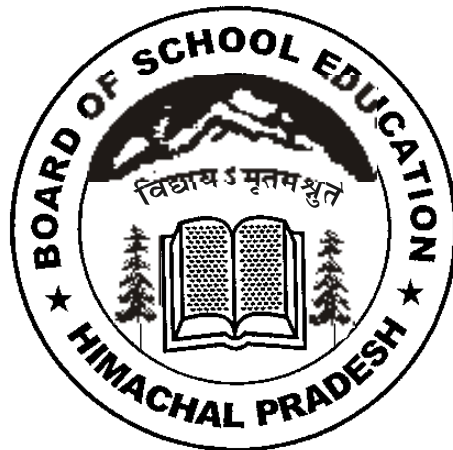


HIMACHAL PRADESH BOARD OF SCHOOL EDUCATION



SYLLABI AND COURSES OF STUDY FOR PLUS ONE
2007-2008

GYANALOK PARISAR, CIVIL LINES,
DHARAMSHALA-176 213.

**REGULATIONS, SCHEME OF EXAMINATIONS AND PASS
CRITERIA, SCHEME OF STUDIES AND COURSES OF STUDY FOR
PLUS ONE
2007–2008**

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**Effective from academic session 2007-08 for Plus One and
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**HIMACHAL PRADESH BOARD OF SCHOOL EDUCATION, GYANALOK
PARISAR, CIVIL LINES, DHARAMSHALA-176 213**

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PART - I

REGULATIONS

1. SHORT TITLE

These Regulations may be called the “**Himachal Pradesh Board of School Education Senior Secondary Certificate (Ten Plus One) Examination (Scheme of Examinations, Scheme of Studies and Courses of Study) Regulations, 2007**”.

2. COMMENCEMENT

These Regulations shall come into force w.e.f. admission year 2007.

3. DEFINITIONS

In these Regulations :—

Unless the subject or context otherwise requires, the following terms shall have the following meanings. Words importing the masculine gender shall be taken to include feminine and those in singular shall include the plural and vice versa :

- (a) “Act” means the Himachal Pradesh Board of School Education Act, 1968;
- (b) “Board” means the Himachal Pradesh Board of School Education;
- (c) “Chairman” means the Chairman of the Himachal Pradesh Board of School Education;
- (d) “Department” means the Education Department of Himachal Pradesh;
- (e) “Director” means the Director of Education, Himachal Pradesh;
- (f) “Examination” means the Senior Secondary Certificate Ten Plus One Examination;
- (g) “Equivalent Examination” means an examination conducted by any recognized Board/Indian University or an Institution recognized by or affiliated to such Board/University and is recognized by this Board equivalent to the corresponding examination conducted by this Board or conducted by a school affiliated to/recognized by the Board;
- (h) “Guardian” means the natural or legal guardian or a person approved by the Head of the Institution concerned as the guardian of a student for the purpose of these regulations;
- (i) “Head of an Institution” means the Principal/Headmaster of a Senior Secondary/High School and such other institution recognized by the Board;
- (j) “High School” means an educational institution preparing candidates for the Matriculation examination of the Board and recognized by the Board for this purpose;

- (k) "Institution" means an institution admitted to the privileges of the Himachal Pradesh Board of School Education or an institution recognized by or affiliated to such Board/University which is recognized by this Board;
- (l) "Pass Criteria" means the standards fixed by the Board for a candidate being declared successful in each subject of examination and or the examination as a whole;
- (m) "Principal" means the Principal of a Senior Secondary School or Senior Secondary division of a College;
- (n) "Private" candidate means a person seeking admission to an examination conducted by the Board and has not, during the session, preceding the examination, been on the rolls of an educational institution affiliated to the Board;
- (o) "Regular Courses of Study" means a Course of Study prescribed by the Board for the purpose of any of its examination;
- (p) "Senior Secondary School" means an educational institution preparing candidates for the Ten Plus Two examination of the Board and recognized by the Board for such purpose;
- (q) "Scholar's Register" means the register containing the record of a scholar's progress kept by the institution to which he belongs in the form approved by the Board;
- (r) "Secretary" means the Secretary of Himachal Pradesh Board of School Education;
- (s) "Session" means the period for which an institution is open for tuition during the twelve months commencing with the formation of new classes; and
- (t) "Teacher" means a person actually engaged in the work of instructions in an institution affiliated to the Board.
- (u) All other words and expressions used in these Regulations but not defined, shall have the same meaning as has been respectively assigned to them in the Act.

4. TIME OF EXAMINATION

- (a) The first Senior Secondary Certificate Ten Plus One Examination having been conducted as public examination by the Board in the academic year 2000-2001, the Board shall conduct Senior Secondary Certificate (Ten Plus One) Examination at the end of Class XI in the course prescribed from the academic year 2007-2008 and onwards.

- (b) The Examination shall be held twice a year. The annual examination shall ordinarily be held every year in the month of March and Supplementary Examination in the month of September for compartmental candidates, at such centres and on such dates and at such time, as may be fixed by the Board from time to time.

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| 5. ADMISSION OF STUDENTS TO A SCHOOL FOR TEN PLUS ONE CLASS |
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Admission to Class Ten Plus One of Senior Secondary Certificate examination to an affiliated institution shall be open to a scholar who has passed :—

- (i) The Matriculation examination of the Himachal Pradesh Board of School Education;
- (ii) Any other examination recognised by the Board as equivalent to (i) above provided that the candidate has qualified the examination with English, Mathematics and Hindi Subjects.

Provided further that students offering :

- (a) Science Group must have secured at least 50% marks in aggregate;
- (b) Commerce Group must have secured at least 45% marks in aggregate;
- (c) Humanities Group must have secured at least 33% marks in aggregate.
- (d) Relaxation of 5% marks for SC/ST candidates shall be given for admission in Science and Commerce group only.

Note :— Students who obtained upto 49.5% and 44.5% marks in aggregate shall be counted to have obtained 50% and 45% marks respectively for admission to Science and Commerce groups in Ten Plus One.

Provided further that the students coming from a Board/University outside Himachal Pradesh shall have to furnish migration certificate issued by the Board/University concerned.

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| 6. GENERAL CONDITIONS FOR THE PURPOSE OF ADMISSION |
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- (i) A candidate who has been placed under compartment in the examination mentioned in clause 5 (i) and 5 (ii) above, may be admitted to the XI Class provisionally provided he / she has got

requisite percentage of aggregate including the marks obtained by him/her in the subject in which he/she got the compartment as stated in clause (a), (b) and (c) of clause 5 (i) above. Provided that such a candidate shall have to clear the compartment **before or simultaneously** failing which he/she shall be reverted to lower class.

- (ii) A candidate who has passed Matriculation Examination without English or Mathematics or Hindi from any other recognised Board/ University shall have to qualify that subject **before or simultaneously**. Such candidates shall be admitted in Ten Plus One class provisionally after fulfilling codal formalities for admission, however, in the event of his/her not qualifying the subject **before or simultaneously**, his/her admission to Ten Plus One Class shall stand cancelled.
- (iii) The admission cases coming from abroad in respect of the examinations, the equivalence of which has not been established may be referred to the Board by the Principal(s) with full details and with their recommendations.
- (iv) A candidate who fails twice in Class XI shall not be re-admitted to that class.
- (v) The dates for admission to 10+1 shall only be fixed by the Director of Education. Any extension in the date shall also be effected by the Director of Education.
- (vi) No student who has attained the age of 20 years on 31st March of the year of admission shall be admitted to Class XI of affiliated institutions. In case of SC and ST students, the age limit shall be relaxable by three years.
- (vii) Age relaxation case (s) should be submitted by the Head of the Institution to the Director of Education for final decision.
- (viii) Students migrating from other recognised Boards/Universities who have undertaken any examination of that Board/University shall furnish Migration Certificate in addition to marks sheet/qualifying certificate issued by the Board/University concerned to the Institution where they are seeking admission.
- (ix) No candidate who has been expelled or is under sentence or is under the punishment of rustication or is debarred from appearing in or taking an examination for any reason whatsoever, shall be admitted to any examination of the Board.

7. ADMISSION PROCEDURE

- (i) An admission and withdrawal register in the form prescribed by the Education Department shall be maintained by the Institution where the name of every scholar joining an Institution shall be entered.
- (ii) Successive numbers must be allotted to scholars on their admission and each scholar should retain this number throughout his career in the Institution. A scholar leaving and then returning to the school after absence of any duration shall, resume his original number of admission.
- (iii) If a scholar applying for admission to an Institution has attended any other Institution, an authenticated copy of the transfer certificate from his last school must be produced before his name can be entered in the scholar's register.
- (iv) Local transfer of a student from an Institution to another shall not be permissible.
- (v) A scholar shall not be allowed to migrate from one affiliated institution to another during the session after his name has been sent up for the examination of the Board. This condition may be waived only in special circumstances by the Chairman.
- (vi) A scholar leaving his institution at the end of a session or who is permitted to leave his institution during the session shall, on payment of all dues, receive an authenticated copy of the Transfer Certificate up-to-date. A duplicate copy may be issued if the Head of the Institution is satisfied that the original is lost but it shall always be so marked.
- (vii) In case a scholar from an institution affiliated to any recognised Board/University seeks admission in an institution affiliated to the Board, the Transfer Certificate indicating the subjects of studies of the previous institution of such a student shall be countersigned by an officer not below the rank of District Education Officer/District Inspector of Schools of the Education Department of the State/ Union Territory concerned and the scholar shall not be admitted to an Institution without such a countersignature. Countersignatures are not necessary in case a candidate is admitted from one institution affiliated to the Board to another.
- (viii) If the statement made by the parent or guardian of a scholar or by the scholar himself, if he was a major at the time of his admission to an institution is found to contain any wilful misrepresentation of facts regarding the scholar's career, the Head of Institution may punish him by expulsion and report the matter to the Board.

8. ELIGIBILITY FOR EXAMINATIONS : REGULAR CANDIDATES

The Examination shall be open to a student of an Institution affiliated to the Board whose name is submitted to the Secretary duly certified by the Head of the Institution on form prescribed by the Board that he/she :

- (i) has passed the Matriculation examination of the Board or an equivalent examination from a recognised Board/University provided that such a candidate has qualified the examination with English, Mathematics and Hindi subjects.
- (ii) has not passed equivalent or higher examination of any other Board/University.
- (iii) has completed the prescribed courses of study in the subjects required to pass the examination.
- (iv) he/she is on the active rolls of the school.
- (v) bears good moral character.

9. SUBMISSION OF APPLICATION FORMS FOR EXAMINATION

Every candidate from a recognised Institution shall have to forward his/her application on the prescribed form together with the prescribed fee for the Examination through the Head of the Institution to which he/she belongs so as to reach the Secretary of the Board Dharmshala on or before 15th October and with late fee of Rs. 100/- upto 15th November. No form shall be entertained after the last date. Fee may be deposited in cash in Board's office at Dharmshala against printed receipt or remitted through a Bank Draft (crossed, Payees Account only) drawn in favour of the Secretary, H.P. Board of School Education, payable at any scheduled Bank at Dharmshala.

10. REQUIREMENT OF ATTENDANCE FOR REGULAR CANDIDATES

- (i) The expression prescribed courses of study means 75% of attendance counted from the opening of Class XI upto the day preceeding the first day of examination of the Board.
- (ii) Failed candidates who have rejoined Class XI shall be required to put in 75% of attendance calculated from the 11th day after the declaration of result and upto the 14th day preceeding the first day of examination of the Board.
- (iii) In the case of migration, attendance at an institution from which the candidate migrates will be taken into account in calculating the required percentage of attendance.

- (iv) If candidate's attendance falls short of the prescribed percentage, the Head of the Institution may submit his/her name to the Board provisionally. If the candidate does not complete the required percentage before the 14th day preceeding the first day of examination, he/she shall become ineligible for the examination. The Head of the Institution shall not issue roll number slip/Admit Card to such a candidate and shall report and return his/her roll number slip/Admit Card to the Secretary.
- (v) Candidates taking up a subject involving practical work shall be required to put in 75% of the total attendance for practical work in the laboratory.
- (vi) A candidate whose name has been struck off the rolls of the institution after his application for admission to the examination was sent, ceases to be eligible for the examination. The Head of the Institution shall not issue roll number slip to such an ineligible candidate and shall report and return his roll number slip to the Secretary. If, however, a candidate whose name had been struck off the rolls and is re-admitted upto one month before the commencement of the examination, he shall automatically become eligible to appear at the examination, subject to the fulfillment of other eligibility conditions.

11. CONDONATION OF SHORTAGE OF ATTENDANCE

- (i) The Secretary shall be the competent authority to condone a deficiency of attendance upto 20 and the Chairman upto 40.
- (ii) The Head of the Institution shall refer a case of shortage of attendance to the Secretary, with his recommendations failing which valid reasons for not recommending the case shall have to be stated.
- (iii) The following may be considered valid reasons for recommending the cases ;
 - (a) Prolonged illness;
 - (b) Loss of father/mother or some other such incident leading to absence from school and which merits special consideration;
and
 - (c) any other reason of serious nature.

- (iv) In case a candidate participates in sports and cultural activities/ tournaments conducted by the Education Department/Government or appears in a competitive examination conducted by the Govt. or Public Service Commission, the actual days spent in sports and cultural activities / tournaments / examination and travelling days connected therewith shall be counted, on the production of satisfactory evidence towards the attendance of the candidates.

12. DETAINING OF ELIGIBLE CANDIDATES

- (i) Heads of affiliated institutions shall not detain eligible candidates from appearing at the examination of the Board except for very grave reasons and with the prior permission of the Chairman of the Board.
- (ii) Notwithstanding anything contained in these regulations, no candidate who has been expelled or is still undergoing rustication or who has been debarred from taking examination for having used unfair means or for any other reasons shall be admitted to any examination of the Board.

13. CHANGE OF SUBJECTS

Heads of Institutions may allow change of subject(s) in Class XI at their discretion upto 30th September. A request for change of subject(s) may, however, be accepted by the Chairman on the recommendation of the Head of the Institution in special cases such as transfer of parents/ guardian, physical disability of the candidate to pursue the subject(s) already offered or for any other adequate reasons even after September 30th as per provisions in the regulations.

14. ELIGIBILITY FOR PRIVATE CANDIDATES

The following shall be eligible to appear as a private candidate at the annual examination :—

- (i) A candidate who has previously appeared and failed in Senior Secondary Certificate 10+1 examination of the Board. Unless otherwise notified, such candidate shall appear in the syllabus and text books as prescribed for the examination of the year in which he will appear. Candidates falling in this category shall appear in the group in which they have failed unless they are allowed to change the group as provided in the Examination Regulations by the Board.
- (ii) The following candidates may appear in Ten Plus One examination if they have passed the Matriculation Examination of the Board or an equivalent examination with English, Mathematics & Hindi

subjects from a recognised Board/University at least one year earlier than the year in which they would take Ten Plus One examination but they can do so in Humanities and Commerce groups only provided that they have not been on the rolls of any affiliated institution during the academic year;

- (a) All persons who are bonafide residents of Himachal Pradesh.
- (b) A candidate who has passed his Matriculation from Himachal Board.
- (c) Members of regular Land, Air and Naval Forces serving in Himachal Pradesh or their wards.
- (d) Members of Border Police serving in the State of Himachal Pradesh or their wards.
- (e) Members of any security force created by the Ministry of Home Affairs, serving in Himachal Pradesh or their wards.
- (f) All persons who are residing in Himachal Pradesh for nine months preceding the commencement of Examination.

Provided that in respect of category (c), (d) and (e), a certificate from the Commanding Officer of the Unit, in case of category (f), a certificate from the employer along with a solemn declaration duly attested by the Executive Magistrate First Class to the effect that the candidate is residing in Himachal Pradesh for nine months preceding the commencement of examination, shall be appended with the admission form.

- (iii) No candidate who has been on the rolls of an affiliated institution at any time during the academic year preceding the examination shall be eligible to appear as a private candidate without recommendation from the Head of the Institution in which he studied.
- (iv) No candidate who has been debarred by any recognised Board/ University/any other competent authority from appearing at the examination shall be allowed to appear at the Ten Plus One examination of the year concerned.

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| 15. ATTESTATION OF ADMISSION FORM AND PROCEDURE OF SUBMISSION OF APPLICATIONS FOR PRIVATE CANDIDATES |
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A candidate shall submit his application for admission on the prescribed admission form to the Secretary with the requisite certificate countersigned by authorities as mentioned below :

- (i) **For Regular candidates** : by the Head of the Govt. / affiliated institution concerned;

- (ii) **For Private Candidates : by any of the authorities mentioned below :—**
- (a) Head of the Institution last attended ;
 - (b) Principal/Headmaster/Headmistress of the Govt./Affiliated Institution or any officer of the H.P. Education Department not below the rank of Deputy Director;
 - (c) A Member of the Board.
- (iii) For Private candidates serving in the Military/Para Military forces; by the Commanding Officer of their units.
- (iv) All private candidates will submit three copies of the latest passport size photograph attested by the same authority who attested the certificate on prescribed admission form.
- (v) No candidate shall be allowed to offer additional subjects alongwith the full subjects unless he indicates so in his admission form and remits the fee for additional subjects prescribed under regulation 32 alongwith the usual admission fee.
- (vi) If the application for admission to the examination on the prescribed form of a private candidate is received after 30th September for annual examination and 30th June for supplementary examination, he/she shall pay late fee as under :—

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|---------------------------|
| ANNUAL EXAMINATION |
|---------------------------|

| | | | | |
|----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Rs.100/- upto 31st October | Rs. 200/- upto 15th November | Rs. 500/- upto 30th November | Rs. 1000/- upto 15th January | Rs. 1500/- upto 25th January |
|----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|

| |
|----------------------------------|
| SUPPLEMENTARY EXAMINATION |
|----------------------------------|

| | | |
|-----------------------------|-----------------------------|-------------------------------|
| Rs. 100/- Upto 15th July | Rs. 200/- Upto 31st July | Rs. 500/- Upto 10th August |
|-----------------------------|-----------------------------|-------------------------------|

After the last dates mentioned above, no admission form shall be entertained.

- (vii) Private candidates shall not be allowed to offer such subjects for the examination which involve practical work except in the case of candidates who had failed earlier. However, notwithstanding this condition, candidates may offer Home Science with practical.

16. SUBMISSION OF MIGRATION CERTIFICATE BY PRIVATE CANDIDATES

A candidate who has passed the Matriculation or equivalent examination from other recognised Board/University shall be required to submit migration certificate from the concerned Board/University along with the examination form. However, in case a Migration certificate is not received fifteen days before the commencement of the examination, the candidature of a candidate shall be cancelled and the admit card for appearance at the examination shall not be issued to him/her by the Board.

17. MEDIUM OF EXAMINATION

- (i) Medium for English shall be English except for passage of English which shall be translated into Hindi;
- (ii) Medium for the paper of Sanskrit will be Hindi;
- (iii) Medium for the papers in other languages shall be the language concerned;
- (iv) Medium for the subjects of Mathematics, Biology, Chemistry and Physics shall be English;
- (v) Medium for all other subjects shall be Hindi or English.

18. MODE OF EXAMINATION

Candidates for the examination shall be examined by means of :

- (i) Written question papers which they shall be required to answer in writing;
- (ii) Practical/Oral tests/Project Work as provided for in the Syllabus for the respective subject(s);
 - (a) Practical/Oral test/Project Work, unless otherwise specified, shall be carried out by the examiners appointed by the Board or any other authority approved by the Board in such manner, as the Board may determine, from time to time.
 - (b) Wherever practical work/Project Work has been prescribed in the syllabus in any subject for the Examination, a record of such work done by each candidate offering the subject in the form prescribed by the Board shall be duly maintained and attested by the Head of the Institution concerned and the same shall be produced or forwarded for purpose of evaluation in such manner and according to such directions, as may be issued by the Board, from time to time.

- (c) Written test in a subject shall be, by means of question paper and the question paper in the subject, shall be given to candidates simultaneously at every centre at which the examination is being held.

19. SUBJECTS OF EXAMINATION

Examination shall be held in the subjects approved by the Board from time to time.

20. SYLLABI IN SUBJECTS OF EXAMINATION

- (i) The Syllabus in each subject for the examination setting out the detailed courses of study and scheme of examination shall be prescribed by the Board from time to time and shall be shown in the 'Courses of Study and Syllabi'.
- (ii) 'Courses of Study and Syllabi' for various examinations shall be made available by the Board for sale at such price and at such places, as may be decided by the Chairman and shall also be available at the office of the Board for reference.

21. POWER OF THE BOARD TO EXCLUDE ANY CANDIDATE FROM EXAMINATION

- (i) The Board shall have the power to exclude any candidate from appearing at an examination permanently or for a specified period for reasons to be recorded in writing, if it is satisfied that such a candidate is not fit and proper person to be admitted thereto.
- (ii) If a candidate, after admission to an examination, commits an immoral act or is discovered to have committed an immoral act which, in the opinion of the Board is such 'that had it come to their knowledge in time they would have excluded him from the examination, the Board may ;
- (a) Cancel his candidature for that examination and order that his result be not declared; and/or
- (b) Disqualify him permanently or for a specified period from appearing at an examination.
- (iii) If a candidate, subsequent to the issue of roll number slip/admit card is found to be ineligible to take the examination, his candidature shall be cancelled.

22. CHANCES TO APPEAR AT THE EXAMINATION

- (i) Where the chances of a candidate to clear an examination are limited and he is disqualified from appearing at it for a fixed period, he may be allowed by the Chairman one more chance to appear at the examination in the current syllabus after the period of disqualification, in lieu of the chance or chances missed by him during the period of disqualification.
- (ii) Where the chances of a candidate to clear an examination are limited, the Chairman shall have the authority to grant an extra chance for valid reasons in lieu of the chance missed by a candidate; provided that the extra chance shall be immediately admissible next to the last admissible chance.
- (iii) Where a candidate has missed one or more chances to clear an examination on account of illness or due to some natural calamities, additional chance or chances in lieu thereof may be given by the Chairman provided the candidate had submitted his admission form and fees and had informed the Secretary of the Board within 30 days of the commencement of the Board examination of inability to appear at the examination on account of illness along with a medical certificate of a Government Hospital/any other well known Hospital and in case of natural calamities, a certificate issued by the Tehsildar mentioning the nature of calamity and duly countersigned by the concerned Sub Divisional Magistrate provided that the additional chance or chances shall be immediately next to the last admissible chance.

23. ADMISSION TO EXAMINATION OF PHYSICALLY HANDICAPPED PERSONS

Notwithstanding anything contained in any other regulation, the Board shall have power, in the case of a permanently physically handicapped person to :—

- (i) Admit him/her to the Senior Secondary (Commerce or Humanities Group) as a private candidate i.e. without attending an affiliated institution;
- (ii) Provide service of a competent amanuensis for writing out the answers at the examination and shall pay the prescribed fee per paper of examination for the use of an amanuensis.
- (iii) Permit the answers to be typewritten or use of PC by himself/herself if the examinee so desires and brings of his own;

- (iv) lay down any other method for assessing the examinee's academic ability and declare his/her result.

Provided that in each case, the examinee shall produce such evidence to the satisfaction of the Secretary as he may consider necessary, in proof of the statement that his / her permanent disability is such that he/she deserves to be considered for the above facility.

24. PASS CRITERIA

The result of Senior Secondary Certificate 10+1 Examination will be furnished in terms of marks for each subject secured in the examination. The marks of other subject(s) as additional subject(s) will also be shown on the marks sheet.

- (i) Each candidate will be required to obtain at least 33% marks in English and in each of four elective subjects to pass the examination.
- (ii) For subjects involving practical work/Project Work, a candidate must obtain at least 33% marks in theory and practical/Project Work separately in order to qualify that subject.
- (iii) Marks of additional subject i.e. 6th and 7th subject(s) if offered by the candidate will not be taken into account in the total.
- (iv) If a candidate fails in one or more subjects excluding additional subject(s) and the total deficiency is not more than 1% of total marks, he/she shall be accorded these marks to make up the deficiency without regard to the number of subjects. In case the percentage of grace marks is increased to more than 1% of total marks as per the provisions of Regulation 11.17.2 of Himachal Pradesh Board of School Education Examination Regulations, 1994, the candidate shall not be accorded more than 1% of the total marks in an individual subject. If by the addition of these, he/she obtains the pass marks, he/she shall be declared to have passed the examination.
- (v) A candidate appearing in the additional subject(s) or compartmental subject shall also be eligible for the above concession but the limit of grace marks shall be 1% of the total marks of the subject(s) in which he/she appears.
- (vi) A candidate shall be given 1% of the aggregate marks as grace marks to improve the division. However, a candidate who has already availed of the grace marks for passing the examination shall not be entitled to these grace marks for improving the division in the examination.

(vii) **The successful candidates of Senior Secondary Certificate 10+1 examination shall be classified as under :—**

- | | |
|-------------------------------|---|
| (a) Distinction in subject(s) | Those who secure 75% or more marks in subject(s) |
| (b) First Division | Those who obtain 60% or more of the aggregate marks. |
| (c) Second Division | Those who get 50% or more marks but less than 60% marks of the aggregate; |
| (d) Third Division | Those who gain below 50% of the aggregate. |

25. ELIGIBILITY OF COMPARTMENT

A candidate who fails/absents in English or one of the four elective subjects offered by him/her shall be placed under compartment.

26. COMPARTMENT EXAMINATION FOR SENIOR SECONDARY CERTIFICATE (10+1) EXAMINATION

- (i) A candidate placed under Compartment may appear at the Supplementary examination during the same year and may avail himself of the second chance in annual examination next year as per Syllabi and Courses laid down for the 10+1 examination.
- (ii) A candidate who does not appear at one or both the chances of Compartment or who avails the chance/chances but does not succeed, shall be treated to have failed in the examination and will be required to appear in all the subjects at a subsequent annual examination of the Board as per Syllabi and Courses laid down in order to pass the examination.
- (iii) In case a candidate has passed in practical at the main examination, he shall be allowed to appear in theory part only and marks in practical obtained at the main examination shall be carried forward and accounted for the compartment examination. In case the candidate had failed in practical, he shall have to appear in theory and practical both irrespective of the fact that he has already cleared the theory examination.
- (iv) A candidate placed in compartment shall have the liberty to appear in full subjects but he/she can do so only at the annual examination.

27. SUBSTITUTION OF MARKS OF ADDITIONAL SUBJECT (S)

Additional subject(s) may be substituted for the Elective subject(s) in which the candidate has failed in the following manner :—

- (i) An elective subject offered as an additional subject can be substituted for another elective subject if, the candidate fails in one of the main electives offered by him but passes in the additional elective subject offered.
- (ii) If a candidate fails in two elective subjects but had offered one additional elective subject and passed in it, the additional subject in which the candidate had passed can be substituted for one of the subject(s) in which the candidate had failed (the one in which he/she had scored less marks) and the candidate can be declared eligible for compartmental examination in the other subject in which the candidate had failed.
- (iii) If a candidate fails in two elective subjects but had offered two additional subjects and passed in both of them then these subjects can be substituted for the subjects in which the candidate had failed.
- (iv) If a candidate fails in one elective subject but had offered two additional subjects and passed in both, the additional subject in which the candidate had scored higher marks can be substituted for one of the elective subject in which the candidate had failed. In case of the candidate having scored equal marks in both subjects, the option of the candidate for substitution may be obtained and till such time, the result may be declared as 'Result Late'.
- (v) In Science group, substitution only in Biology and Mathematics and vice versa is allowed while in Commerce group, substitution only of Economics with Mathematics and vice versa is allowed. There shall be no substitution in Vocational group.

28. ADDITIONAL SUBJECTS

Candidates who have passed the Senior Secondary Certificate 10+1 Examination from this Board or other recognised institution affiliated with any Board in India may offer additional subject(s) as private candidates provided in the Scheme of Studies subject to the condition that the additional subject(s) is/are offered within five years of passing the examination. Exemption from time limit may, however, be granted by the Chairman in deserving cases. Such candidates can appear in one additional subject in the Supplementary examination but the facility to appear in more than one additional subject will be available only at the annual examination.

29. ALLOTMENT OF EXAMINATION CENTRES

- (i) The Board reserves the right to allot any examination centre to a candidate for his theory or practical examination or both. No institution / candidate can, as a matter of right, ask for any particular Centre or challenge the centre allotted by the Board in any Court of Law.
- (ii) Centres for the regular or private candidates will be fixed keeping in view the seating capacity of an examination centre, the object of fair conduct of examination or other administrative reasons.
- (iii) Ordinarily, the regular students of an Institution, which itself is an approved Examination Centre, will be allotted Centre in their own Institution. Other regular candidates may be allotted examination centre requested by them or any other centre determined by the Board.
- (iv) It will be obligatory for a private candidate to name in his admission form three approved Examination Centres which are nearest to his place of residence or home town and the Board may allot him any Centre out of the three at its discretion. In case he cannot be allotted any of the three Centres due to some reason, he may be allotted any other centre by the Board.
- (v) Where a private candidate does not name any Centre in his admission form or names only one Centre or two Centres, the Board may allot him any Centre whether named by him in his admission form or not.

30. CHANGE OF EXAMINATION CENTRE

- (i) A candidate shall take the examination at the Centre allotted by the Board unless he obtains prior written permission of the Board for the change.
- (ii) **The board shall not allow change of Examination Centre in the following cases :**
 - (a) Change of centre within the same city/town.
 - (b) Change of centre within one month of commencement of the examination.
- (iii) The Board may allow change of centre in the following cases on payment of prescribed fee and form;
 - (a) If a candidate or his father or guardian is transferred and the fact of transfer is certified by the Head of the Office in which he or his father or guardian is employed;

- (b) If a regular student has joined a school at some other place and his application has been received duly forwarded by the Head of the Institution where the candidate has been admitted with date of admission.
- (iv) A candidate seeking change of examination centre under the above Regulations shall, make an application on the prescribed form accompanied by the prescribed fee and photographs to the Secretary. The application form for change will be entertained if the same has been submitted through the Head of the Institution in case of a regular student and countersigned by any person competent to attest the admission form in case of private candidate.
- (v) Concerned Deputy Secretary/Assistant Secretary (Exams) shall be competent to order change of examination Centres as per the prescribed rules.
- (vi) The application and fee for change of centre shall be entertained upto one month before the date of commencement of examination.
- (vii) Notwithstanding the provisions in sub clause (vi) supra the Secretary may approve change by written order justifying special circumstances for change of centre 15 days before the commencement of an examination.
- (viii) A candidate who has appeared at an examination centre not allotted to him without prior approval of the Board may, forfeit his eligibility for examination and the Board reserves the right to declare him 'Not Eligible' for the examination and cancel his result.

31. IMPROVEMENT OF PERFORMANCE

- (i) A candidate who has passed the Senior Secondary Certificate Ten Plus One Examination of the Board may improve his performance in one subject at the Supplementary Examination to be held in the same year or at the annual examination next year.
- (ii) A candidate who has passed the Senior Secondary Certificate Ten Plus One examination of the Board may, reappear for improvement of performance only ONCE provided he has not passed higher examination in the meantime, as under :
 - (a) For improvement in one subject at the supplementary examination to be held in the same year or at the annual examination next year.
 - (b) For improvement in more than one subject at the annual examination next year.
- (iii) In case the candidate has passed in practical at the main examination, he shall be allowed to appear in theory part only and

marks in practical obtained at the main examination shall be carried forward and accounted for at the Improvement examination.

- (iv) A candidate who appears for improvement of performance in full subjects or less subjects shall have to surrender the previous statement of marks/certificate before the issuance of new statement of marks/certificate.
- (v) The syllabi & courses of study for improvement shall be the same as are applicable to the regular candidates appearing with him/her in the examination.

32. FEE STRUCTURE

| | |
|---|---|
| Regular (Arts / Commerce) Rs. 250/- | Private (Science / Vocational) 300/- |
| Compartment Rs. 160/- | 160/- |
| Additional Subject Rs. 100/- for One subject Full Fee for Two or more subjects | |

Improvement of Performance

Full Fee

Rs. 60/- for each Additional 6th or 7th subject offered by Regular/Private candidates alongwith full subjects.

Note :— The structure shall be subject to change under the instructions issued by the Board from time to time.

33. PASS CERTIFICATE / MARKS STATEMENTS

- (i) A Candidate who has appeared in Senior Secondary Certificate Ten Plus One Examination of the Board shall be given a result-cum-detailed marks card.
- (ii) A candidate who has appeared in Senior Secondary Certificate Ten Plus One Examination of the Board and has passed the examination shall be given a result-cum-detailed marks card. However, a candidate who has appeared for an additional subject in a subsequent examination shall not be given a separate certificate or a combined marks statement. Such candidate shall be given only a statement of marks in that subject.

34. COMPARTMENT/IMPROVEMENT OF PERFORMANCE CANDIDATES AS PRIVATE CANDIDATES

Compartment /Improvement of performance candidates shall appear as private candidate and certificate will be issued accordingly.

35. INTERPRETATION OF THE REGULATIONS

If any question arises as to the interpretation of the Regulations, the Board's decision shall be final.

36. APPLICATION OF REGULATIONS

The Regulations applicable in case of Senior Secondary Certificate 10+2 examination of the Board shall also be applicable in Senior Secondary Certificate 10+1 examination of the Board.

37. JURISDICTION OF THE COURT REGARDING DISPUTES / INTERPRETATION OF RULES

Any differences or disputes arising out of the interpretation of the rules and regulations of the Board, entries made in the application forms and the matter relating to use of unfair means by the candidate or any other decision or order of the Board or any competent authority will be subject to the jurisdiction of the Courts at Dharmshala.

38. POWER TO RELAX

Where the Board is of the opinion that it is necessary or expedient to do so, it may, by order, for reasons to be recorded in writing, relax any of the provisions of these regulations with respect to any case or category of cases.

39. REPEAL AND SAVINGS

From the commencement of these Regulations, the "HIMACHAL PRADESH BOARD OF SCHOOL EDUCATION SENIOR SECONDARY CERTIFICATE (Ten Plus One) EXAMINATION REGULATIONS, 2005" shall stand repealed.

Notwithstanding such repeal, anything done or any action taken including any orders, Notifications etc; issued in exercise of the powers conferred by or under the repealed Regulations shall be deemed to have been done or taken under the corresponding provisions of these Regulations and in case of any dispute, the decision of the Board shall be final.

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| PART - II |
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SCHEME OF EXAMINATION

The Board will conduct Plus One Examination in the following subjects as under :

| | Paper | Marks | | Duration |
|---|-------|--------|-----------|----------|
| | | Theory | Practical | |
| 1. English Compulsory for all Groups | 1 | 100 | — | 3 Hours |
| HUMANITIES GROUP | | | | |
| 1. Hindi | 1 | 100 | — | 3 Hours |
| 2. Mathematics (Common with Sc. & Comm.) | 1 | 100 | — | 3 Hours |
| 3. Home Science (Common with Science & Commerce groups) | 2 | 70 | 30 | 3 Hours |
| 4. Informatics Practices (Common with Science & Commerce groups) | 2 | 70 | 30 | 3 Hours |
| 5. Economics (Common with Commerce group) | 1 | 100 | — | 3 Hours |
| 6. History | 1 | 100 | — | 3 Hours |
| 7. Political Science | 1 | 100 | — | 3 Hours |
| 8. Geography (Common with Science and Commerce Groups) | 2 | 70 | 30 | 3 Hours |
| 9. Psychology | 2 | 70 | 30 | 3 Hours |
| 10. Sociology | 1 | 100 | — | 3 Hours |
| 11. Physical Education | 2 | 70 | 30 | 3 Hours |
| 12. Public Administration | 1 | 100 | — | 3 Hours |
| 13. Sanskrit | 1 | 100 | — | 3 Hours |
| 14. Music | 2 | 30 | 70 | 3 Hours |
| 15. Dance | 2 | 30 | 70 | 3 Hours |
| 16. Urdu | 1 | 100 | — | 3 Hours |
| 17. Philosophy | 1 | 100 | — | 3 Hours |
| 18. Fine Arts | 2 | 30 | 70 | 3 Hours |
| 19. French | 1 | 100 | — | 3 Hours |
| 20. Yoga (Common with Science and Commerce Groups) | 2 | 70 | 30 | 3 Hours |
| SCIENCE GROUP | | | | |
| 21. Physics | 2 | 70 | 30 | 3 Hours |
| 22. Chemistry | 2 | 70 | 30 | 3 Hours |
| 23. Biology | 2 | 70 | 30 | 3 Hours |
| COMMERCE GROUP | | | | |
| 24. Accountancy | 1 | 100 | — | 3 Hours |
| 25. Business Studies | 2 | 90 | 10 | 3 Hours |

VOCATIONAL GROUP

| | | | | |
|--|--------|------------|------------|--------------------|
| 26. GFC | 1 | 100 | — | 3 Hours |
| 27. Accounting and Auditing | | | | |
| (i) Financial Accounting-I | 2 | 100 | 100 | 3 Hours |
| (ii) Business Communication & Statistics | 2 | 100 | 100 | 3 Hours |
| (iii) Computer Application in Business | 2 | 100 | 100 | 3 Hours |
| 28. Computer Technique | | | | |
| (i) Vocational Theory-I (Computer Fundamentals, Operating Systems and Utilities) | 2 | 100 | 100 | 3 Hours |
| (ii) Vocational Theory-II (Programming in C) | 2 | 100 | 100 | 3 Hours |
| (iii) Vocational Theory-III (Data Base Management System) | 2 2 | 100 100 | 100 100 | 3 Hours 3 Hours |
| 29. Electronics Technology | | | | |
| (i) Vocational Theory-I (Basic Electricity) | 2 | 100 | 100 | 3 Hours |
| (ii) Vocational Theory-II (Basic Electronics) | 2 | 100 | 100 | 3 Hours |
| (iii) Vocational Theory-III (Applied Electronics) | 2 | 100 | 100 | 3 Hours |
| 30. Maintenance and Repair of Electrical Domestic Appliances | | | | |
| (i) Vocational Theory-I (Basic Electrical Technology) | 2 | 100 | 100 | 3 Hours |
| (ii) Vocational Theory-II (Domestic Appliances) (Non Motorised) | 2 | 100 | 100 | 3 Hours |
| (iii) Vocational Theory-III (Engineering Materials & Workshop Practice-I) | 2 | 100 | 100 | 3 Hours |
| 31. Food Science | | | | |
| (i) Fundamentals of Food Preservation | 2 | 100 | 100 | 3 Hours |
| (ii) Food Microbiology and Quality Assurance | 2 | 100 | 100 | 3 Hours |
| (iii) Food Preservation Technique | 2 | 100 | 100 | 3 Hours |
| 32. Horticulture | | | | |
| (i) Fundamentals of Horticulture | 2 | 100 | 100 | 3 Hours |
| (ii) Fruit Production | 2 | 100 | 100 | 3 Hours |
| (iii) Vegetable Production | 2 | 100 | 100 | 3 Hours |

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| PART - III |
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SCHEME OF STUDIES

Compulsory for All Groups

1. English (Core)

| |
|-----------------------|
| I. Humanities Group : |
|-----------------------|

Elective Subjects (Combination of four subjects to be offered from the following)

1. **Dance (Any one of the following Indian Classical Dances)**
 - (a) Kathak
 - (b) Bharat Natyam
2. Economics (Common with Commerce Group)
3. Geography (Common with Science Group)
4. History
5. Home Science (Common with Science Group)
6. Mathematics (Common with Science and Commerce Groups)
7. **Modern Indian Language (Any one of the following)**
 - (a) Hindi
 - (b) Urdu
8. **Music (Any one of the following)**
 - (a) Hindustani (Vocal)
 - (b) Hindustani (Instrumental Melodic)
 - (c) Hindustani (Instrumental Percussion)
9. Philosophy
10. Political Science
11. Psychology
12. Sanskrit
13. Sociology
14. Public Administration
15. **Any one of the following :—**
 - (a) Informatics Practices (Common with Science & Commerce Groups)
 - (b) Yoga (Common with Science & Commerce Groups)
 - (c) Physical Education (Common with Science & Commerce Groups)
16. Fine Arts
17. French

II. Science Group

Compulsory

1. Physics
2. Chemistry
3. Biology and or Mathematics (Mathematics common with Humanities & Commerce Groups)
4. **Anyone of the following :**
 - (i) Mathematics/Biology.
(Mathematics Common with Humanities & Commerce Groups)
 - (ii) Home Science (Common with Humanities Group)
 - (iii) Geography (Common with Humanities Group)
 - (iv) **Any one of the following :—**
 - (a) Informatics Practices (Common with Science, Humanities & Commerce Groups)
 - (b) Yoga (Common with Science, Humanities & Commerce Groups)
 - (c) Physical Education (Common with Science, Humanities & Commerce Groups)
 - (v) All other subjects mentioned as Electives under the Humanities Group.

III. Commerce Group

Compulsory

1. Accountancy.
2. Business Studies.
3. Economics and or Mathematics (Economics Common with Humanities Group and Mathematics common with Humanities & Science Groups).
4. **Anyone of the following :**
All subjects mentioned as Electives under the Humanities Group.

IV. Vocational Group

The Board Offers the following Vocational Courses :—

1. Accounting and Auditing
2. Computer Technique
3. Electronics Technology
4. Maintenance and Repair of Electrical Domestic Appliances
5. Food Science
6. Horticulture

Compulsory

1. General Foundation Course (G.F.C.)

Elective Subjects to be offered from the Groups given below :—

| | |
|--|---|
| <p>1. Accounting and Auditing</p> <p>(i) Financial Accounting-I</p> <p>(ii) Business Communication & Statistics</p> <p>(iii) Computer Application in Business</p> | <p>Paper</p> <p>I</p> <p>II</p> <p>III</p> |
| <p>2. Computer Technique</p> <p>(i) Vocational Theory-I (Computer Fundamentals, Operating Systems and Utilities)</p> <p>(ii) Vocational Theory-II (Programming in C)</p> <p>(iii) Vocational Theory-III (Data Base Management System)</p> | <p>I</p> <p>II</p> <p>III</p> |
| <p>3. Electronics Technology</p> <p>(i) Vocational Theory-I (Basic Electricity)</p> <p>(ii) Vocational Theory-II (Basic Electronics)</p> <p>(iii) Vocational Theory-III (Applied Electronics)</p> | <p>I</p> <p>II</p> <p>III</p> |
| <p>4. Maintenance and Repair of Electrical Domestic Appliances</p> <p>(i) Vocational Theory-I (Basic Electrical Technology)</p> <p>(ii) Vocational Theory-II (Domestic Appliances Non Motorised)</p> <p>(iii) Vocational Theory-III (Engineering Materials & Workshop Practice-I)</p> | <p>I</p> <p>II</p> <p>III</p> |

| | |
|--|-----|
| 5. Food Science | |
| (i) Fundamentals of Food Preservation | I |
| (ii) Food Microbiology and Quality Assurance | II |
| (iii) Food Preservation Technique | III |
| 6. Horticulture | |
| (i) Fundamentals of Horticulture | I |
| (ii) Fruit Production | II |
| (iii) Vegetable Production | III |

- Notes :—**
1. In addition to the Elective subjects offered under a Group, a student may offer upto two additional subjects if he/she so wishes from amongst the Elective subjects appended under the **Humanities Group**. While offering the number of subjects or their combinations, candidates are advised to keep admission requirements for higher courses in view.
 2. Students appearing in the capacity of private candidate(s) cannot offer subject(s) involving practical work except Home Science. However, students offering Commerce Group can appear in private capacity which involves Project Work but such a student shall have to get his Project Work examined at an institution/examination centre notified by the Board for the purpose.
 3. The syllabus in Vocational Group has been published separately which may be supplied to the schools on request.

Instructional Time

Regarding instructional time, it has been stipulated that a minimum of one hundred and eighty days in a year will be available for instructional activities after taking into account the activities like evaluation/test, school functions etc; schools will be getting adequate time for effective instruction and the prescribed quantum of the subject areas in syllabus will be properly completed.

The instruction work will be about 31 hours and 30 minutes per week. In addition to the instructional time, each school is expected to devote 45 minutes for each day for Morning Assembly and Recess. The duration of the instructional period will be 35 minutes. There will be 9 periods daily for instructional work.

SUBJECT WISE DIVISION OF SCHOOL TIME PER WEEK

| | | |
|--|-----------------------|---------------------|
| All five subjects | @ 10 periods per week | = 50 periods |
| Library | @ 01 period per week | = 01 period |
| Moral Education | @ 01 period per week | = 01 period |
| Co-curricular activities (including games and sports) | @ 02 period per week | = 02 periods |
| Total working periods per week | | = 54 periods |

Note :— *While designing the courses, it has been presumed that given margin for vacations, public holidays and other contingencies, a minimum of 30 weeks of teaching time will be available in each session for actual instructional transaction. Accordingly, the distribution of periods over units and sub units has been done which is only suggestive in character. The schools keeping the over all number of periods in each subject/area the same, may assign more or less number of periods to individual units according to their relative importance, if thought necessary. The distribution of marks over each unit (unit wise weightage) is however, prescriptive hence, shall remain, unchanged.*

NOTE REGARDING TEXT BOOKS

In most of the subjects, the Board has already prescribed text books. However, for subjects where no books have been prescribed, the text books/reference books as recommended and prescribed by the CBSE/NCERT shall be deemed to have been recommended by the HP Board of School Education and shall stand authorized prescription for the students appearing through HP Board. For Public Administration and Physical Education, students may read any standard text book which covers the syllabus.

1. ENGLISH (CORE)

CODE NO. 131

BACKGROUND

Students are expected to have acquired a reasonable degree of language Proficiency in English by the time they come to class XI, and the course will aim, essentially, at promoting the higher-order language skills.

For a large number of students, the higher secondary stage will be a preparation for the university, where a fairly high degree of proficiency in English may be required. But for another large group, the higher secondary stage may be a preparation for entry into the world of work. The Core Course should cater to both groups by promoting the language skills required for academic study as well as the language skills required for the workplace.

OBJECTIVES

The general objectives at this stage are :

- to listen to and comprehend live as well as recorded oral presentations on a variety of topics.
- to develop greater confidence and proficiency in the use of language skills necessary for social and academic purposes.
- to participate in group discussion/interviews, making short oral presentations of given topics.
- to perceive the overall meaning and organisation of the text (i.e., the relationships of the different “chunks” in the text to each other).
- to identify the central/main point and supporting details, etc.
- to build communicative competence in various registers of English.
- to promote advanced language skills with an aim to develop the skills of reasoning, drawing inferences, etc. through meaningful activities.
- to translate texts from mother tongue (s) into english and vice versa.
- to develop ability and knowledge required in order to engage in independent reflection and enquiry.
- to develop the capacity to appreciate literary use of English and also use English creatively and imaginatively.

At the end of this stage learners will be able to do the following :

- read and comprehend extended texts (prescribed and non-prescribed) in the following genres : fiction, science fiction, drama, poetry, biography, autobiography, travel and sports literature, etc.
- text-based writing (i.e., writing in response to questions or tasks based on prescribed or unseen texts)
- understand and respond to lectures, speeches, etc.
- write expository/argumentative essays of 250-500 words, explaining or developing a topic, arguing a case, etc.
- write formal/informal letters and applications for different purposes.
- write items related to the workplace (minutes, memoranda, notices, summaries reports; filling up of forms, preparing CVs, e-mail messages, etc.).
- taking/making notes from reference materials, recorded talks etc.

LANGUAGE ITEMS

The Core Course should draw upon the language items suggested for classes IX-X and delve deeper into their usage and functions. Particular attention may, however, be given to the following areas of grammar :

- the uses of different tense forms for different kinds of narration (e.g. media commentaries, reports, programmes, etc).
- the use of passive forms in scientific and innovative writings.
- converting one kind of sentence/clause into a different kind of structure as well as other items to exemplify stylistic variations in different discourses.
- modal auxiliaries - used based on semantic considerations.

The study of formal (descriptive) grammar, at a very elementary level, will be introduced in Class XI. The Workbook for the Core Course will contain suitable exercises on grammar as well as basic phonology. A conscious knowledge of some-grammatical rules and sound patterns may be useful and interesting at this stage.

METHODS AND TECHNIQUES

The techniques used for teaching should promote habits of self-learning and reduce dependence on the teacher. In general, we recommend a multi-skill, learner-centred, activity based approach, of which there can be many variations. The core classroom activity is likely to be that of silent reading of prescribed/selected texts for comprehension, which can lead to other forms of

language learning activities such as role play, dramatization, group discussion, writing, etc. although many such activities could be carried out without the preliminary use of textual material. It is important that students be trained to read independently and intelligently, interacting actively with texts, with the use of reference materials (dictionaries, thesauruses, etc.) where necessary. Some pre-reading activity will generally be required, and the course books should suggest suitable activities, leaving teachers free to devise other activities when desired. So also, the reading of texts should be followed by post reading activities. It is important to remember that every text can generate different readings. Students should be encouraged to interpret texts in different ways.

Group and pair activities can be resorted to when desired, but many useful language activities can be carried out individually.

In general, teachers should encourage students to interact actively with texts and with each other. Oral activity (group discussion, etc.) should be encouraged.

UNIT-WISE WEIGHTAGE

| Unit/Areas of Learning | | Marks |
|----------------------------------|----|-------|
| A. Reading Unseen Passages (Two) | 20 | 50 |
| B. Writing | 20 | |
| C. Grammar | 10 | |
| D. Textual Questions | | 50 |
| (i) Textbook | 35 | |
| (ii) Supplementary Reader | 15 | |

SECTION A

READING UNSEEN PASSAGE FOR COMPREHENSION AND NOTE-MAKING : 20 MARKS 40 Periods

Two unseen passage with a variety of questions including 5 marks for vocabulary such as words formation and inferring meaning. The total length of both the passages together should be around 1100 words.

1. The passages could be any of the following two types :
2. (a) Factual passage e.g. instructions, descriptions, reports.
(b) Discursive Passages involving opinion e.g. argumentative, persuasive.

SUMMARY

| | Unseen Passages | No. of Words | Testing Areas | Marks Allotted |
|----|-----------------|--------------|---|----------------|
| 1. | 12 marks | around 600 | Short answer type questions to test local, global and inferential comprehension | 10 |
| | | | Vocabulary | 02 |
| 2. | 8 marks | around 500 | Note-making in an appropriate format | 05 |
| | | | Vocabulary | 03 |

One of the passages should have about 600 words carrying 12 marks, the other passage should have about 500 words carrying 8 marks.

The passage carrying 08 marks should be used for testing note-making for 5 marks and testing vocabulary for 3 marks. Vocabulary for 2 marks may be tested in the other passage carrying 12 marks.

| |
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| SECTION - B |
|--------------------|

| | | |
|----------------|-----------------|-------------------|
| WRITING | 20 Marks | 40 Periods |
|----------------|-----------------|-------------------|

3. One out of two tasks such as a factual description of any event or incident, a report or a process based on verbal input provided (80-100 words). 04 marks
4. One out of two compositions based on a visual and/or verbal input (in about 100-150 words). The output may be descriptive or argumentative in nature such as an article for publication in a newspaper or a school magazine or a speech. 08 marks
5. Writing one out of two letters based on given input. Letters types include (a) business or official letters (for making enquiries, registering complaints, asking for and giving information, placing orders and sending replies); (b) letters to the editors (giving suggestions, opinions on an issue of public interest) or (c) application for a job. 08 marks

| |
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| SECTION - C |
|--------------------|

| | | |
|----------------|-----------------|-------------------|
| GRAMMAR | 10 Marks | 30 Periods |
|----------------|-----------------|-------------------|

Different grammatical structures in meaningful context will be tested. Item types will include gap-filling, sentence - reordering dialogue-completion and sentence-transformation. The grammar syllabus will include the following areas :

6. Determiners, Tenses, Clauses, Modals and Error Correction 4
7. Editing Task 4
8. Reordering of sentences 2

SECTION - D

| | | |
|--------------------------|-----------------|--------------------|
| TEXTUAL QUESTIONS | 50 Marks | 100 Periods |
|--------------------------|-----------------|--------------------|

Questions on the prescribed textbooks will test comprehension at different levels; literal, inferential and evaluative based on the following prescribed text books :

1. *English Reader Text book*, published by HPBSE Dharamshala.
2. *Supplementary Reader*, published by HPBSE Dharamshala.

English Reader **35 marks**

9. One out of two extracts based on poetry from the text to test comprehension and appreciation. **04 marks**
10. Two out of three short answer questions from the poetry section to test local and global comprehension of text (upto 30 words). **06 marks**
11. Five out of six short answer questions on the lessons from prescribed text (upto 30 words) **3 * 5 = 15 marks**
12. One out of two long answer type questions based on the text to test global comprehension and extrapolation beyond the set text.
(Expected word limit would be about 100-125 words each.) **10 marks**

Supplementary Reader **15 marks**

13. One out of two long answer type questions based on Supplementary Reader to test comprehension of theme, character and incidents. (upto 100 words) **07 marks**
14. Two out of three short answer questions from the Supplementary Reader (upto 30 words) **4 + 4 = 8 marks**

Prescribed Books :

1. *English Reader Text book* - Hornbill published by HPBSE Dharamshala.
2. *Supplementary Reader* - Snapshot published by HPBSE Dharamshala.

2. हिंदी (ऐच्छिक)

कोड सं० 135

उच्चतर माध्यमिक स्तर में प्रवेश लेने वाला विद्यार्थी पहली बार सामान्य शिक्षा से विशेष अनुशासन की शिक्षा की ओर उन्मुख होता है। दस वर्षों में विद्यार्थी भाषा के कौशलों से परिचित हो जाता है। भाषा और साहित्य के स्तर पर उसका दायरा अब वर्षों में विद्यार्थी भाषा के कौशलों से परिचित हो जाता है। भाषा और साहित्य के स्तर पर उसका दायरा अब घर पास-पड़ोस, स्कूल, प्रांत और देश से होता हुआ धीरे-धीरे विश्व तक फैल जाता है। वह इस उम्र में पहुँच चुका है कि देश की सांस्कृतिक, सामाजिक, राजनीतिक और आर्थिक समस्याओं पर विचार-विमर्श कर सके, एक जिम्मेदार नागरिक की तरह अपनी जिम्मेदारियों को समझ सके तथा देश और खुद के सही दिशा दे सकने में भाषा की ताकत को पहचान सके। ऐसे दृढ़ भाषिक और वैचारिक आधार के साथ जब विद्यार्थी आता है तो उसे विमर्श की भाषा के रूप में हिंदी की व्यापक समझ और प्रयोग में दक्ष बनाना सबसे पहला उद्देश्य होगा। किशोरावस्था से युवावस्था के इस नाजुक मोड़ पर किसी भी विषय का चुनाव करते समय बच्चे और उनके अभिभावक इस बात को लेकर सबसे अधिक चिंतित रहते हैं कि चयनित विषय उनके भावी कैरियर और जीविका के अवसरों में मदद करेगा कि नहीं। इस उम्र के विद्यार्थियों में चिंतन और निर्णय करने की प्रवृत्ति भी प्रबल होती है। इसी आधार पर वे अपने मानसिक, सामाजिक, बौद्धिक और भाषिक विकास के प्रति भी सचेत होते हैं और अपने भावी अध्ययन की दिशा तय करते हैं इस स्तर पर ऐच्छिक हिंदी का अध्ययन एक सृजनात्मक, साहित्यिक, सांस्कृतिक और विभिन्न प्रयुक्तियों की भाषा के रूप में होगा। इस बात पर भी बल दिया जाएगा कि निरंतर विकसित होती हिंदी के अखिल भारतीय स्वरूप से बच्चे का रिश्ता बन सके।

इस स्तर पर विद्यार्थियों में भाषा के लिखित प्रयोग के साथ-साथ उसके मौखिक प्रयोग की कुशलता और दक्षता का विकास भी जरूरी है। प्रयास यह भी होगा कि विद्यार्थी अपने बिखरे हुए विचारों और भावों की सहज और मौलिक अभिव्यक्ति की क्षमता हासिल कर सके।

इस पाठ्यक्रम के अध्ययन से (1) विद्यार्थी अपनी रूचि और आवश्यकता के अनुरूप साहित्य का गहन और विशेष अध्ययन जारी रख सकेंगे। (2) विश्वविद्यालय स्तर पर निर्धारित हिंदी साहित्य से संबंधित पाठ्यक्रम के साथ सहज संबंध स्थापित कर सकेंगे। (3) लेखन कौशल के व्यावहारिक और सृजनात्मक रूपों की अभिव्यक्ति में सक्षम हो सकेंगे। (4) रोजगार के किसी भी क्षेत्र में जाने पर भाषा का प्रयोग प्रभावी ढंग से कर सकेंगे। और (5) यह पाठ्यक्रम विद्यार्थी को संचार तथा प्रकाशन जैसे विभिन्न-क्षेत्रों में अपनी क्षमता आजमाने के अवसर प्रदान कर सकता है।

उद्देश्य

- सृजनात्मक साहित्य की सराहना, उसका आनंद उठाना और उसके प्रति सृजनात्मक और आलोचनात्मक दृष्टि का विकास।
- साहित्य की विविध विधाओं (कविता, कहानी, निबंध आदि) महत्त्वपूर्ण कवियों और रचनाकारों, प्रमुख धाराओं और शैलियों का परिचय कराना।

- ❑ भाषा की सृजनात्मक बारीकियों और व्यावहारिक प्रयोग का बोध तथा उसका संदर्भ और समय के अनुसार प्रभावशाली ढंग से मौखिक और लिखित अभिव्यक्ति कर सकना।
- ❑ विभिन्न ज्ञानानुशासनों के विमर्श की भाषा के रूप में हिंदी की विशिष्ट प्रकृति एवं क्षमता का बोध कराना।
- ❑ साहित्य की प्रभावकारी क्षमता का उपयोग करते हुए सभी प्रकार की विविधताओं (धर्म, जाति, लिंग, वर्ग, भाषा आदि) एवं अंतरों के प्रति सकारात्मक और संवेदनशील रवैये का विकास कराना।
- ❑ देश-विदेश में प्रचलित हिंदी के रूपों से परिचित कराना।
- ❑ संचार-माध्यमों (प्रिंट और इलेक्ट्रॉनिक) में प्रयुक्त हिंदी की प्रकृति से अवगत कराना और नवीन विधियों के प्रयोग की क्षमता का विकास करना।
- ❑ साहित्य की व्यापक धारा के बीच रखकर रचनाओं का विश्लेषण और विवेचन करने की क्षमता हासिल करना।
- ❑ विपरीत परिस्थितियों में भी भाषा का इस्तेमाल शांति के साथ करना।
- ❑ अमूर्त विषयों पर प्रयुक्त भाषा का विकास तथा कल्पनाशीलता और मौलिक चिंतन के लिए प्रयोग करना।

पाठ्य सामग्री और पाठ्य बिंदु

1. काव्य और गद्य संग्रह भाग-1 में प्रमुख रचनाकारों द्वारा लिखित विविध विधाओं से संबद्ध काव्य और गद्य (लगभग 20 पाठ) रचनाएँ होंगी। ये रचनाएँ रचनाकारों और विधाओं की विभिन्न शैलियों से विद्यार्थी को परिचित कराएँगी। रचनाओं में लेखक-परिचय में उनकी साहित्यिक पृष्ठभूमि, साहित्यिक प्रवृत्ति संक्षेप में दी जा सकती है। प्रश्न-अभ्यासों में ऐसे प्रश्न होंगे जो विद्यार्थी की सृजनात्मकता और मौलिकता का विकास कर सके। रचनाओं की प्रस्तुति इस प्रकार होगी कि विद्यार्थी में साहित्य के विकासात्मक स्वरूप ही समझ बन सके।
2. ग्यारहवीं के ऐच्छिक पाठ्यक्रम के लिए पूरक पठन का प्रावधान-साहित्य की विविध विधाओं की रचनाओं का एक संकलन (भाग 1)
3. रचनात्मक और व्यावहारिक लेखन पर आधारित एक पुस्तक (कक्षा XI और कक्षा XII दोनों के लिए) इस पुस्तक में निम्न विषय सम्मिलित होंगे-
 - सर्जनात्मक लेखन-कविता, नाटक, डायरी, कहानी
 - सूचना तंत्र के लिए लेखन-
 - (क) प्रिंटमाध्यम (समाचार पत्र और पत्रिका)
 - वृत्त लेखन, पुस्तक-समीक्षा, साक्षात्कार, सामाजिक विषयों पर लेखन
 - (ख) इलेक्ट्रॉनिक माध्यम-
 - रेडियो-दूरदर्शन के लिए लेखन, समाचार लेखन

व्यावहारिक लेखन-
प्रतिवेदन, कार्यसूची, कार्यवृत्त

शिक्षण-युक्तियाँ :

इन कक्षाओं में अध्यापकों की भूमिका उचित वातावरण निर्माण में सहायक की होनी चाहिए। उनको भाषा और साहित्य की पढ़ाई में इस बात पर ध्यान देने की जरूरत होगी कि -

- कक्षा का वातावरण संवादात्मक ही ताकि अध्यापक विद्यार्थी और पुस्तक तीनों के बीच एक रिश्ता बन सके।
- गलत से सही की ओर पहुंचने का प्रयास हो। यानी बच्चों को स्वतंत्र रूप से बोलने, लिखने और पढ़ने दिया जाए और फिर उनके होने वाली भूलों की पहचानकर अध्यापक अपनी पढ़ाने की शैली में परिवर्तन करे।
- ऐसे शिक्षण-बिंदुओं की पहचान की जाए जिससे कक्षा में विद्यार्थी की सक्रिय भागीदारी रहे और अध्यापक भी उनका साथी हो।
- शारीरिक बाधाग्रस्त विद्यार्थियों के लिए उपयुक्त शिक्षण सामग्री का इस्तेमाल किया जाए तथा किसी भी प्रकार से उन्हें अन्य विद्यार्थियों से कमतर या अलग न समझा जाए।
- विभिन्न विधाओं से संबंधित रूचिकर और महत्वपूर्ण 10 अन्य पुस्तकें - जिनका जिक्र पाठ्यपुस्तक के अंत में किया जाएगा-स्वयं पढ़ने के लिए प्रेरित किया जाए।
- कक्षा में अध्यापक की हर प्रकार की विभिन्नताओं (लिंग, धर्म, जाति वर्ग आदि) के प्रति साकारात्मक और संवेदनशील वातावरण निर्मित करना चाहिए।
- सृजनात्मकता के अभ्यास के लिए विद्यार्थी से साल में कम से कम दो रचनाएं लिखवाई जाएं।

| | |
|---|----|
| (क) अपठित बोध (गद्यांश और काव्यांश बोध) | 20 |
| (ख) रचनात्मक तथा व्यावहारिक लेखन | 20 |
| (ग) अंतरा, भाग-1 (काव्य भाग) | 25 |
| (गद्य-भाग) | 20 |
| पूरक पुस्तक, भाग-1 | 15 |

- क. अपठित बोध : (गद्यांश और काव्यांश बोध) 20
1. गद्यांश पर आधारित चार लघूतरात्मक प्रश्न तथा शीर्षक का चुनाव 10
 2. काव्यांश पर आधारित पांच लघूतरात्मक प्रश्न 10
- ख. रचनात्मक तथा व्यावहारिक लेखन : 20
- निर्धारित पुस्तक के आधार पर सृजनात्मक लेखन से संबंधित दो प्रश्न (5 + 5) 10

| | | | |
|--|---|-------------|----|
| 3. | निबंध | (5 + 5) | 10 |
| 4. | पत्र | | |
| 5. | व्यावहारिक लेखन पर दो प्रश्न | (5 + 5) | 10 |
| 6. | प्रतिवेदन, कार्यसूची, कार्यवृत्त इत्यादि | | |
| ग. | अंतरा, भाग-1 | | 45 |
| | काव्य भाग : | | 25 |
| 7. | सप्रसंग व्याख्या (दो में से एक) | | 05 |
| | कविता के कथ्य और काव्य-सौंदर्य पर चार प्रश्न | | 15 |
| 8. | तीन प्रश्न काव्य पर | (3 + 3 + 3) | 9 |
| 9. | एक प्रश्न काव्य पर-सौंदर्य पर | | 06 |
| 10. | किसी एक कवि का परिचय - | | 05 |
| | <input type="checkbox"/> जीवन परिचय | | 02 |
| | <input type="checkbox"/> रचना-परिचय | | 02 |
| | <input type="checkbox"/> काव्य-शिल्प की विशेषता | | 01 |
| | गद्य भाग : | | 20 |
| 11. | सप्रसंग व्याख्या (दो में से एक) | | 05 |
| 12. | पाठों की विषय वस्तु पर आधारित चार में से तीन प्रश्न | (3 + 3 + 3) | 9 |
| 13. | पूछे गये दो लेखकों में से किसी एक का परिचय (जीवन-परिचय, रचना-परिचय, भाषा-शिल्प की विशेषताएं) | | 06 |
| | पूरक पुस्तक | | 15 |
| 14. | विषय वस्तु पर आधारित (तीन में से दो प्रश्न) | (4 + 4) | 8 |
| 15. | विविध विधाओं पर आधारित दो बोधात्मक प्रश्न | (4 + 3) | 7 |
| निर्धारित पुस्तकें :- (1) अंतरा भाग-1 (हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित) | | | |
| (2) अंतराल (हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित) | | | |
| (3) अभिव्यक्ति और माध्यम (हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित) | | | |

3. HISTORY

CODE NO. 132

RATIONALE

Through a focus on a series of critical historical issues and debates, the students would be introduced to a set of important historical events and processes. A discussion of these themes, it is hoped, would allow students not only to know about these events and processes, but also to discover the excitement of doing history.

OBJECTIVES

- ❑ Effort in these senior secondary classes would be to emphasize to students that history is a critical discipline, a process of enquiry, a way of knowing about the past, rather than just a collection of facts. The syllabus would help them understand the process through which historians write history, by choosing and assembling different types of evidence, and by reading their sources critically. They will appreciate how historians follow the trails that lead to the past, and how historical knowledge develops.
- ❑ The syllabus would also enable students to relate/compare developments in different situations, analyze connection between similar processes located in different time periods, and discover the relationship between different methods of social enquiry within different social sciences.
- ❑ The syllabus in class XI is organized around some major themes in world history. The themes have been selected so as to (i) focus on some important developments in different spheres-political, social, cultural and economic, (ii) study not only the grand narratives of development-urbanization, industrialization and modernization—but also to know about the processes of displacements and marginalization. Through the study of these themes students will acquire a sense of the wider historical processes as well as an idea of the specific debates around them.
- ❑ The treatment of each theme in class XI would include (a) a road picture of the theme under discussion, (b) a more detailed focus on one region of study, (c) an introduction to a critical debate associated with the issue.

| One Paper | 3 Hours | 100 Marks |
|---|----------------|------------------|
| UNITS | PERIODS | MARKS |
| 1. Introduction to World History | - | - |
| Section A : Early Societies | 32 | 15 |
| 2. Introduction | 6 | - |
| 3. From the beginning of time | 14 | - |
| 4. Early Cities | 12 | - |
| Section-B : Empires | 40 | 25 |
| 5. Introduction | 6 | |
| 6. An empire across three continents | 12 | |
| 7. Central Islamic lands | 12 | |
| 8. Nomadic Empires | 10 | |
| Section C : Changing Traditions | 44 | 25 |
| 9. Introduction | 6 | |
| 10. Three orders | 12 | |
| 11. Changing cultural traditions | 14 | |
| 12. Confrontation of cultures | 12 | |
| Section D : Paths to Modernization | 46 | 25 |
| 13. Introduction | 8 | |
| 14. The Industrial Revolution | 12 | |
| 15. Displacing indigenous People | 12 | |
| 16. Paths to modernization | 14 | |
| Map Work (units 1–6) | 10 | 10 |

THEMES IN WORLD HISTORY

| Themes | Periods | Objectives |
|---|---------|---|
| 1. Introduction to World History (8) | | |
| SECTION A : EARLY SOCIETIES | | |
| 2. Introduction (6) | | |
| 3. From the Beginning of Time (14) Focus : Africa, Europe till 15000 BC (a) Views on the origin of human beings. (b) Early societies (c) Historians' views on present-day hunting-gathering societies. | | <input type="checkbox"/> Familiarize the learner with ways of reconstructing human evolution. <input type="checkbox"/> Discuss whether the experience of present-day hunting-gathering people can be used to understand early societies. |
| 4. Early Cities (12) Focus : Iraq, 3rd millennium BC (a) Growth of towns. (b) Nature of early urban societies. (c) Historians' Debate on uses of writing. | | <input type="checkbox"/> Familiarize the learner with the nature of early urban centres. <input type="checkbox"/> Discuss whether writing is significant as a marker of civilization. |
| SECTION B : EMPIRES | | |
| 5. Introduction (6) | | |
| 6. An Empire across Three Continents. (12) Focus : Roman Empire, 27 B.C. to A.D. 600. (a) Political evolution (b) Economic expansion (c) Religion (d) Late Antiquity. (e) Historians views on the institution of Slavery. | | <input type="checkbox"/> Familiarize the learner with the history of a major world empire. <input type="checkbox"/> Discuss whether slavery was a significant element in the economy. |

| Themes | Periods | Objcetives |
|--|-------------|---|
| <p>7. Central Islamic Lands :</p> <p>Focus : 7th to 12th centuries</p> <p>(a) Polity</p> <p>(b) Economy</p> <p>(c) Culture</p> <p>(d) Historians viewpoints on the nature of the crusades.</p> | (12) | <p><input type="checkbox"/> Familiarize the learner with the rise of Islamic empires in the Afro-Asian territories and its implications for economy and society.</p> <p><input type="checkbox"/> Understand what the crusades meant in these regions and how they were experienced.</p> |
| <p>8. Nomadic Empires :</p> <p>Focus : the Mongol, 13th to 14th century</p> <p>(a) The nature of nomadism.</p> <p>(b) Formation of empires.</p> <p>(c) Conquests and relations with other states.</p> <p>(d) Historians' views on nomadic societies and state formation.</p> | (10) | <p><input type="checkbox"/> Familiarize the learner with the varieties of nomadic society and their institutions.</p> <p><input type="checkbox"/> Discuss whether state formation is possible in nomadic societies.</p> |
| SECTION-C : CHANGING TRADITIONS | | |
| <p>9. Introduction</p> | (6) | |
| <p>10. Three Orders</p> <p>Focus :Western Europe, 13th-16th Century</p> <p>(a) Feudal Society and economy :</p> <p>(b) Formation of States.</p> <p>(c) Church and Society.</p> <p>(d) Historian's views on decline of feudalism</p> | (12) | <p><input type="checkbox"/> Familiarize the learner with the nature of the economy and society of this period and the changes within them.</p> <p><input type="checkbox"/> Show how the debate on the decline of feudalism helps in understanding processes of transition.</p> |

| Themes | Periods | Objectives |
|--|---------|--|
| <p>11. Changing cultural traditions (14) Focus on Europe, 14th to 17th century</p> <p>(a) New ideas and new trends in literature and arts.</p> <p>(b) Relationship with earlier ideas.</p> <p>(c) The contribution of West Asia.</p> <p>(d) Historian's view points on the validity of the notion 'European Renaissance'.</p> <p>12. Confrontation of Cultures (12) Focus on the America 15th to 18th century.</p> <p>(a) European Voyages of exploration.</p> <p>(b) Search for gold; enslavement, raids, extermination.</p> <p>(c) Indigeonous people and cultures - the Arawaks, the Aztecs, the Incas.</p> <p>(d) The History of displacements.</p> <p>(e) Historian's view points on the slave trade.</p> | | <p><input type="checkbox"/> Explore the intellectual trends in the period.</p> <p><input type="checkbox"/> Familiarize students with the paintings and buildings of the period.</p> <p><input type="checkbox"/> Introduce the debate around the idea of 'Renaissance'.</p> <p><input type="checkbox"/> Discuss changes in European economy that led to the voyages.</p> <p><input type="checkbox"/> Discuss the implications of the conquests for the indigenous people.</p> <p><input type="checkbox"/> Explore the debate on the nature of the slave trade and see what this debate tells us about the meaning of these "discoveries".</p> |
| SECTION D: PATHS TO MODERNIZATION | | |
| <p>13. Introduction (8)</p> <p>14. The Industrial Revolution. (12) Focus on England, 18th and 19th century.</p> <p>(a) Innovations and technological change.</p> <p>(b) Patterns of growth.</p> <p>(c) Emergence of a working class.</p> <p>(d) Historians' viewpoints Debate, Was there an Industrial Revolution ?</p> | | <p><input type="checkbox"/> Understand the nature of growth in the period and its limits.</p> <p><input type="checkbox"/> Initiate students to the debate on the idea of industrial revolution.</p> |

| Themes | Periods | Objectives |
|---|---------|--|
| <p>15. Displacing indigenous People. (12) Focus on North America and Australia, 18th-20th century,</p> <p>(a) European colonists in North America and Australia.</p> <p>(b) Formation of white settler societies.</p> <p>(c) Displacement and repression of local people.</p> <p>(d) Historians view points on the impact of European settlement on indigenous population.</p> | | <p><input type="checkbox"/> Sensitize students to the processes of displacements that accompanied the development of America and Australia.</p> <p><input type="checkbox"/> Understand the implications of such processes for the displaced populations.</p> |
| <p>16. Paths to Modernization (14) Focus on East Asia. Late 19th and 20th century.</p> <p>(a) Militarization and Economic growth in Japan.</p> <p>(b) China and the Communist alternative.</p> <p>(c) Historians' Debate on meaning of modernization</p> | | <p><input type="checkbox"/> Make students aware that transformation in the modern world takes many different forms.</p> <p><input type="checkbox"/> Show how notions like 'modernization' need to be critically assessed.</p> |
| <p>17. Map Work on Units 1-15 (10)</p> | | |

PRESCRIBED BOOKS :

1. विश्व इतिहास के कुछ विषय : हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित
2. Themes in World History : N.C.E.R.T Publication.

4. ECONOMICS

CODE NO. 133

RATIONALE

Economics is one of the social sciences, which has great influence on every human being. As economic life and the economy go through change, the need to ground education in children's own experience becomes essential. While doing so, it is imperative to provide them opportunities to acquire analytical skills to observe and understand the economic realities.

At senior secondary stage, the learners are in a position to understand abstract ideas, exercise the power of thinking and to develop their own perception. It is at this stage, the learners are exposed to the rigour of the discipline of economics in a systematic way.

The economics courses are introduced in such a way that in the initial stage, the learners are introduced to the economic realities that the nation is facing today along with some basic statistical tools to understand these broader economic realities. In the later stage, the learners are introduced to economics as a theory of abstraction.

The economics courses also contain many projects and activities. These will provide opportunities for the learners to explore various economic issues both from their day-to-day life and also from issues, which are broader and invisible in nature. The academic skills that they learn in these courses would help to develop the projects and activities. The syllabus is also expected to provide opportunities to use information and communication technologies to facilitate their learning process.

OBJECTIVES

1. Understanding of some basic economic concepts and development of economic reasoning which the learners can apply in their day-to-day life as citizens, workers and consumers.
2. Realisation of learners' role in nation building and sensitivity to the economic issues that the nation is facing today.
3. Equipment with basic tools of economics and statistics to analyse economic issues. This is pertinent for even those who may not pursue this course beyond senior secondary stage.
4. Development of understanding that there can be more than one views on any economic issue and necessary skills to argue logically with reasoning.

One Paper **3 Hours** **100 Marks**

| Units | Periods | Marks |
|-------|---------|-------|
|-------|---------|-------|

PART A : STATISTICS FOR ECONOMICS

| | | |
|---|------------|-----------|
| 1. Introduction | 8 | 3 |
| 2. Collection and Organization and Presentation of Data | 26 | 12 |
| 3. Statistical Tools and Interpretation | 70 | 35 |
| | 104 | 50 |

PART B : INDIAN ECONOMIC DEVELOPMENT

| | | |
|---|------------|-----------|
| 4. Development Policies and Experience (1947-90) | 18 | 10 |
| 5. Economic Reforms since 1991 | 14 | 8 |
| 6. Current Challenges facing Indian Economy | 60 | 25 |
| 7. Development experience of India-A comparison with neighbours | 12 | 7 |
| | 104 | 50 |

PART A : STATISTICS FOR ECONOMICS

In this course, the learners are expected to acquire skills in collection, organisation and presentation of quantitative and qualitative information pertaining to various simple economic aspects systematically. It also intends to provide some basic statistical tools to analyse, interpret any economic information and draw appropriate inferences. In this process, the learners are also expected to understand the behaviour of various economic data.

Unit 1 : Introduction

Periods 8

What is Economics ?

Meaning, scope and importance of statistics in Economics

Unit 2 : Collection, Organisation and Presentation of data (26 Periods)

Collection of data-sources of data-primary and secondary; how basic data is collected; methods of collecting data; Some important sources of secondary data : Census of India and National Sample Survey Organisation.

Organisation of Data : Meaning and types of variables ; Frequency Distribution.

Presentation of Data : Tabular Presentation and Diagrammatic Presentation of Data : (i) Geometric forms (bar diagrams and pie diagrams), (ii) Frequency diagram (histogram, polygon and ogive) and (iii) Arithmetic line graphs (time series graph).

Unit 3 : Statistical Tools and Interpretation (Periods 70)

(For all the numerical problems and solutions, the appropriate economic interpretation may be attempted. This means, the students need to solve the problems and provide interpretation for the results derived)

Measures of Central Tendency-mean (simple and weighted, median and mode.

Measures of Dispersion-absolute dispersion (range, quartile deviation, mean deviation and standard deviation); relative dispersion (co-efficient of quartile-deviation, co-efficient of mean deviation, co-efficient of variation); Lorenz Curve : Meaning and its application.

Correlation-meaning, scatter diagram; Measures of correlation-Karl Pearson's method (two variables ungrouped data) Spearman's rank correlation.

Introduction to Index Numbers -meaning, types-wholesale price index, consumer price index and index to industrial production, uses of index numbers; Inflation and index numbers.

PART-B : INDIAN ECONOMIC DEVELOPMENT

Unit 4 : Development Policies and Experience (1947-90) : (Periods 18)

A brief introduction of the state of Indian economy on the eve of independence.

Common goals of Five Year Plans.

Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy, etc.) industry (industrial licensing, etc.) and foreign trade.

Unit 5 : Economic Reforms since 1991 : (Periods 14)

Need & main features-liberalisation, globalisation and privatisation;

An appraisal of LPG policies.

Unit 6 : Current challenges facing Indian Economy : (Periods 60)

Poverty -absolute and relative ; Main programmes for poverty alleviation : A critical assessment;

Rural development : Key issues-credit and marketing-role of cooperatives; agricultural diversification; alternative farming-organic farming.

Human Capital Formation : How people become resource ; Role of human capital in economic development, Growth of Education Sector in India.

Employment : Growth, informalisation and other issues : Problems and policies

Infrastructure : Meaning-and Types : Case Studies : Energy and Health : problems and Policies -a critical assessment ;

Sustainable Economic Development :

Meaning ; Effects of Economic Development on Resources and Environment.

Unit 7 : Development Experience of India : (Periods 12)

A comparison with neighbours

India and Pakistan

India and China

Issues : Growth, Population, Sectoral development and other developmental indicators.

PRESCRIBED BOOKS :

- | | |
|---------------------------------|--|
| 1. अर्थशास्त्र में सांख्यिकी | हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित। |
| 2. भारतीय अर्थव्यवस्था का विकास | हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित। |
| 3. Statistics for Economics | NCERT Publication |
| 4. Indian Economic Development | NCERT Publication |

5. POLITICAL SCIENCE

CODE NO. 134

RATIONALE

At the senior secondary level students who opt Political Science are given an opportunity to get introduced to the diverse concerns of a Political Scientist. At this level there is a need to enable students to engage with political processes that surround them and provide them with an understanding of the historical context that has shaped the present. The different courses introduce the students to the various streams of the discipline of political science : political theory, Indian politics and international politics. Concerns of the other two streams — comparative politics and public administration — are accommodated at different places in these courses. In introducing these streams, special care has been taken not to burden the students with the current jargon of the discipline. The basic idea here is to lay the foundations for a serious engagement with the discipline at the undergraduation stage.

OBJECTIVES

Indian Constitution At Work :—

- ‡ Enable students to understand historical processes and circumstances in which the Constitution was drafted.
- ‡ Provide opportunity for students to be familiar with the diverse visions that guided the makers of the Indian Constitution.
- ‡ Enable students to identify the certain key features of the Constitution and compare these to other constitutions in the world.
- ‡ Analyse the ways in which the provisions of the Constitution have worked in real political life.

POLITICAL THEORY

- ‡ Develop the skills for logical reasoning and abstraction.
- ‡ Inculcate attention to and respect for viewpoints other than one's own.
- ‡ Introduce students to the different political thinkers in relation to a concept and in everyday social life.
- ‡ Enable students to meaningfully participate in a concern of current political life that surrounds them.
- ‡ Encourage the students to analyse any unexamined prejudices that one may have inherited.

POLITICS IN INDIA AFTER INDEPENDENCE

- † Enable students to be familiar with some of the key political events and figures in the post-independence period.
- † Develop skills of political analysis through events and processes of recent history.
- † Develop their capacity to link macro processes with micro situations and their own life.
- † Encourage the students to take a historical perspective of making sense of the contemporary India.

CONTEMPORARY WORLD POLITICS

- † Enable the students to expand their horizon beyond India and make sense of the political map of contemporary world.
- † Familiarise the students with some of the key political events and processes in the post cold war era.
- † Equip student to be conscious of the way in which global events and processes shape our everyday lives.
- † Strengthen their capacity for political analysis by thinking of contemporary developments in a historical perspective.

| | | |
|------------------|------------------|-----------------------|
| Marks 100 | One Paper | Time : 3 Hours |
| UNITS | PERIODS | MARKS |

PART A : INDIAN CONSTITUTION AT WORK

| | | |
|--|------------|-----------|
| 1. Making of the Constitution | 8 | 4 |
| 2. Fundamental Rights | 10 | 4 |
| 3. System of representational democracy | 12 | 6 |
| 4. Executive in a parliamentary system | 15 | 8 |
| 5. Legislature at the Central and state level | 15 | 8 |
| 6. Judiciary | 12 | 6 |
| 7. Federalism | 8 | 4 |
| 8. Local Government | 8 | 4 |
| 9. Political Philosophy underlying the constitution | 8 | } 6 |
| 10. Constitution as a living document. | 8 | |
| | 104 | 50 |

PART B : POLITICAL THEORY

| | | |
|--------------------------------------|------------|-----------|
| 11. Introduction to Political Theory | 10 | 6 |
| 12. Freedom | 10 | } 14 |
| 13. Equality | 12 | |
| 14. Social Justice | 12 | |
| 15. Rights | 12 | 8 |
| 16. Citizenship | 12 | 6 |
| 17. Nationalism | 10 | 4 |
| 18. Secularism | 10 | 6 |
| 19. Peace | 8 | } 6 |
| 20. Development | 8 | |
| | 104 | 50 |

COURSE CONTENT :**PART A : INDIAN CONSTITUTION AT WORK****1. Making of the constitution :****8 Periods**

Why do we need a constitution ? What does a constitution do ? Who made our constitution ? How did the country's partition affect the working of the Constituent Assembly ? What were the sources of the constitution ?

2. Fundamental Rights :**10**

Why do we need bill of rights in a constitution ? What are the fundamental rights provided by the constitution ? Why was the right to property removed from fundamental rights ? How have the interpretations by the courts influenced fundamental rights ? How has provision of fundamental rights provided the basis for civil liberties movement in India ? What are the fundamental duties ?

3. System of representational democracy :**12**

What are the different methods of representations ? How do these methods affect parties and politics ? Why was the first past the post system chosen in India ? What have been the effects of this system ?

Why is there a system of reserved seats ? What are the provisions to ensure free and fair elections ? What does the Election Commission do ?

4. Executive in a parliamentary system : **15**

Why was the parliamentary system chosen over other forms of government ? Why does the parliamentary system need a constitutional head ? How are the prime minister and the chief ministers elected ? What are the powers of the President of India ? What are the powers of the Prime Minister or the Chief Minister and the council of ministers ? What are the powers of the governor ?

5. Legislature at the central and state level : **15**

Why does the parliament of India have two Houses ? How are the Parliament and the state assemblies constituted ? What are the powers of the Rajya Sabha and Lok Sabha ? How are the laws passed ? How is the executive made accountable ? What are the constitutional means to prevent defection ?

6. Judiciary : **12**

What is Rule of law ? Why do we need an independent judiciary ? What are the provisions that ensure the independence of judiciary in India ? How are judges appointed ? What are the powers of the Supreme and the High courts ? How do they use their jurisdiction for public interest.

7. Federalism : **8**

What is federalism ? How does federalism ensure accommodation of diversities ? In which ways is the Indian constitution federal ? In which ways does the constitution strengthen the centre ? Why are there special provisions for some states and areas ?

8. Local government **8**

Why do we need decentralisation of power ? What has been the status of local government in the constitution ? What are the basic features of rural and urban local governments ? What has been the effect of giving constitutional status to local governments ?

9. Political Philosophy underlying the constitution : **8**

What are the core provisions of the constitution ? What is the vision underlying these core provisions ? How is this vision shaped by modern Indian political thought ?

10. Constitution as a living document **8**

How has the constitution changed since its inception ? Why further changes are being debated ? How has the working of democracy affected the constitution ?

PART-B : POLITICAL THEORY

- 11. Introduction to Political Theory** 10
 What is politics ? Do we find politics in seemingly non- political domains ?
 Can political arguments be resolved through reasoning? Why do we need political theory ?
- 12. Freedom** 12
 What is freedom ? What are reasonable constraints on individual liberty ? How are the limits defined ?
- 13. Equality** 12
 Do all differences involve inequality ? Does equality imply sameness ?
 What are the major forms of inequality ? How can equality be realized ?
- 14. Social Justice** 12
 Is justice all about fairness ? What is the relationship between justice and equality ? What are the different forms of injustice ? In which ways can justice be secured ?
- 15. Rights** 12
 How is a right different from any claim ? What are the major kinds of right claims ? How do we resolve a conflict between individual and community rights ? How does the state enable and obstruct rights ?
- 16. Citizenship** 12
 Who is a citizen ? What are relevant grounds for inclusion and exclusion ? How are new claims to citizenship negotiated ? Can we have a global citizenship ?
- 17. Nationalism** 10
 How are the boundaries of a nation defined ? Must every nation have a state ? What demands can a nation make on its citizens ? What is the basis of the right to self determination ?
- 18. Secularism** 10
 What is secularism ? Which domains of life does it relate to ? What is a secular state ? Why do we need secular state in modern times ? Is secularism suitable for India ?
- 19. Peace** 8
 What is peace ? Does peace always require non-violence ? Under what conditions is war justified ? Can armament promote global peace ?

20. Development

8

What is development ? Is there a universally accepted model of development ? How to balance the claims of present generation with claims of future generations ?

PRESCRIBED BOOKS

- | | |
|---|---|
| 1. भारत का संविधान (सिद्धांत और व्यवहार) | हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित |
| 2. राजनीतिक सिद्धांत | हि. प्र. स्कूल शिक्षा बोर्ड द्वारा प्रकाशित |
| 3. Indian Constitution at Work | NCERT Publication |
| 4. Bharat Ka Samvidhan (Sidhant Aur Vyavhar) | NCERT Publication |

6. GEOGRAPHY

CODE NO. 142

RATIONALE

Geography is introduced as an elective subject at the senior secondary stage. After ten years of general education, students branch out at the beginning of this stage and are exposed to the rigours of the discipline for the first time. Being an entry point for the higher education, students choose geography for pursuing their academic interest and, therefore, need a broader and deeper understanding of the subject. For others, geographical knowledge is useful in daily lives because it is a valuable medium for the education of young people. Its contributions lie in the content, cognitive processes, skills and values that geography promotes and thus helps the students explore, understand and evaluate the environmental and social dimensions of the world in a better manner.

Since geography explores the relationship between people and their environment, it includes studies of physical and human environments and their interactions at different scales - local, state/region, nation and the world. The fundamental principles responsible for the varieties in the distributional pattern of physical and human features and phenomena over the earth's surface need to be understood properly. Application of these principles would be taken up through selected case studies from the world and India. Thus, the physical and human environment of India and study of some issues from a geographical point of view will be covered in greater detail. Students will be exposed to different methods used in geographical investigations.

OBJECTIVES

The course in geography will help learners :

- Familiarise themselves with the terms, key concepts and basic principles of geography,
- Search for, recognise and understand the processes and patterns of the spatial arrangement of the natural as well as human features and phenomena on the earth's surface;
- Understand and analyse the inter-relationship between physical and human environments and their impact;
- Apply geographical knowledge and methods of inquiry to new situations or problems at different levels-local, regional, national and global;

- Develop geographical skills, relating to collection, processing and analysis of data/information and preparation of report including maps and graphs and use of computers wherever possible; and
- Utilize geographical knowledge in understanding issues concerning the community such as environmental issues, socio-economic concerns, gender and become responsible and effective member of the community.

Theory

| One Theory Paper | 3 Hours | 70 Marks |
|--|---------|-------------------|
| A. FUNDAMENTALS OF PHYSICAL GEOGRAPHY | | (35 MARKS) |
| Unit- 1. Geography as a Discipline | | 3 |
| Unit- 2. The Earth | | 5 |
| Unit- 3. Land forms | | 8 |
| Unit- 4. Climate | | 10 |
| Unit- 5. Water (Oceans) | | 4 |
| Unit- 6. Life on the Earth | | 3 |
| Unit- 7. Map Work | | 2 |
| B. INDIA-PHYSICAL ENVIRONMENT | | (35 MARKS) |
| Unit- 8. Introduction | | 3 |
| Unit- 9. Physiography | | 10 |
| Unit- 10. Climate, Vegetation and Soil | | 10 |
| Unit- 11. Natural hazards and Disasters | | 9 |
| Unit- 12. Map Work - | | 3 |
| PRACTICAL WORK | | |
| One Paper | 3 Hours | 30 Marks |
| Unit- 1. Fundamentals of Maps | | 10 |
| Unit- 2. Topographic and Weather Maps | | 20 |

PART A : FUNDAMENTALS OF PHYSICAL GEOGRAPHY (Periods 75)

Unit 1 : Geography as a Discipline (Periods 3)

Geography as an integrating discipline, as a science of spatial attributes.
 Branches of geography : importance of physical geography.

Unit 2 : The Earth**(Periods 10)**

Origin and evolution of the earth, Interior of the earth; Wegener's continental drift theory and plate tectonics; earthquakes and volcanoes.

Unit 3 : Landforms**(Periods 18)**

Rocks : major types of rocks and their characteristics;
Landforms and their evolution.

Geomorphic processes-weathering, mass wasting, erosion and deposition; soil-formation.

Unit 4 : Climate**(Periods 30)**

- Atmosphere-composition and structure; elements of weather and climate.
- Insolation - angle of incidence and distribution; heat budget of the earth - heating and cooling of atmosphere, (conduction, convection, terrestrial radiation and advection;) temperature - factors controlling temperature; distribution of temperature - horizontal and vertical; inversion of temperature.
- Pressure - pressure belts; winds - planetary, seasonal and local; air masses and fronts, tropical and extratropical and cyclones.
- Precipitation - evaporation; condensation - dew, frost, fog, mist and cloud; rainfall-types and world distribution;
- World climates - classification (Koeppen); greenhouse effect, global warming.

Unit 5 : Water (Oceans)**(Periods 8)**

- Hydrological Cycle.
- Oceans - distribution of temperature and salinity; movements of ocean water - waves, tides and currents.

Unit 6 : Life on the Earth**(Periods 6)**

- Biosphere - importance of plants and other organisms; biodiversity and conservation; ecosystems and ecological balance.

UNIT 7 : Map Work on outline political map of the world for identification only

PART B : INDIA - PHYSICAL ENVIRONMENT**(PERIODS 65)****Unit 8 : Introduction****(Periods 3)**

- Location - space relations and India's place in the world.

Unit 9 : Physiography**(Periods 23)**

- Structure and Relief;
- Drainage systems - concept of water sheds; the Himalayan and the Peninsular;
- Physiographic divisions

Unit 10 : Climate, Vegetation and Soil**(Periods 23)**

- **Weather and climate** - spatial and temporal distribution of temperature, pressure winds and rainfall, Indian monsoons; mechanism, onset and withdrawal variability - spatial and temporal;
- **Natural vegetation** - forest – types and distribution; wild life; conservation ; biosphere reserves.
- **Soils** - major types (ICAR's classification) and their distribution, soil degradation conservation.

Unit 11 : Natural Hazards and Disasters : Causes, Consequences and Management (One case study to be introduced for each topic)**(Periods 16)**

- Floods and droughts
- Earthquakes and Tsunami
- Cyclones
- Landslides

Unit 12 : Map Work on Outline Political map of India-for identification, location and Labelling.**PRACTICAL WORK****(PERIODS 40)****Unit 1 : Fundamentals of Maps****(Periods 12)**

- **Maps** - types; scales - types; construction of linear scales, measuring distance, finding direction and use of symbols.

- c Latitude, Longitude and time;
- c **Map projection** : Typology; construction and properties of conical with one standard parallel and Mercator's projection.

Unit 2 : Topographic and Weather Maps

(Periods 28)

- c Study of topographic maps (1:50,000 ; 25,000, Survey of India maps) : contour cross-section and identification of landforms-slopes, hills, valleys waterfalls, cliffs; distribution of settlements.
- c Aerial Photographs and Satellite Imageries.
- c Aerial Photographs : Types & Geometry-vertical aerial photographs; difference between maps & aerial photographs; photo scale determination;
- c Satellite imageries, stages in remote sensing data-acquisition, platform & sensors and data products, (photographic & digital).
- c Interpretation of Physical & cultural features from aerial photographs & satellite imageries.
- c Use of weather instruments : thermometer, wet and dry-bulb thermometer, barometer, wind vane, raingauge;
- c Use of weather charts : describing pressure, wind and rainfall distribution.

PRESCRIBED BOOKS:

- | | | |
|--------------------------------------|---|-------------------|
| 1. भौतिक भूगोल के मूल सिद्धांत | राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद द्वारा प्रकाशित | |
| 2. भारत भौतिक पर्यावरण | राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद द्वारा प्रकाशित | |
| 3. भूगोल में प्रयोगात्मक कार्य | राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद द्वारा प्रकाशित | |
| 4. Fundamental of Physical Geography | | NCERT Publication |
| 5. India Physical Environment | | NCERT Publication |
| 6. Practical Work in Geography | | NCERT Publication |

7. PSYCHOLOGY

CODE NO. 144

Psychology is introduced as an elective subject at the higher secondary stage of school education. As a discipline, psychology specializes in the study of experiences, behaviours and mental processes of human beings within a socio-cultural and socio-historical context. This course purports to introduce the learners to the basic ideas, principles and methods in psychology so as to enable them to understand themselves and their social world better. The emphasis is put on creating interest and exposure needed by learners develop their own knowledge base and understanding.

The course deals with psychological knowledge and practices which are contextually rooted. It emphasizes the complexity of behavioural processes and discourages simplistic cause-effect thinking. This is pursued by encouraging critical reasoning, allowing students to appreciate the role of cultural factors in behaviour, and illustrating how biology and experience shape behaviour. The course while developing an appreciation of subjectivity, also focuses on multiplicity of worldviews.

It is suggested that the teaching-learning processes should involve students in evolving their own understanding. Therefore, Teaching of Psychology should be based on the use of case studies, narratives, experiential exercises, analysis of common everyday experiences, etc.

The present effort at reforming and updating the syllabus is based on the feedback received from the teachers and students as well as some new educational and curricular concerns such as, the curriculum load, interdisciplinary approach, issues related to gender parity, concerns of special and marginalised groups, peace and environmental concerns, and inculcating citizenship values.

Objectives

1. To develop appreciation about human behaviour and human mind in the context of learners' immediate society and environment.
2. To develop in learners an appreciation of multidisciplinary nature of psychological knowledge and its application in various aspects of life.
3. To enable learners to become perceptive, socially aware and self-reflective.
4. To facilitate students' quest for personal growth and effectiveness, and to enable them to become responsive and responsible citizens.

| |
|---------------|
| THEORY |
|---------------|

One Theory Paper

Time : 3 Hours

Marks : 70

UNIT-WISE WEIGHTAGE

| UNITS | MARKS |
|---|-----------|
| Foundations of Psychology | |
| I. What is psychology ? | 08 |
| II. Methods of Enquiry in Psychology | 09 |
| III. The Bases of Human Behaviour | 08 |
| IV. Human Development | 07 |
| V. Sensory, Attentional and Perceptual Processes | 08 |
| VI. Learning | 08 |
| VII. Human Memory | 08 |
| VIII. Thinking | 07 |
| IX. Motivation and Emotion | 07 |
| Practicals (Projects, experiments, small studies) | 30 |

Foundations of Psychology**(90 Periods)**

| |
|--------------------------------------|
| Unit I : What is Psychology ? |
|--------------------------------------|

08 Marks (16 Periods)

The unit seeks to develop understanding and appreciation of psychology as a discipline, its evolution, its applications and its relationships with other sciences through appropriate and interesting examples and analysis of everyday experience.

What is psychology ? Popular notions about discipline of psychology; Understanding mind and behaviour; Evolution of psychology; Branches of psychology: Themes of research and applications; Psychology and other disciplines; Psychologists at work, Development of Psychology in India.

| |
|---|
| Unit II : Methods of Enquiry in Psychology |
|---|

09 Marks (20 Periods)

The objective of this unit is to discuss methods of enquiry for collecting and analysing psychological data.

Goals of psychological enquiry; Nature of psychological data; Some important methods: Observational, Experimental, Correlational, Survey, Psychological testing, Case study; Analysis of data : measures of central Tendency-computation, Graphical Presentation of Data- Bar, Histogram, Polygon Limitations of psychological enquiry; Ethical issues.

Unit III : The Bases of Human Behaviour**08 Marks (20 Periods)**

The unit will focus on the role of biological and socio-cultural factors in the shaping of human behaviour.

Evolutionary perspective; Biological basis : Biological and cultural roots; Biology of behaviour : Structure and functions of nervous system and endocrine system; Relationship of nervous system and endocrine system with behaviour and experience; Brain and behaviour; Heredity : Genes and behaviour; Cultural basis : Socio-cultural shaping of behaviour (e.g. family, community, faith, gender, caste, disability etc.) Socialisation, enculturation and acculturation.

Unit IV : Human Development**07 Marks (16 Periods.)**

This unit deals with variations in development and the developmental tasks during the life span.

Meaning of development; Factors influencing development; Context of development; Overview of developmental stages : infancy, Childhood, Challenges of Adolescence, Adulthood and Old age.

Unit V : Sensory, Attentional and Perceptual Processes**08 Marks (20 Periods)**

This unit aims at understanding how various sensory stimuli are received, attended to and given meaning.

Knowing the world; Nature and varieties of stimulus; Sense modalities; Adaptation; Attentional processes; Selective and sustained attention; Perceptual processes; The Perceiver; Principles of perceptual organisation; After images; Perception of space, depth and distance; Perceptual constancies; Illusions; Socio-cultural influences on perception.

Unit VI : Learning**08 Marks (20 Periods.)**

This unit focuses on how one acquires new behaviour and how changes in behaviour take place.

Nature of learning; Paradigms of learning : Classical and Operant conditioning, Observational learning, Cognitive learning, Verbal learning, Concept learning Skill-learning; Factors facilitating learning; Transfer of learning Types Applications The Learner : Learning styles; Learning disabilities ; Applications of learning principles.

Unit VII : Human Memory**08 Marks (20 Periods.)**

This unit deals with how information is received stored, retrieved and lost. It will also discuss how memory can be improved.

Nature of memory; Information Processing Approach; Levels of processing; Memory systems-Sensory memory, Short-term memory, Long-term memory; Knowledge representation and organisation in memory; Memory as a constructive process; Nature and causes of forgetting; Enhancing memory..

Unit VIII : Thinking**07 Marks (20 Periods.)**

This unit deals with thinking and related processes like reasoning, problem-solving, decision making and creative thinking. The relationship between thought and language will also be discussed.

Nature of thinking ; Thought and language; Development of language and language use; Reasoning; Problem-solving; Decision making; Creative Thinking: Nature, Process and development.

Unit IX : Motivation and Emotion**07 Marks (18 Periods.)**

This unit focuses on why human beings behave as they do. It also deals with how people experience positive and negative events and respond to them.

Nature of motivation; Biological motives; Social and psychological motives-Achievement, Affiliation and Power; Maslow's hierarchy of needs; Nature of emotions; Physiological, cognitive and cultural bases of emotions; Expression of emotions; Enhancing positive emotions, e.g. Happiness. Optimism etc.; Managing negative emotions, e.g. anger, fear etc.

Practicals (Projects, experiments, small studies, etc.) 30 Marks (60 Pds.)

The students shall be required to undertake one project and conduct three practicals. The project would involve the use of different methods of enquiry and related skills. Practical would involve undertaking experiments and conducting small studies, exercises, related to the topics covered in the course (Human development, Learning, Memory, Motivation, Perception, Attention, Thinking)

- (i) Reporting file including Project work; **05 Marks**
- (ii) Viva Cove : **05 Marks**
- (iii) Two experiments : 10 marks each (05 for accurate conduct and 05 for reporting)

PRESCRIBED BOOKS:

- 1. मनोविज्ञान का परिचय एन.सी.ई.आर.टी.
- 2. Psychology NCERT Publication

8. SOCIOLOGY

CODE NO. 137

RATIONALE

Sociology is introduced as an elective subject at the higher secondary stage. The syllabus is designed to help learners to reflect on what they hear and see in the course of everyday life and develop a constructive attitude towards society in change; to equip a learner with concepts and theoretical skills for the purpose. The Curriculum of Sociology at this stage should enable the learner to understand dynamics of human behaviour in all its complexities and manifestations. The learners of today need answers and explanations to satisfy the questions that arise in their minds while trying to understand social world. Therefore, there is a need to develop an analytical approach towards the social structure so that they can meaningfully participate in the process of social change. There is scope in the syllabus not only for interactive learning, based on exercises and project work but also for teachers and students to jointly innovate new ways of learning.

- c Sociology studies society. The child's familiarity with the society in which she/he lives in makes the study of sociology a double edged experience. At one level sociology studies institutions such as family and kinship, class, caste and tribe religion and region-contexts with which children are familiar of, even if differentially. For India is a society which is varied both horizontally and vertically, the effort in the books will be to grapple overtly with this both as a source of strength and as a site for interrogation.
- c Significantly the intellectual legacy of sociology equips the discipline with a plural perspective that overtly engages with the need for defamiliarization, to unlearn and question the given. This interrogative and critical character of sociology also makes it possible to understand both other cultures as well as relearn about one's own culture.
- c This plural perspective makes for an inbuilt richness and openness that not too many other disciplines in practice share. From its very inception sociology has had mutually enriching and contesting traditions of an interpretative method that openly takes into account 'subjectivity' and causal explanations that pays due importance to establishing causal correspondences with considerable sophistication. Not surprisingly its field work tradition also entails large scale survey methods as well as a rich ethnographic tradition. Indeed Indian sociology, in particular has bridged this distinction between what has often been seen as distinct approaches of sociology and social anthropology. The syllabus provides ample

opportunity to make the child familiar with the excitement of field work as well as its theoretical significance for the very discipline of sociology.

- c The plural legacy of sociology also enables a bird's eye view and a worm's eye view of the society the child lives in. This is particularly true today when the local is inextricably defined and shaped by macro global processes.
- c The syllabus proceeds with the assumption that gender as an organizing principle of society cannot be treated as an add on topic but is fundamental to the manner that all chapters shall be dealt with.
- c The chapters shall seek for a child centric approach that makes it possible to connect the lived reality of children with social structures and social processes that sociology studies.
- c A conscious effort will be made to build into the chapters a scope for exploration of society that makes learning a process of discovery. A way towards this is to deal with sociological concepts not as givens but a product of societal actions humanly constructed and therefore open to questioning.

OBJECTIVES

1. To enable learners to relate classroom teaching to their outside environment.
2. To introduce them to the basic concepts of sociology that would enable them to observe and interpret social life.
3. To be aware of the complexity of social processes.
4. To appreciate diversity in society in India and the world at large.
5. To build the capacity of students to understand and analyze the changes in contemporary Indian society.

One Paper

3 Hours

Marks : 100

UNIT-WISE WEIGHTAGE

| UNITS | MARKS |
|-------|-------|
|-------|-------|

INTRODUCING SOCIOLOGY

| | |
|---|----|
| I. Society, Sociology and relationship with other social sciences | 10 |
| II. Basic Concepts | 10 |
| III. Social Institutions | 10 |
| IV. Culture and Society | 10 |
| V. Practical Sociology : Methods and Techniques | 10 |

UNDERSTANDING SOCIETY

| | |
|---|----|
| VI. Structure, Process and Stratification | 10 |
| VII. Social Change | 10 |
| VIII. Environment and Society | 10 |
| IX. Western Social Thinkers | 10 |
| X. India Sociologists | 10 |

INTRODUCING SOCIOLOGY**Marks****Unit 1 : Society & Sociology****10 Marks (Periods 22)**

- c **Introducing Society** : Individuals and collectivities. Plural Perspectives
- c **Introducing Sociology** : Emergence. Nature & Scope. Relationship to other disciplines.

Unit II : Basic Concepts**10 Marks (Periods 22)**

- c Social Groups
- c Status and Role
- c Social Stratification
- c Social Control

Unit III : Social Institutions**10 Marks (Periods 24)**

- c Family and Kinship
- c Political and Economic Institutions
- c Religion as a Social Institution
- c Education as a Social Institution

Unit IV : Culture and Society**10 Marks (Periods 20)**

- c Culture. Values and Norms : Shared. Plural. Contested
- c Socialization : Conformity. Conflict and the Shaping of Personality

Unit V : Practical Sociology : Methods & Techniques**10 Marks (Periods 22)**

- c Tools and Techniques ; Observation. Survey. Interview
- c The Significance of Field Work in Sociology

UNDERSTANDING SOCIETY

Unit VI : Structure, Process and Stratification 10 Marks (Periods 22)

1. Social Structure
2. Social Processes: Cooperation, Competition, Conflict
3. Social Stratification: Class, Caste, Race, Gender.

Unit VII : Social Change 10 Marks (Periods 22)

1. **Social change** : Types and Dimensions; Causes and Consequences.
2. **Social Order** : Domination, Authority & Law; Contestation Crime & Violence
3. Village, Town & City : Changes in Rural & Urban Society.

Unit VIII : Environment and Society 10 Marks (Periods 18)

1. Ecology and Society
2. Environmental Crises and Social Responses

Unit IX : Western Social Thinkers 10 Marks (Periods 24)

1. Karl Marx on Class Conflict
2. Emile Durkheim on Division of Labour
3. Max Weber on Bureaucracy

Unit X : Indian Sociologists 10 Marks (Periods 24)

1. G.S. Ghurye on Race and Caste
2. D.P. Mukherji on Tradition and Change
3. A.R. Desai on the State
4. M.N. Srinivas on the Village

PRESCRIBED BOOKS:

- | | |
|-------------------|-------------------------------|
| 1. समाजशास्त्र- 1 | एन.सी.ई.आर.टी.द्वारा प्रकाशित |
| 2. समाजशास्त्र-2 | एन.सी.ई.आर.टी.द्वारा प्रकाशित |
| 4. Sociology-I | NCERT Publication |
| 5. Sociology-II | NCERT Publication |

9. संस्कृतम् (ऐच्छिकम्)

कोड सं. 136

पाठ्यक्रमः परीक्षानिर्देशाश्च

| | | |
|-------------------|------------------|------------------|
| एकम् प्रश्नपत्रम् | अवधि: होरात्रयम् | पूर्णाङ्कः : 100 |
|-------------------|------------------|------------------|

अस्मिन् प्रश्नपत्रे चत्वारः खण्डाः भविष्यन्ति

| | | |
|---------------|------------------------------------|----|
| खण्ड : | (क) अपठितांश-अवबोधनम् | 10 |
| | (ख) रचनात्मककार्यम् | 10 |
| | (ग) अनुप्रयुक्तव्याकरणम् | 30 |
| | (घ) (अ) पठित अवबोधनम् | 35 |
| | (आ) संस्कृतसाहित्येतिहासस्य परिचयः | 15 |

प्रतिखण्डं विस्तृतविवरणम्।

खण्डः 'क' (अपठितांशावबोधनम्)

80-100 शब्दपरिमितः एकः सरलः अपठित गद्यांशः। संस्कृतसाहित्यपरिचयकं विषयवस्तु स्यात्।

अंका : 10

प्रश्नवैविध्यम्

| | |
|---|---|
| (1) एकपदेन उत्तरम् | 2 |
| (2) पूर्णवाक्येन उत्तरम् | 2 |
| (3) सर्वमानस्थाने संज्ञाप्रयोगः | 1 |
| (4) कर्ता-क्रिया-अन्वितिः | 1 |
| (5) विशेषण-विशेष्य / पर्याय / विलोमादिचयनम् | 2 |
| (6) समुचितशीर्षकप्रदानम् | 1 |
| (7) कर्तृ-क्रिया-पदचयनम् | 1 |

खण्ड: 'ख' (रचनात्मककार्यम्)

संस्कृतेन रचनात्मकं लिखितकार्यम्

अंका : 10

1. कस्यचिद् ग्रन्थस्य वैशिष्ट्यमधिकृत्य (प्रदत्तसंकेताधारितम्)
अनौपचारिकं पत्रम् / औपचारिकं पत्रम् 5
2. संकेताधारितम् अनुच्छेदलेखनम् 5
प्रदत्ततथ्यसाहाय्येन (कमपि कविम् काव्यम् अधिकृत्य)

खण्ड- 'ग' (अनुप्रयुक्तव्याकरणम्)

अंका: 30

1. वर्णानाम् उच्चारणस्थानानि 2
2. सन्धिः 3
सन्धिकरणम् सन्धिछेदः च
वाक्येषु एवं अधोलिखितसन्धिनियमान् आधारीकृत्य-स्वरसन्धिः दीर्घः, गुणः, वृद्धि, यण्, अयादि, पूर्वरूपम्
व्यञ्जनसन्धिः श्चुत्वम्, ष्टुत्वम्, णत्वविधानम्, षत्वविधानम्, चत्वम् , आगमः, मोऽनुस्वारः, परसवर्णः विसर्गसन्धिः सत्वम्, उत्त्वम्, रकारः, लोपः
3. वाक्येषु शब्दप्रयोगः (अधोलिखितशब्दरूपाणि अधिकृत्य) 5
अजन्ताः सर्व, पूर्व, प्रथम, द्वितीय, सखि, पति, दातृ, नृ, गो, स्वसु, अक्षि
हलन्ता : पथिन्, मरुत, तादृश्, अदस् , दिश् वाच् गिर् धनिन् पयस् पञ्चन्, षट् सप्तन्, अष्टन्, नवन् दशन्
4. वाक्येषु क्रियाप्रयोगः (अधोलिखितधातून् अधिकृत्य) 5
धातवः
भू (भव्) पठ्, हस्, नम्, गम् (गच्छ्) अस्, हन्, क्रुध्, नश्, नृत्, आप्, शक्, इष्, प्रच्छ्, कृ, ज्ञा, भक्ष्, चिन्त्, तेषाम् समानार्थकाश्च
आत्मनेपदिनः सेव्, लभ, रुच्, मुद्, याच्,
उभयपदिनः नी, ह्, भज्, पच्,
5. पाठ्यांशेषु अधोलिखितप्रत्यययुक्तानि पदानि अधिकृत्य प्रश्नाः
अ. कृदन्तानिक्, क्, क्वत्, शत्, शानच्, क्त्वा, ल्यप्, तुमुन् यत्, तव्यत्, अनीयर, तृच् ण्वुल, क्तिन्, णिनि, अच् 4
आ. तद्धितान्तानि- इन, ठक्, अण्, त्व, मयट्, ईयसुन, इष्टन्
इ. स्त्रीप्रत्ययाः - टाप्, डीप्

6. अव्ययप्रयोगा :

पठितपाठ्यांशेषु अधोलिखित-अव्ययपदैः रिक्तस्थानपूर्तिः : 3

पुनः, उच्चैः, नीचैः, शनैः अद्य, ऋते, युगपत्, अद्य, श्वः ह्यः, सायम्, चिरम्, ईषत्, तूष्णीम्, सहसा, मिथ्या, पुरा, प्रायः नूनम्, भूयः, खलु, किल, पठितांशेषु प्रयुक्तानि अन्यानि अव्ययपदानि च।

7. विभक्तिप्रयोगा:

पठितपाठ्यांशेषु प्रयुक्त-उपपदकारकविभक्तीः अधिकृत्य प्रश्नाः 4

8. पठित पाठ्यांशेषु सरलसमस्तपदानां विग्रहाः 4

खण्डः 'घ'
भाग : 'अ (पठितांश-अवबोधनम्)

अङ्काः 35

1. त्रयः अंशाः 15

1. गद्यांशः
2. पद्यांशः
3. नाट्यांशः

प्रश्नवैविध्यम्

एकपदेन उत्तरम्

पूर्णवाक्येन उत्तरम्

विशेषण-विशेष्य अन्वितिः / पर्यायः / विलोमचयनम् कर्तृ-क्रिया पदचयनम् सर्वनामस्थाने संज्ञाप्रयोगः / कः कम् कथयति

2. कथनानि आश्रित्य प्रश्ननिर्माणम् 5
3. अन्वयलेखनम् / रिक्तस्थानपूर्तिमाध्यमेन अन्वयः 5
4. प्रदत्तपंक्तिषु चारित्रिकवैशिष्ट्यक्तनम्/ भावार्थलेखनम् 5
5. प्रदत्तपंक्तीनां प्रसंगसन्दर्भादिलेखनम् 5

खण्ड-'घ'
भाग : 'आ' (संस्कृतसाहित्यस्य इतिहासः)

अङ्काः 15

अतिलघूत्तर / लघूत्तरप्रश्नमाध्यमेन संस्कृतनाट्यसाहित्यस्य परिचयपरीक्षणम्

1. पाठ्यपुस्तके संकलित-अंशानां प्रमुखलेखकानां संक्षिप्तपरिचयः 5

2. संस्कृतसाहित्यस्य प्रमुख काव्यानां परिचयः 5
3. नाट्यविषयकशब्दावलीपरिचयः 5
- नान्दी, नेपथ्यम्, प्रस्तावना, आत्मगतम्, प्रकाशम्, प्रवेशकः जनान्तिकम् भरत वाक्यम्
(प्रदत्तपरिभाषासु रिक्तस्थानपूर्तिमाध्यमेन / प्रदत्तनाट्यांशं पठित्वा अभिज्ञानमाध्यमेन।)

पुस्तकानि

- | | |
|--|---|
| 1. शाश्वती (प्रथमो भागः) | (पाठ्यपुस्तकम् (हि०प्र० स्कूल शिक्षा बोर्ड)) |
| 2. व्याकरणसौरभम् (सहायकपुस्तकम्) | (रा. शै. अनु. एवं प्र. परिषदा प्रकाशितम्) (संशोधित संस्करणम्) |
| 3. हायर संस्कृतग्रामर | एम्० आर० कालेलिखितम्) |
| 4. रचनानुवादकौमुदी | (कपिलदेव द्विवेदी लिखितम्) |
| 5. संस्कृतसाहित्यपरिचयः (संदर्भपुस्तकम्) | (रा. शै. अनु. एवं प्र. परिषदा प्रकाशितम्) (संशोधित संस्करणम्) |

10. PUBLIC ADMINISTRATION**CODE NO 140****One Paper****3 Hours****100 Marks**

Introduction to Public Administration.

Unit I Public Administration :

Meaning, Scope, Significance and relationship with Political Science, History, Economics and Sociology, Differences and Similarly between Public Administration and Private Administration.

Unit II Organization :

Meaning, Principles (Hierarchy, Unity of command and span of control) and its kinds i.e. Formal and informal, Singular and Plural (Bureau and Board).

Unit III Bureaucracy :

Meaning, Characteristics, Functions, evils and remedies of civil services.

Unit IV Recruitment :

Meaning, methods of recruitment (within and without) Qualifications of employees and examinations for determining the qualifications.

Unit V Training and Promotion :

Training: Meaning, Kinds, Methods and Significance; Promotion: Meaning, basis of promotion (Merit and Seniority) and significance.

Unit VI Conduct and Discipline :

Rules of Conduct for employees, types of disciplinary action (Formal and informal) procedure of taking disciplinary action.

Unit VII Salary, Morale and Retirement :

Determinants of Salary, meaning of morale and factors leading to High morale, Meaning and main features of retirement system.

Unit VIII Management :

Management :- Meaning, nature and functions of Management.

Proceses :- Communication, Leadership and decision making.

Unit IX Field Administration :

Types of field establishments, methods of creating harmony between Headquarters and field. Establishments, Methods of control over field establishment.

Unit X Public Relations :

Meaning, Functions, Media, obstacles and Significance.

11. PHYSICAL EDUCATION

Code No. 192

It covers the following aspects :

Eligibility Conditions for Admission to the course, Conditions to Schools offering Physical Education as an Elective subject, Norms for Physical Fitness Test (For use at the time of Admission), Theory Syllabus and Practical Activity Syllabus - Part - A, Part B and Part - C.

ELIGIBILITY CONDITIONS FOR ADMISSION TO THE COURSE

The following category of Students will be permitted to join the course.

1. Those who have represented the school in Inter-school Tournaments in any game/sport.
2. Those who do not represent the school but are keen to join the course should undergo a physical fitness test and secure a minimum of 40% marks. The norms of the test to be used for ascertaining eligibility is given below.
3. Those granted permission to join the course should be medically fit to follow a prescribed programme of physical education.
4. The unit of a class in physical education and health education should not exceed 40 students.
5. Instructional hours and duration of the period should be strictly as per the norms of the Board.

CONDITIONS TO SCHOOLS FOR OFFERING PHYSICAL EDUCATION AS AN ELECTIVE SUBJECT

Only those schools satisfying the following conditions will be permitted to offer physical education as a course study at +2 stage as an elective subject :

1. The school should have adequate open space to accommodate at least 200 mts. Track and play fields for minimum three games/sports.
2. The teacher handling the elective programme to physical education should hold a Master Degree in Physical Education.
3. The school should provide adequate funds for physical education and health education for the purchase of equipments, books on physical education and also for the maintenance of sports facilities.

**PHYSICAL FITNESS TEST
(For admission)**

**NORMS FOR PHYSICAL FITNESS TEST
(Boys)**

| Points Marks | 100 mts. (Sec.) | 12 min. Run/Walk (Mts.) | Long Jump (Mts.) | Cricket Ball throw (Mts.) | Shuttle Run (4' 10mts.) Sec.) |
|---------------------|----------------------------|--|---------------------------------|--|--|
| 10 | 12.0 | 2000 | 5.50 | 70 | 8.5 |
| 9 | 12.5 | 1900 | 5.25 | 65 | 9.0 |
| 8 | 13.0 | 1800 | 5.00 | 60 | 9.4 |
| 7 | 13.5 | 1700 | 4.80 | 55 | 9.7 |
| 6 | 13.8 | 1650 | 4.65 | 50 | 10.0 |
| 5 | 14.0 | 1600 | 4.50 | 45 | 10.3 |
| 4 | 14.5 | 1550 | 4.35 | 40 | 10.6 |
| 3 | 14.8 | 1450 | 4.10 | 35 | 11.0 |
| 2 | 15.3 | 1350 | 3.85 | 30 | 11.5 |
| 1 | 15.8 | 1250 | 3.60 | 25 | 12.0 |

**NORMS FOR PHYSICAL FITNESS TEST
(Girls)**

| Points Marks | 100 mts. (Sec.) | 9 min. Run/Walk (Mts.) | Long Jump (Mts.) | Cricket Ball throw (Mts.) | Shuttle Run (4' 10mts.) Sec.) |
|---------------------|----------------------------|---------------------------------------|---------------------------------|--|--|
| 10 | 14.0 | 1700 | 5.0 | 50 | 9.5 |
| 9 | 14.5 | 1600 | 4.75 | 46 | 10.0 |
| 8 | 15.0 | 1500 | 4.50 | 42 | 10.5 |
| 7 | 15.5 | 1400 | 4.25 | 38 | 11.0 |
| 6 | 16.0 | 1300 | 4.00 | 34 | 11.5 |
| 5 | 16.5 | 1200 | 3.75 | 30 | 12.0 |
| 4 | 17.0 | 1100 | 3.50 | 26 | 12.5 |
| 3 | 17.5 | 1000 | 3.25 | 22 | 13.0 |
| 2 | 18.0 | 900 | 3.00 | 18 | 13.5 |
| 1 | 18.5 | 800 | 2.75 | 14 | 14.0 |

PHYSICAL EDUCATION**70 MARKS****PART - A****(28 MARKS)****THEORY****1. CONCEPT OF PHYSICAL EDUCATION**

- 1.1 Meaning and definition of Physical Education-its aim and objectives.
- 1.2 Modern Concept and scope of Physical Education.
- 1.3 Need and importance of Physical Education.
- 1.4 Miconceptions about Physical Education.
- 1.5 Place of Physical Education in the total education process.

2. PHYSIOLOGICAL ASPECTS OF PHYSICAL EDUCATION**Effect of Exercise on :**

- 2.1 Muscular System.
- 2.2. Circulatory System.
- 2.3 Respiratoy System.
- 2.4 Digestive System

3. PSYCHOLOGICAL ASPECTS OF PHYSICAL EDUCATION

- 3.1 Definition of Psychology and Sports Psychology
- 3.2 Achievement and Motivation in Sports
- 3.3. Sportsmanship and Sports Ethics

PART - B**(14 MARKS)**

1. History of the game/sport (Any one game/sport of student's choice).
2. Latest general rules of the game/sport (Any one game /sport of student's choice).
3. Measurement of play fields and specifications of sports equipment.
4. Fundamental skills of the game/sport.
5. Related sports technologies.
6. Important tournaments and venues.
7. Sports personalities.
8. Sports Awards

PART - C**(28 MARKS)****1. HEALTH EDUCATION**

- 1.1 Concept and objectives of Health Education.
- 1.2 Importance of Health Education.
- 1.3 Principles of Health Education.
- 1.4 Importance of community participation for health promotion and welfare of individual, family and community.

2. COMMUNICABLE DISEASES.

- 2.1 Meaning of Communicable Diseases
- 2.2 Essential conditions for Communicable Diseases to occur and disease process.
- 2.3. Common alert signals indicating on set of Communicable Diseases.
- 2.4 Mode of transmission, common symptoms and prevention of spread (transmission) of :

AIDS, Hepatitis B and Hepatitis C.

Rabies

Tetanus

Malaria

Tuberculoses

3. CONTEMPORARY HEALTH PROBLEMS

- 3.1 Abuse of alcohol, tobacco and drugs and the effect of abuse on individual, family and community.
- 3.2. Effect of alcohol, tobacco and drugs on sportsperson.
- 3.3 Eating habits that cause obesity and its effect on health on individual.

PRACTICAL**(30 marks)**

The activity syllabus has been divided into following three parts. The marks of each part are as follows :

Part - A Track and Field (Two events) — 10 marks

77

| | | | |
|----------|------------------------------------|---|----------|
| Part - B | Games and Sports (One game) | — | 06 marks |
| Part - C | Achievement in Sports | — | 10 marks |
| Part - D | Practical Note Book (Class Record) | — | 04 Marks |

PART A

TRACK AND FIELD

Any two events may be opted. Each event will carry 5 marks out of which 2 marks are for viva concerning athletics event selected by the candidate.

1. Sprints 100 meters or 200 meters or 400 meters.
2. Middle and Long distance running 800 meters or 1500* meters or 3000* meters.
3. Broad Jump.
4. Tripple Jump*.
5. High Jump.
6. Shot Put.
7. Discuss Throw.
8. Javelin Throw.

*denotes 'for boys only'

PART B

GAMES AND SPORTS

One game either from Group A or Group B may be opted. Each game will carry 5 marks out of which 2 marks will be for proficiency in the game and skills of the game.

Group A

Hockey

Football*

Volley Ball

Basket Ball

Kabaddi

Kho-Kho

Hand Ball

*denotes 'for boys only'

Group B

Badminton

Wrestling*

Table Tennis

Boxing*

Rhythmic (Folk Dance, Drill & Marching)

PART C**ACHIEVEMENT IN SPORTS**

(Earmarking of marks is shown against each)

Upto :—

- | | |
|---------------------------------|----|
| 1. School level participation | 4 |
| 2. Zonal level participation | 5 |
| 3. District level participation | 7 |
| 4. State level participation | 9 |
| 5. National level participation | 10 |

PART D**PRACTICAL NOTE BOOK****04 MARKS**

The Practical Note Book will carry class record OR sessional work.

12. INFORMATICS PRACTICES

Code No 191

Learning Objectives :

1. To understand the application development environment.
2. To gain programming Skills in GUI Programming Tool and Database Creation in RDBMS.
3. To design, program and develop database application using GUI Programming Tool and RDBMS.
4. To learn database connectivity using Visual Basic as Front-end tool.
5. To develop ability to use the Open Source Technology.

Competencies :

1. Student will become familiar with Application Development.
2. Student will be able to develop & debug programs Independently.
3. Student can use SQL for storing and retrieving data from the RDBMS.
4. Ability to arrive at a normalized design of tables and other database objects in RDBMS.
5. Student will be able to develop a Client Server Application using Front end and Back end tools.

Theory

| Duration : 3 hours | Total Marks : 70 | |
|--------------------|---|-----------|
| Unit No | Unit Name | Marks |
| 1. | COMPUTER SYSTEM AND BUSINESS APPLICATIONS | 10 |
| 2. | INTRODUCTION TO PROGRAMMING | 30 |
| 3. | RELATIONAL DATABASE MANAGEMENT SYSTEM | 30 |
| | | 70 |

Unit I : Computer System and Business Applications

Evolution of computers; Basics of computer and its operation: Functional Components and their inter-connections, concept of Booting;
 Hardware concepts;
 Diagram illustrating main parts of computers;

Central Processing Unit (CPU) : Arithmetic Logic Unit (ALU), Control Unit, Memory Unit (RAM-Random Access Memory & ROM - Read Only Memory)

Role of Input, Processing and Output Devices in a computer system.

Input devices : Keyboard, Mouse, Light pen, Touch Screens, Graphics Tablets, Joystick, Mic, MICR, OCR, Scanner, Smart Card reader, Barcode reader, Biometric sensor, web camera, digital camera;

Output Devices : Monitor/Visual Display Unit (VDU), Printer (Dot Matrix Printer, Desk jet/Ink Jet/ Bubble Jet Printer, Laser Printer), Plotter, Speaker).

Secondary Storage Devices : Floppy Disk, Hard Disk, Compact Disk, Magnetic Tape, Digital Video Disk (DVD), Zip Drive; Units of Memory: Bit (Binary Digit), Byte, Kilobyte), Megabyte, Gigabyte.

Software Concepts :

Types of Software : System Software, Utility Software and Application Software.

System Software : Operating System, Language Compilers, Interpreters and Assembler;

Operating System : Need of operating systems, Functions of Operating System Types of operating system.

Utility Software : Compression tools, Anti Virus, File Management tools and Disk Management ;

Application Software as a tool : Word Processor, Presentation Tool, Spreadsheet Package, Database Management System; Business software (for example: Inventory Management System, Payroll System, Financial Accounting, Hotel Management, and Reservation System);

Development of programming languages - Machine Language, Assembly Language, High Level Language (BASIC, COBOL, FORTRAN, PASCAL, C++); GUI based language - Visual Basic Visual C++; C#, Java, vb.net.

GUI Operating System

Important : *Students/Teachers can also perform similar operation on any operating system. It is advised that the teacher while using any one operating system, give a demonstration of equivalent features for the other operating system.*

Windows

General features, Elements of Desktop - Taskbar, Icon, Start button, Shortcuts, Folder, Recycle Bin, My Computer;

Start Menu : Program, Documents, Settings, Find/Search, Help, Run, Shut Down/Log off;

Customization of Taskbar, start menu, Display properties (Wallpaper, Font Settings, Colour Settings, Screen Savers);

Program Menu : Accessories - Calculator, Notepad, Paint, Word Pad, Entertainments (CD Player, Sound Recorder, Media Player, Volume (Controller); Internet Browsers – Mozilla Firefox, internet Explorer, Netscape Navigator.

Control Panel : Add new hardware; Add new Software, Printer Installation, Date/Time, Mouse, and Regional Settings :

Documentation

Purpose of using word processing software, opening a new/existing document, closing a document, typing in a document, saving a document, print preview, printing a document, setting up of page as per the specifications, selecting a portion of document, copying selected text, cutting selected text, pasting selected text; changing font, size, style, colour of text; Inserting symbol; Formatting: Alignment – Left, Right, Center; Justification :

Industries and Business Computing : Types of Industries (Production, Shipping, Travel, Hotel, Insurance, Construction, Automobile), Applications of Business Computing in Industries.

Unit 2 : Introduction to Programming**Programming Methodology :**

General Concepts; Modular approach; Stylistic Guidelines: Clarity and Simplicity of Expressions, Names, Comments, Indentation; Documentation and Program Maintenance; Running and Debugging programs, Syntax Errors, Run-Time Errors, Logical Errors;

Problem Solving Methodology and Techniques: Understanding of the problem, Identifying minimum number of inputs required for output, Step by step solution for the problem, breaking down solution into simple steps, Identification of arithmetic and logical operations required for solution, Using Control Structure: Conditional control and looping (finite and infinite);

Programming Tool : Visual Basic

Introduction to Programming – Modular Programming, Object Oriented Programming, Event Driven Programming.

About Visual Basic (Object Based Programming Language), Rapid Application Development using Visual Basic; Concept of Project in Visual Basic, VB Project Options – Standard EXE, Active X DLL, Active X EXE, Active X Control, Active X Document DLL, Active X Document EXE, Addin, VB Application Wizard, IIS Application, DHTML Application;

Getting Familiar with Visual Basic User Interface-Pull-Down menus, Toolbar, Toolbox, Project Explorer, Properties Window, Form Layout window, Form, Immediate window;

Opening and Closing windows, Resizing and moving windows, Docking windows; Quitting Visual Basic;

Visual Basic Tool Box (Standard Window Controls) - Pointer, Picture Box, Label, Text Box, Frame, Command Button, Check Box, Option Button, Combo Box, List Box, Horizontal Scrollbar, Vertical Scrollbar, Timer, Drive List box, Directory List box, File List box, Shape, Line, Image, Data, OLE;

Object Naming Conventions, Event Procedures;

Programming Fundamentals

Data Types : Integer, Long, Single, Double, Currency, String, Byte, Boolean, Data, Object, Variant;

Variables : Need to use variable, Declaring Variables, Variable Naming Convention, Assigning value to variables, Data Types of variable, Scope and lifetime of Variables (Public and Private);

Control Structures :

Decision Structure - IF, IF- THEN-ELSE, Select Case ;

Looping Structure - Do WhileLoop, DoLoop While, For..... Next, For each Next;

Menu Editor : Concept of Menus, Shortcut menus and Popup menus Designing Menu System, Menu Editor Dialog Box Options (Name, Index, Shortcut, Help Context ID, Negotiate Position, Checked, Enabled, Visible, Window List, Right Arrow, Left Arrow, Up Arrow, Down Arrow, Menu List, Next, Insert, Delete, OK, Cancel), To Create Menu Controls in the Menu Editor,

Menu Naming Conventions, Setting the Name Property, Creating a Menu Control Array, Creating Sub Menus, Separating Menu Controls, Assigning Access Keys and Shortcut Keys, Controlling Menus at Runtime-Enabling and Disabling Menu Commands, Displaying a Checkmark on a Menu Control, Making a Menu Control Invisible, Adding Menu Control at Runtime, Displaying Pop-Up Menu;

General Controls (Advance) : Image List, Common Dialog Box, ADO DC, DB Combo, Media Player Control, DB Grid;

Adding a Toolbar; Creating an Image List, Adding Images to the Toolbar, To Add Code for the Toolbar Buttons;

Adding Status Bar: Adding Status Bar panels, Adding Time on the panel.

Dialog Boxes : Pre-defined dialog box, Custom dialog box;

UNIT 3 : RELATIONAL DATABASE MANAGEMENT SYSTEM

Database Management System

Introduction to database concepts : Relation/Table, attribute, Tuple/ Rows, field, Data, Concept of String, Number and Data values, Data type and Data Integrity (Domain and Referential Integrity). Candidate key, Alternate Key, Primary Key, Foreign Keys; Data Normalization-first, second, third, BCNF normal form;

Examples of Commercially available Database Management System's (Back-End) – Oracle, MS-SQL Server, DB2, MySQL, Sybase, INGRES.

Examples of Front End Software's : Oracle Developer, Visual Basic, Visual C++, Power Builder, Delphi;

RDBMS Tool :

Interface with oracle, Login Screen, Entering Name and Password;

Classification of SQL Statements : DML (SELECT, INSERT, UPDATE, DELETE), DDL (CREATE, DROP, ALTER, RENAME, TRUNCATE), DCL (GRANT, REVOKE), TCL (COMMIT, ROLLBACK); SQL SELECT Statement : SQL SELECT statement, Selecting All the Columns, Selecting Specific Column, Column Heading Default, Using Arithmetic Operators, Operator Precedence, Significance of NULL value, NULL values in Arithmetic Expressions, Defining and using Column Alias, Concatenation Operation (||),

Duplicate rows and their Elimination (DISTINCT keyword), Role of SQL and SQL* Plus in interacting with RDBMS, Displaying Table Structure (DESC command);

SELECT Statement Continued: Limiting Rows during selection (using WHERE clause), Working with Character Strings and Dates, Using Comparison operators, BETWEEN Operators, IN Operator, LIKE Operator, IS NULL Comparison, Logical Operators, Use of Logical Operators (AND/OR/NOT Operators), Logical Operator Precedence, ORDER BY Clause, Sorting in Ascending/Descending Order, Sorting By Column Alias Name, Sorting On Multiple Columns ;

Functions : SQL Functions, Types of SQL Function (Single Row/Multiple Row), Single Row SQL Functions, Character Functions (Case Conversion/Character Manipulation), Case Conversion Functions (lower (), InitCap (), UPPER ()) Character Manipulation Function (CONCAT(), INSTR(), LENGTH(), TRIM(), SUBSTR(), LPAD()), Number Functions (ROUND(), TRUNC(), MOD()), Working with Dates (LAST_DAY(), MONTHS_BETWEEN(), NEXT_DAY(), ADD_MONTHS(), ROUND(), TRUNC()) Arithmetic Operation on Dates, Date Functions and their Usage, Data type Conversion Functions, Implicit and Explicit Conversion, TO_CHAR Function with Dates, TO_CHAR Function for Numbers. TO_NUMBER and TO_DATE Functions, NVL Function and its Usage, DECODE Function and its Usage;

Grouping Records : Concept of Grouping Records and Nested Grouping, Nested Grouping of records, Group Functions, Types of group functions (MAX(), MIN(), AVG(), SUM(), COUNT()), Using AVG and Sum Functions, Using MIN and MAX Functions, Using the COUNT Function, using COUNT(*), DISTINCT clause with COUNT, Group Functions and Null Values, Using NVL Function with Group Functions, Grouping Records; Group by Clause, Grouping By More than One Column, Illegal Queries with Group By Clause, Excluding Group Results: Having Clause, Nesting Group Functions,

Sub Queries : Concept of Sub-Query, Sub Query to Solve a Problem, Guidelines for Using Sub Queries, Types of Sub-Queries (Single Row and Multiple Row) and (Single Column and Multiple Column); Single Row Sub-Query and its Execution;

Displaying Data From Multiple Tables : Concept of Join, Result of Join, Cartesian Product and Generating Cartesian Product example using

Mathematical Set), Types of joins (EQUI, SELF, NON-EQUI, OUTER (LEFT and RIGHT)), Equi-join : Retrieving Records with Equi-join, Additional Search Conditions using AND operator, Short Naming Convention for Tables (Table Aliases), Non-Equi join and its Implementation, Out-Join and Its Usage, Self-Join (Joining a table to itself);

Manipulating Data of A Table/Relation; Concept of DML (Data Manipulation Language), INSERT Statement, Inserting New Rows, Inserting New Rows with Null Values, Inserting Date Values, Use of Substitution Variable to Insert Values, Copying Rows From Another Table, Update Statement to Change Existing Data of a Table, Updating Rows In A Table, Updating Rows Based on Another Table, Delete statement/Removing Row/ Rows from a Table, Deleting Rows Based on condition from another Table. Making Data Manipulation Permanent (COMMIT). Undo Data Manipulation Changes (ROLLBACK).

Database Objects : View, Table, Sequence, index, and Synonyms, DDL (Data Definition Language), Naming Convention, Creating Views, Creating Synonyms, Simple Views and Complex Views, Retrieving Data From a View, Querying a View, Modifying a View.

Including Constraints : Constraints, Concept of using Constraints, Constraint Guidelines, Defining Constraints, NOT NULL, UNIQUE KEY, PRIMARY KEY, FOREIGN KEY, FOREIGN KEY Constraint Keywords, CHECK, Adding a Constraint, Dropping a Constraint, Disabling Constraints, Enabling Constraints, Viewing Constraints, Viewing The Columns, Associated with Constraints;

Creation of a Table/Relation; CREATE TABLE Statement, Data types, The DEFAULT option, Creating Tables. Referencing Another User's Tables, Querying the Database Dictionary to view all tables in the Oracle Database, Creating a Table by using a Sub-Query;

Managing Existing Tables and other Database Objects : The ALTER TABLE Statement, Adding a New Column in a Table. Modifying Existing Column, Dropping a Column, Renaming an Object, Truncating a Table, Adding Comments to a Table, Dropping Views, Dropping Synonyms, Dropping Tables; giving permission to other users to work on Created Tables and Revoking it (GRANT and REVOKE statement).

INFORMATICS PRACTICES**PRACTICAL**

Duration : 3 Hours**Total Marks : 30**

1. Hands on Experience 15

A problem should be given covering the following

- c Table definition (The table must include constraints).
- c A form with Label, Text, Command Button control, List Box, Drive List Box, Directory List Box, File List Box, Tool and Menu Bar (Any 4)
- c DSN to access tables in the database.
- c For data connectivity (Activex Database Control).
- c Change of Text Box Control Properties to view Database fields.

2. Practical File 05

The practical file should contain print outs from each of the following topics.

1. Create an application using Visual Basic with a Text Box control to accept a name from the user and print "Hello <Name>" in a message box. E.g. when user types his name as "Kamal Kant" in the text box and clicks OK button, a message "Hellow Kamal Kant" should be displayed and if he clicks on Cancel button a message as "Bye Kamal Kant" should appear.
2. Create an Application having two Text Boxes on the Window. Get Title, First Name and Last Name on its. On clicking Ok button a message should appear by joining Title + First Name + Last Name. e.g. if user enters Prof. in Title, Rajyash in First Name, and Swami as Last Name then the message to be printed should be "Happy Deepawali Prof. Rajyash Swami."
3. Create an application to let user guess any number and click a Play button given on the form. On clicking the Play button the application will generate a random number. If the generated number is same as gussed by the user then display a message "You Win" otherwise display a message "You Loose".
4. Create an application to Display Image files kept in different folders in the system. The application should allow the user to navigate in the folders and list all Image Files (*.BMP, * JPG) when ever a image file is selected it should get that picture displayed in an Image control.

5. Create an application having menu bar and tool bar to create a text file, navigate and open text files, edit text file and save changes made by the user.
6. Create a small application working as a general purpose calculator. (+, -, ', ,).
7. SQL assignments (based on Demo Tables present in the ORACLE database for example Emp table, Dept table and SalGrade table);
 - c Display all the records (all columns) from table Emp.
 - c Display EmpNo and EName of all employees from table Emp.
 - c Display Ename, Sal and Sal added with Comm from table Emp.
 - c Display EName joined with Job with heading "Employee", Sal* 12 as "Total Salary" from table Emp.
 - c Display distinct Sal of employees from table Emp.
 - c Show the Structure of table Dept.
 - c Write a Query to display EName and Sal of Employees whose salary is greater than or equal to 3000 from table Emp.
 - c Write a Query to display employee Number, name, sal and sal* 12 as Annual Salary whose commission is no NULL from table Emp.
 - c Write a Query to display employee name and salary of those employee who don't have there salary in the range of 1500 to 2000.
 - c Write a Query to display name, job, salary, and Hire Date of employees who are hired between February 20, 1981, and May 1, 1981, Order the query in ascending order of Hire Date.
 - c Write a Query to display the name and hire data of all employees who were hired in 1982.
 - c Write a Query to display the name, job title and salary of employee who do not have manager.
 - c Write a Query to display the name of employee whose name contains 'A' as third alphabet.
 - c Write a Query to display the name of employee whose name contains 'T' as the last alphabet.
 - c Write a Query to display the name of employee whose name contains 'M' as first alphabet 'L' as third alphabet.

- c Write a Query to display the name of employee who is having 'L' as any alphabet of the name.
- c Write a query to display the current system date.
- c Write a Query to display employee number, name, salary, salary increase by 15% expressed as a whole number. Label the column as New Salary.
- c Write a Query to display the employee's name and salary review date, which is the date after six months of Hire Date.
- c Write a Query to display the employee's name and salary review date, which is the date after six months of HireDate in format of 'Sunday, 7 SEP, 1981'.
- c For each employee display employee name and total number of weeks lapsed between HireDate and Today.
- c For each employee display employee name and total number of days lapsed between HireDate and Today.
- c Create a query that produces display in the following format–
<employee name> Earns \$<salary> Monthly and working as <Job>.
- c Write a query which displays the employee name with the first letter capitalized and all other letters lower case and length of their name string.
- c Write a Query to display the employee name and commission amount. If the employee does not earn commission, put "No Commission".
- c Write a query to display the grade of all employees based on the value of the column job as per following scheme :

| JOB | GRADE |
|-------------------|--------------|
| PRESIDENT | A |
| MANAGER | B |
| ANALYST | C |
| SALESMAN | D |
| CLERK | E |
| NONE OF THE ABOVE | O |

- c Write a query to display the EName and DeptNo and DName for all employees using tables Emp and Dept.

- c Write a Query to display employee name, department name and location of all employees who have manager number between 7500 and 7900.
- c Write a Query to display the employee name, department number and all the employees that worked in the same department as the given employee.
- c Write a Query to display employee name and HireDate of employees who are employed after Employee 'BLAKE'.
- c Write Query to display employee number, name and manager's name with their manager number.
- c Write a Query to Display the Sum, Average, Highest and Lowest salary of the employees.
- c Write a Query to Display the Sum, Average, Highest and Lowest Salary of the employees grouped by department number.
- c Write a Query to Display the Sum, Average, Highest and Lowest salary of the employees grouped by department number and sub-grouped by job.
- c Write a query to display the number of employee with same job.
- c Write a query to display the average of Highest and lowest salary of each department.
- c Write a query to display the difference of Highest and lowest salary of each department having maximum salary > 4000.
- c Write a query to display the employee name and job for all employee in the same department as 'ALLEN'. Write a query to display employee name and salary of those who either work in department 10 or have salary greater than employee 7521.

Before the following exercise please ensure that you are provided with a table Employee with following description.

Table : Employee

| Name of Column | | Type |
|----------------|-----------|--------|
| ID | NUMBER | (4) |
| First_Name | Varchar 2 | (30) |
| Last_Name | VARCHAR 2 | (30) |
| User_ID | VARCHAR 2 | (10) |
| Salary | NUMBER | (9, 2) |

1. Use DESCRIBE command to ensure the table structure.
2. Add the following data in the above Table as instructed.

| ID | First_Name | Last_Name | User_ID | Salary |
|----|------------|-----------|----------|--------|
| 1. | Dim | Joseph | Jdim | 5000 |
| 2. | Jagannath | Mishra | Jnmishra | 4000 |
| 3. | Siddharth | Mishra | Smishra | 8000 |
| 4. | Shankar | Giri | Sgiri | 7000 |
| 5. | Gautam | Buddha | Bgautam | 2000 |

- Populate table with first record mentioning the column list in the insert clause.
- Populate table with next two records without mentioning the column list in the insert clause.
- Populate table with 4th record and enter only ID and First_Name.
- Populate table with 5th record and enter ID, User_ID, and Last_Name only,.
- For record with ID = 4 update record with Last_Name User_ID and Salary.
- For record with ID = 5 update records with First_Name and Salary.
- Make the changes permanent.
- Modify the Last_Name, of the employee 3, to Gautam.
- Modify the Salary and increase it by 1000, for all who get salary less than 5000.
- Delete the employee record having First_Name as Siddharth.
- Make the changes permanent.
- Remove the entire contents of the table.
- Undo the above step.
- Create a table Employee1 with columns ID, First_Name and Dept_ID from table Employee and also confirm the existence of table Employee1.
- Create a view VU_Emp1 which should include column EmpNo. EName and DeptNo. from the table Emp.
- Create a view VU_Emp2 which should include column EmpNo, EName and Dept No. from the table Emp and change the column headings as Emp Number, Employee, Department.
- Select VIEW-NAME and TEXT from the data dictionary USER_VIEWS.
- Create the table Department table based on the following table instance chart.

| Column Name | ID | Name |
|-------------|--------|-----------|
| Data Type | NUMBER | VARCHAR 2 |
| Length | 8 | 25 |

- c Populate the table Department with data from table dept. Including only required columns.
- c Create the table Employee based on the following table instance chart.

| Column Name | ID | First_Name | Last_Name | Dept_ID |
|-------------|--------|------------|-----------|---------|
| Data Type | NUMBER | VARCHAR2 | VARCHAR2 | NUMBER |
| Length | 8 | 25 | 25 | 8 |

1. Rename table Employee1 to Employee2.
2. Drop table Employee2.
3. Drop table Employee and Department.
4. Create table Customer as per following Table Instance Chart.

| Column Name | Cust_ID | Cust_Name | Cust_Address1 | Cust_Address2 | Pincode | Cust_Phone |
|--------------|---------|-----------|---------------|---------------|---------|------------|
| Key Type | | | | | | |
| Nulls/Unique | | | | | | |
| FK Table | | | | | | |
| FK Column | | | | | | |
| Datatype | NUMBER | VARCHAR2 | VARCHAR2 | VARCHAR2 | NUMBER | VARCHAR2 |
| Length | 7 | 30 | 20 | 30 | 6 | 10 |

- c Add one column Email of data type VARCHAR2 and size 30 to the table Customer.
- c Change the data type of column pincode to VARCHAR2(10) in the table Customer.
- c Add one more column Customer Income Group of data type VARCHAR2(10).
- c Insert few records with relevant information, in the table.
- c Drop the column Customer Income Group from table Customer.
- c Create table Department as per following Table Instance Chart.

| Column Name | DeptID | DeptName | DeptLocation |
|--------------|---------|----------|--------------|
| Key Type | Primary | | |
| Nulls/Unique | | NOT NULL | |
| FK Table | | | |
| FK Column | | | |
| Datatype | NUMBER | VARCHAR2 | VARCHAR2 |
| Length | 2 | 20 | 20 |

Create table Employee as per following Table Instance Chart.

| Column Name | EmpID | EmpName | EmpAddress | EmpPhone | EmpSal | DeptID |
|--------------|---------|----------|------------|----------|--------|------------|
| Key Type | Primary | | | | | Foreign |
| Nulls/Unique | | NOT NULL | | | | |
| FK Table | | | | | | Department |
| FK Column | | | | | | Dept ID |
| Data type | NUMBER | VARCHAR2 | VARCHAR2 | VARCHAR2 | NUMBER | VARCHAR2 |
| Length | 6 | 20 | 30 | 10 | 9, 2 | 2 |

- Create table Employee1 as per the above Table Instance Chart but now use table level primary key addition method.
- Create table Employee2 as per the above Table Instance Chart without any constraint while table creation.
- Add a PRIMARY KEY constraint to the table Employee2 using the EmpID column.
- Add a FOREIGN KEY reference on the Employee2 table that will ensure that employee records with non-existent departments are to be prohibited.
- Confirm that constraints were added by querying Constraint_Name and Constraint from USER_CONSTRAINTS relation.
- Add a NOT NULL constraint to the table Employee2 on column EmpName.
- Add a CHECK constraint to ensure, at the time of record insertion, that employee records with salary less than 2000 are to be prohibited.
Disable NOT NULL Constraint on the column EmpName from the table Employee2.
Drop UNIQUE constraint from the column DeptName in table Department.
- Create an application to list all the contents of a database table using a data control object in visual basic,

- c. Create an Application in Visual basic having Menu Bar, Tool Bar and other controls to View, Add and Modify records present in the Database Tables.

3. Project-05

05

The following case study is to be used to develop a team project.,

A cable company in Delhi is working since 1998. They have about 2 Lac customers in differen zones (North, South, East and West). Company wants to computerise its working, which involves Customer Registration, Customer Billing and Bill Collection on monthly basis.

Develop a Database Handling Software for the company. The software should have option to enter customer data and information of bill collection. The data entry form should also have option to navigate through the records.

The software should allow to store following information of customer and billing (Normalize this to store data in tabular form).

Customer Name

Customer Address

Customer City

Customer Zone

Customer Pin Code

Customer Phone

Customer Interest (Movies, Games etc.)

Customer Monthly Income

Customer Monthly Installment

Customer Joining Date

Bill Cycle

Bill Collection Date

(Suitable assumptions can be made)

The user interfaces should be designed in visual basic and must be user friendly with correct tab order.

Note :— Similar type of cases can also be encouraged, provided it should include almost every aspect of course undertaken.

4. Viva Voce

05

Five questions from topics covered in the curriculum

13. PHYSICS

Code No. 154

Senior Secondary stage of school education is a stage of transition from general education to discipline-based focus on curriculum. The present updated syllabus keeps in view the rigour and depth of disciplinary approach as well as the comprehension level of learners. Due care has also been taken that the syllabus is not heavy and is at the same time, comparable to the international standards. Salient features of the syllabus include :

- Emphasis on basic conceptual understanding of the content.
- Emphasis, on use of SI units, symbols, nomenclature of physical quantities and formulations as per international standards.
- Providing logical sequencing of the units of the subject matter and proper placement of concepts with their linkage for better learning.
- Reducing the curriculum load by eliminating overlapping of concepts/ content within the discipline and other disciplines.
- Promoting process-skills, problems-solving abilities and applications of Physics concepts.

Besides, the syllabus also attempts to

- Strengthen the concepts developed at the secondary stage to provide firm foundation for further learning in the subject.
- Expose the learners to different processes used in Physics-related industrial and technological applications.
- Develop process-skills and experimental, observational, manipulative, decision making and investigatory skills in the learners.
- Promote problem solving abilities and creative thinking in learners.
- Develop conceptual competence in the learners and make them realize and appreciate the interface of Physics with other disciplines.

| ONE PAPER | COURSE STRUCTURE (THEORY) | M.M. 70 |
|-----------|---|-------------------|
| | THREE HOURS | |
| | Class-XI | Weightage |
| Unit-I | Physical World & Measurement | 03 |
| Unit-II | Kinematics | 10 |
| Unit-III | Laws of Motion | 10 |
| Unit-IV | Work, Energy & Power | 06 |
| Unit-V | Motion of System of particles & Rigid Body | 06 |
| Unit-VI | Gravitation | 05 |
| Unit-VII | Properties of Bulk Matter | 10 |
| Unit-VIII | Thermodynamics | 05 |
| Unit-IX | Behaviour of Perfect Gas & Kinetic Theory of gases | 05 |
| Unit-X | Oscillations & Waves | 10 |
| | | Total - 70 |

UNIT-I : PHYSICAL WORLD AND MEASUREMENT**(PERIODS 10)**

Physics-scope and excitement; nature of physical laws; Physics, technology and society.

Need for measurement : Units of measurement ; systems of units ; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures.

Dimensions of physical quantities, dimensional analysis and its applications.

UNIT-II : KINEMATICS**(PERIODS 30)**

Frame of reference. Motion in a straight line : Position-time graph, speed and velocity.

Uniform and non-uniform motion, average speed and instantaneous velocity.

Uniformly accelerated motion, velocity-time, position-time graphs, relations for uniformly accelerated motion (graphical treatment).

Elementary concepts of differentiation and integration for describing motion.

Scalar and vector quantities : Position and displacement vectors, general vectors and notation, equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors. Relative velocity.

Unit vector; Resolution of a vector in a plane-rectangular components. Motion in a plane. Cases of uniform velocity and uniform acceleration-projectile motion. Uniform circular motion.

UNIT-III : LAWS OF MOTION

(PERIODS 16)

Intuitive concept of force. Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications.

Equilibrium of concurrent forces. Static and kinetic friction, laws of friction, rolling friction.

Dynamics of uniform circular motion : Centripetal force, examples of circular motion (vehicle on level circular road, vehicle on banked road).

UNIT-IV : WORK, ENERGY AND POWER

(PERIODS 16)

Scalar product of vectors. Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power.

Notion of potential energy, potential energy of a spring, conservative forces : conservation of mechanical energy (kinetic and potential energies); non-conservative forces : elastic and inelastic collisions in one and two dimensions.

UNIT-V : MOTION OF SYSTEM OF PARTICLES AND RIGID BODY

(PERIODS 18)

Centre of mass of a two-particle system, momentum conservation and centre of mass motion. Centre of mass of a rigid body; centre of mass of uniform rod.

Vector product of vectors; moment of a force, torque, angular momentum, conservation of angular momentum with some examples.

Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions; moment of inertia, radius of gyration.

Values of moments of inertia for simple geometrical objects (no derivation). Statement of parallel and perpendicular axes theorems and their applications.

UNIT-VI : GRAVITATION**(PERIODS 14)**

Keplar's laws of planetary motion. The universal law of gravitation.

Acceleration due to gravity and its variation with altitude and depth.

Gravitational potential energy; gravitational potential. Escape velocity.

Orbital velocity of a satellite. Geo-stationary satellites.

UNIT-VII : PROPERTIES OF BULK MATTER**(PERIODS 28)**

Elastic behaviour, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear, modulus of rigidity.

Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes). Effect of gravity on fluid pressure.

Viscosity, Stokes' law, terminal velocity, Reynold's number, streamline and turbulent flow. Bernoulli's theorem and its applications.

Surface energy and surface tension, angle of contact, application of surface tension ideas to drops, bubbles and capillary rise.

Heat, temperature, thermal expansion; specific heat-calorimetry; change of state - latent heat.

Heat transfer-conduction, convection and radiation, thermal conductivity, Newton's law of cooling.

Unit VIII : Thermodynamics**(Periods 12)**

Thermal equilibrium and definition of temperature (zeroth law of thermodynamics). Heat, work and internal energy. First law of thermodynamics.

Second law of thermodynamics : reversible and irreversible processes. Heat engines and refrigerators.

Unit IX : Behaviour of Perfect Gas and Kinetic Theory**(Periods 8)**

Equation of state of a perfect gas, work done on compressing a gas.

Kinetic theory of gases-assumptions, concept of pressure. Kinetic energy and temperature; rms speed of gas molecules; degrees of freedom, law of equipartition of energy (statement only) and application to specific heats of gases; concept of mean free path, Avogadro's number.

Unit X : Oscillations and Waves**(Periods 28)**

Periodic motion-period, frequency, displacement as a function of time.

Periodic functions. Simple harmonic motion (S.H.M) and its equation; phase; oscillations of a spring-restoring force and force constant; energy

in S.H.M.- Kinetic and potential energies; simple pendulum- derivation of expression for its time period; free, forced and damped oscillations (qualitative ideas only), resonance.

Wave motion. Longitudinal and transverse waves, speed of wave motion. Displacement relation for a progressive wave. Principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats, Doppler effect.

PRACTICALS

M.M. = 30

Note : Every student will perform 10 experiments (5 from each section) and 8 activities (4 from each section) during the academic year.

Two demonstration experiments must be performed by the teacher with participation of students. The students will maintain a record of these demonstration experiments.

EVALUATION SCHEME FOR PRACTICAL EXAMINATION

- | | |
|---|-----------------|
| – One experiment from any one section | 8 Marks |
| – Two activities (one from each section) | (4 + 4) 8 Marks |
| – Practical Record (experiments & activities) | 6 Marks |
| – Record of demonstration experiments & Viva Based on these experiments | 3 Marks |
| – Viva on experiments & activities | 5 Marks |

SECTION-A

Experiments

1. Use of Vernier Callipers
 - (i) To measure diameter of a small spherical/cylindrical body.
 - (ii) To measure dimensions of a given regular body of known mass and hence find its density.
 - (iii) To measure internal diameter and depth of a given beaker/ calorimetre and hence find its volume.
2. Use of screw gauge
 - (i) To measure diameter of a given wire,
 - (ii) To measure thickness of a given sheet
 - (iii) To measure volume of an irregular lamina.



3. To determine radius of curvature of a given spherical surface by a spherometer.
4. To find the weight of a given body using parallelogram law of vectors.
5. Using a simple pendulum, plot $L-T$ and $L-T^2$ graphs. Hence find the effective length of second's pendulum using appropriate graph.
6. To study the relationship between force of limiting friction and normal reaction and to find co-efficient of friction between a block and a horizontal surface.
7. To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination by plotting graph between force and $\sin\theta$.

Activites

1. To make a paper scale of given least count, e.g. 0.2cm, 0.5cm.
2. To determine mass of a given body using a metre scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bars.
4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
5. To study the variation in range of a jet of water with angle of projection.
6. To study the conservation of energy of a ball rolling down on inclined plane (using a double inclined plane).
7. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.

SECTION-B

Experiments

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting graph between load and extension.
3. To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V , and between P and $1/V$.
4. To determine the surface tension of water by capillary rise method.

5. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
6. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
7. (i) To study the relation between frequency and length of a given wire under constant tension using sonometer.
(ii) To study the relation between the length of a given wire and tension for constant frequency using sonometer.
8. To find the speed of sound in air at room temperature using a resonance tube by two-resonance positions.
9. To determine specific heat of a given (i) solid (ii) liquid, by method of mixtures.

Activities

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.
4. To study the effect of detergent on surface tension by observing capillary rise.
5. To study the factors affecting the rate of loss of heat of a liquid.
6. To study the effect of load on depression of a suitably clamped metre scale loaded (i) at its end (ii) in the middle.

PRESCRIBED BOOKS :

Physics- I

Published by HPBSE Dharmshala

Physics-II

Published by HPBSE Dharmshala

14. CHEMISTRY**CODE NO. 155****RATIONALE**

Higher Secondary is the most crucial stage of school education because at this juncture specialized discipline based, content-oriented courses are introduced. Students reach this stage after 10 years of general education and opt for Chemistry with a purpose of pursuing their career in basic sciences or professional courses like medicine, engineering, technology and study courses in applied areas of science and technology at tertiary level. Therefore, there is a need to provide learners with sufficient conceptual background of Chemistry, which will make them competent to meet the challenges of academic and professional courses after the higher secondary stage.

The new and updated curriculum is based on disciplinary approach with rigour and depth taking care that the syllabus is not heavy and at the same time it is comparable to the international level. The knowledge related to the subject of Chemistry has undergone tremendous changes during the past one decade. Many new areas like synthetic materials, bio-molecules, natural resources, industrial chemistry are coming in a big way and deserve to be an integral part of chemistry syllabus at senior secondary stage. At international level, new formulations and nomenclature of elements and compounds, symbols and units of physical quantities floated by scientific bodies like IUPAC and CGPM are of immense importance and need to be incorporated in the updated syllabus. The revised syllabus takes care of all these aspects. Greater emphasis has been laid on use of new nomenclature, symbols and formulations, teaching of fundamental concepts, applications of concepts in chemistry to industry/technology, logical sequencing of units, removal of obsolete content and repetition etc.

OBJECTIVES

The broad objectives of teaching Chemistry at Senior Secondary Stage are to help the learners

- e To promote understanding of basic facts and concepts in chemistry while retaining the excitement of chemistry.
- e To make students capable of studying chemistry in academic and professional courses (such as medicine technology) at tertiary level.

- c To expose the students to various emerging new areas of chemistry and apprise them with their relevance in their future studies and their application in various spheres of chemical sciences and technology.
- c To equip students to face various changes related to health, nutrition, environment, population, weather, industries and agriculture.
- c To develop problem solving skills in students.
- c To expose the students to different processes used in industries and their technological applications.
- c To apprise students with interface of chemistry with other disciplines of science such as physics, biology, geology, engineering etc.
- c To acquaint students with different aspects of chemistry used in daily life.
- c To develop an interest in students to study chemistry as a discipline.

COURSE STRUCTURE

THEORY

| One Paper | Time : 3 Hours | 70 Marks |
|------------------|--|-----------|
| Unit No. | Title | Marks |
| Unit I | Some basic Concepts of Chemistry | 3 |
| Unit II | Structure of Atom | 6 |
| Unit III | Classification of Elements and Periodicity in Properties | 4 |
| Unit IV | Chemical Bonding and Molecular Structure | 5 |
| Unit V | States of Matter : Gases and Liquids | 4 |
| Unit VI | Thermodynamics | 6 |
| Unit VII | Equilibrium | 6 |
| Unit VIII | Redox Reactions | 3 |
| Unit IX | Hydrogen | 3 |
| Unit X | S-Block Elements | 5 |
| Unit XI | Some P-Block Elements | 7 |
| Unit XII | Organic Chemistry - some basic Principles and Techniques | 7 |
| Unit XIII | Hydrocarbons | 8 |
| Unit XIV | Environmental Chemistry | 3 |
| Total | | 70 |

Unit I : Some Basic Concepts of Chemistry**(Periods 14)**

General Introduction : Importance and scope of chemistry.

Historical approach to particulate nature of matter, laws of chemical combination. Dalton's atomic theory : concept of elements, atoms and molecules.

Atomic and molecular masses. Mole concept and molar mass: percentage composition, empirical and molecular formula; chemical reactions, stoichiometry and calculations based on stoichiometry.

Unit II : Structure of Atom**(Periods 16)**

Discovery of electron, proton and neutron; atomic number, isotopes and isobars. Thomson's model and its limitations, Rutherford's model and its limitations. Bohr's model and its limitations, concepts of shells and subshells, dual nature of matter and light, De Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p, and d orbitals, rules for filling electrons in orbitals-Aufbau principle, Pauli exclusion principle and Hund's rule, electronic configuration of atoms, stability of half filled and completely filled orbitals.

Unit III : Classification of Elements and Periodicity in Properties**(Periods 8)**

Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements-atomic radii, ionic radii, inert gas radii. Ionization enthalpy, electron gain enthalpy, electro negativity, valence.

Unit IV : Chemical Bonding and Molecular Structure**(Periods 16)**

Valence electrons, ionic bond, covalent bond : bond parameters. Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s,p and d orbitals and shapes of some simple molecules, molecular orbital; theory of homo nuclear diatomic molecules (qualitative idea only), hydrogen bond.

Unit V : States of Matter : gases and liquids**(Periods 14)**

Three states of matter. Intermolecular interactions, type of bonding,

melting and boiling points. Role of gas laws in elucidating the concept of the molecule, Boyle's law, Charles law, Gay Lussac's law, Avogadro's law. Ideal behaviour, empirical derivation of gas equation, Avogadro's number. Ideal gas equation. Derivation from ideal behaviour, liquefaction of gases, critical temperature.

Liquid State- Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

Liquid State-Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

Unit VI : Thermodynamics

(Periods 16)

Concepts of System, types of systems, surroundings. Work, heat, energy, extensive and intensive properties, state functions.

First law of thermodynamics-internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH , Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation. Phase transition, ionization, and dilution.

Introduction of entropy as a state function, free energy change for spontaneous and non-spontaneous process, equilibrium.

Unit VII : Equilibrium

(Periods 16)

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium- Le Chatelier's principle; ionic equilibrium-ionization of acids and bases, strong and weak electrolytes, degree of ionization, concept of pH. Hydrolysis of salts (elementary idea). Buffer solutions solubility product, common ion effect (with illustrative examples).

Unit VIII : Redox Reactions

(Periods 6)

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, applications of redox reactions.

Unit IX : Hydrogen

(Periods 8)

Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of hydrogen; hydrides-ionic, covalent and interstitial; physical and chemical properties of water, heavy water; hydrogen peroxide-preparation, reactions and structure; hydrogen as a fuel.

Unit X : S-Block Elements (Alkali and Alkali and Alkaline earth metals

(Periods 14)

Group 1 and Group-2 elements

General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens ; uses.

Preparation and properties of some important compounds :

Sodium carbonate, sodium chloride, sodium hydroxide and sodium hydrogen carbonate, biological importance of sodium and potassium.

CaO, CaCO₃ and industrial use of lime and limestone, biological importance of Mg and Ca.

Unit XI : Some P-Block Elements

(Periods 16)

General Introduction to P-Block Elements

Group 13 elements : General introduction, electronic configuration, occurrence. Variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group; boron-physical and chemical properties, some important compounds : borax, boric acids, boron hydrides. Aluminium : uses, reactions with acids and alkalies.

Group 14 elements : General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first element, Carbon-catenation, allotropic forms, physical and chemical properties ; uses of some important compounds : oxides. Important compounds of silicon and a few uses : silicon tetrachloride, silicones, silicates and zeolites.

Unit XII : Organic Chemistry-Some Basic Principles and Techniques

(Periods 14)

General introduction, method, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds.

Electronic displacements in a covalent bond : inductive effect, electromeric effect, resonance and hyper conjugation.

Homolytic and heterolytic fission of a covalent bond : free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions.

Unit XIII : Hydrocarbons**(Periods 16)****Classification of Hydrocarbons**

Alkanes-Nomenclature, isomerism, conformations (ethane only), physical properties, chemical reactions including free radical mechanism or halogenation, combustion and pyrolysis.

Alkenes- Nomenclature, structure of double bond (ethene) geometrical isomerism, physical properties, methods of preparation; chemical reactions : addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkenes - Nomenclature, structure of triple bond (ethyne), physical properties. Methods of preparation, chemical reactions : acidic character of alkynes, addition reaction of hydrogen, halogens, hydrogen halides and water.

Aromatic hydrocarbons : Introduction, IUPAC nomenclature; Benzene : resonance aromaticity; chemical properties: mechanism of electrophilic substitution. - nitration sulphonation, halogenation, Friedel Craft's alkylation and acylation : directive influence of functional group in mono-substituted benzene; carcinogenicity and toxicity.

Unit XIV : Environmental Chemistry**(Periods 6)**

Environmental pollution-air, water and soil pollution, chemical reactions in atmosphere smog, major atmospheric pollutants; acid rain, ozone and its reactions, effects of depletion of ozone layer, greenhouse effect and global warming-pollution due to industrial wastes ; green chemistry as an alternative tool for reducing pollution, strategy for control of environmental pollution.

PRACTICALS

| EVALUATION SCHEME FOR EXAMINATION | MARKS |
|--|-----------------|
| Volumetric Analysis | 10 Marks |
| Salt Analysis | 6 Marks |
| Content Based Experiment | 4 Marks |
| Class Record and Viva | 5 Marks |
| Investigatory Project | 5 Marks |
| Total | 30 Marks |

A. Basic Laboratory Techniques (Periods 2)

- (a) Cutting a glass tube and glass rod.
- (b) Bending of a glass tube.
- (c) Draw out, a glass jet.
- (d) Boring a Cork.

B. Characterization and Purification of chemical substance (Periods 6)

1. Determination of melting point of organic compound.
2. Determination of boiling point of organic compound
3. Crystallization involving impure sample of any one of the following :
Alum, copper sulphate, Benzoic acid.

C. Experiments related of pH change (Periods 6)

- (a) Any one of the following experiments :
Determination of pH of some solutions obtained from fruit juices, solutions of known and varied concentrations of acids, bases and salts using pH paper or universal indicator.
Comparing the pH of solutions of strong and weak acid of same concentration.
Study the pH change in the titration of a strong base using universal indicator.
- (b) Study of pH change by common-ion effect in case of weak acids and weak bases.

D. Chemical equilibrium (Periods 4)

One of the following experiments :

- (a) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either ions.
- (b) Study the shift in equilibrium between $[\text{Co}(\text{H}_2\text{O})_6]^{2+}$ and chloride ions by changing the concentration of either of the ions.

E. Quantitative estimation (Periods 16)

- c Using a chemical balance.
- c Preparation of standard solution of oxalic acid.
- c Determination of strength of a given solution of sodium hydroxide by titrating it against standard solution of oxalic acid.
- c Preparation of standard solution of sodium carbonate.
- c Determination of strength of a given solution of hydrochloric acid by titrating it against standard sodium carbonate solution.

F. Qualitative analysis (Periods 16)

Determination of one anion and one cation in a given salt

Cations - Pb^{2+} , Cu^{2+} , As^{3+} , Al^{3+} , Fe^{3+} , Mn^{2+} , Zn^{2+} , Co^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+

Anions - CO_3^{2-} , S^{2-} , SO_3^{2-} , HO_2^{-1} , NO_3^{-1} , Cl^- , Br^- , I^- , PO_4^{3-} ,
 , CH_3COO^-

(Note : Insoluble salts excluded)

(G) Detection of nitrogen, sulphur, Chlorine (Periods 10)

Bromine and iodine in an organic compound

PROJECT :

Scientific investigations involving laboratory testing and collecting information from other sources.

A Few suggested Projects

Checking the bacterial contamination in drinking water by testing sulphide ion.

Study of the methods of purification of water.

Testing the hardness, presence of iron, fluoride, chloride etc. depending upon the regional variation in drinking water and the study of causes of presences of these ions above permissible limit (if any).

Investigation of the foaming capacity of different washing soaps and the effect of addition of sodium carbonate on them.

Study of the acidity of different samples of the tea leaves.

Determination of the rate of evaporation of different liquids.

Study of the effect of acids and bases on the tensile strength of fibers.

Analysis of fruit and vegetable juices for their acidity.

Note : Any other investigatory project, which involves about 10 period of work, can be chosen with the approval of the teacher. (Periods 2)

PRESCRIBED BOOKS

Chemistry-I Published by HPBSE Dharmshala

Chemistry-II Published by HPBSE Dharmshala

15. BIOLOGY**CODE NO. 156**

The present syllabus reinforces the ideas introduced in the lower classes while the students learn new concepts besides getting an exposure to contemporary areas of the subject. The syllabus also aims at emphasizing the underlying principles that are common to both animals and plants as well as highlighting the relationships of biology with other areas of knowledge. The format of the syllabus allows a simple, clear, consequential flow of concepts without any jarring jumps. The syllabus also stresses the connection of the study of Biology to real life problems, use of biological discoveries/innovations in everyday life-in environment, nature, medicine, health and agriculture . The updated syllabus also focuses on reducing the curriculum load while ensuring that ample opportunities and scope for learning and appreciating basic concepts of the subject continues to be available within its framework.

The prescribed syllabus is expected to

- Promote understanding of basic principles of biology
- Learning of emerging knowledge and its relevance to individual and society.
- Encourage rational/specific attitude to issues related to population, environment and development.
- Enhance awareness about environmental issues and problems and the appropriate solutions.
- Create awareness amongst the learners about variations amongst the living and developing respect for the diversities and to appreciate that the most complex biological phenomenon are also built on essentially simple processes.

It is expected that the students would get an exposure to various branches of Biology in the syllabus in a more contextual and friendly manner as they study its various units.

III**COURSE STRUCTURE**

| (THEORY) | | |
|--------------|---|-----------|
| One Paper | Time : 3 Hours | 70 Marks |
| 1. | Diversity in living world | 07 |
| 2. | Structural organization in animals and plants | 10 |
| 3. | Cell : Structure and function | 17 |
| 4. | Plant Physiology | 18 |
| 5. | Human Physiology | 18 |
| Total | | 70 |

I. Diversity in Living World (25 Periods)

Diversity of living organisms

Classification of the living organisms (five kingdom classification, major groups and principles of classification within each kingdom).

Systematics and binomial System of nomenclature

Salient features of animal (non chordates up to phylum level and chordates up to class level) and plant (major groups ; Angiosperms up to subclass) classification.

Botanical gardens, herbaria, zoological parks and museums.

II. Structural Organisation in Animals and Plants. (30 Periods)

Tissues in animals and plants.

Morphology, anatomy and functions of different parts of flowering plants : Root, stem, leaf, inflorescence, flower, fruit and seed.

Morphology, anatomy and functions of different systems of an annelid (earthworm), an insect (cockroach) and an amphibian (frog).

III. CELL : Structure and Function (40 Periods)

Cell : Cell wall, cell membrane and cell organelles' (plastids, mitochondria, endoplasmic reticulum, Golgi bodies/dictyosomes, ribosomes, lysosomes, vacuoles, centrioles) and nuclear organization.

Mitosis, meiosis, cell cycle.

Basic chemical constituents of living boides.

Structure and functions of carbohydrates, proteins, lipids and nucleic acids.

Enzymes : types, properties and function.

IV. Plant Physiology (40 Periods)

Movement of water, food, nutrients and gases, Plants and Water Mineral nutrition, Respiration, Photosynthesis, Plant growth and development.

V. Human Physiology (45 Period)

Digestion and absorption.

Breathing and respiration

Body fluids and circulation.

Excretory products and elimination.

Locomotion and movement.

Control and coordination.

PRACTICALS

| Time : 3 Hours | Marks : 30 | 60 Periods |
|--|-------------------|-------------------|
| 1. Experiments and spotting | | 20 Marks |
| 2. Record of one investigatory project and Viva based on the project | | 5 Marks |
| 3. Class record and Viva based on experiments. | | 5 Marks |
| | | 30 marks |

A. LIST OF EXPERIMENTS

1. Study and describe three common flowering plants (solanaceae, Fabaceae and Liliaceae)
2. Preparation and study of T.S. of dicot and monocot roots and stems (normal).
3. Study of osmosis by potato osmometer.
4. Study of plasmolysis in epidermal peels (e.g. Rhoeo leaves).
5. Study of distribution of stomata in the upper and lower surface of leaves.
6. Comparative study of the rates of transpiration in the upper and lower surface of leaves.
7. Test for the presence of sugar, starch, proteins and fats. To detect them is suitable plant and animal materials.
8. Separate plant pigments through paper chromatography.
9. To study the rate of respiration in flower buds/leaf tissue and germinating seeds.

10. To study effect of different temperatures on the activity of salivary amylase on starch.
11. To test the presence of urea in urine.
12. To detect the presence of sugar in urine/blood sample.
13. To detect the presence of albumin in urine.
14. To detect the presence of bile salts in urine.

| |
|---|
| B. STUDY / OBSERVATION OF THE FOLLOWING SPOTTING |
|---|

1. Study parts of a compound microscope.
2. Study of the specimens and identification with reasons-Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, Yeast, liverwort, moss, fern, Pinus, one monocotyledon and one Cotyledon and one lichen.
3. Study of specimens and identification with reasons-Amoeba, Hydra, Liverfluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, Rohu, frog, lizard, pigeon and rabbit.
4. Study of tissues, and diversity in shapes and sizes of plant and animal cells (e.g. palisade cells, guard cells, parenchyma, collenchyma, sclerenchyma, Xylem, Phloem Squamous epithelium, muscle fibers and mammalian blood smear) through temporary/permanent slides.
5. Study of mitosis in onion root tip cells and animal cells (grasshopper) from permanent slides.
6. Study of different modifications in root, stem and leaves.
7. Study and identify different types of inflorescences.
8. Study of imbibition in seeds/ raisins.
9. **Observation and comments on the experimental set up on :**
 - (a) Anaerobic respiration
 - (b) Phototropism
 - (c) Apical bud removal
 - (d) Suction due to transpiration
10. To study human skeleton and different types of joints.
11. Study of external morphology of earthworm cockroach and frog through models.

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| PRESCRIBED BOOKS |
|-------------------------|

16. MATHEMATICS

CODE NO. 157

The syllabus in the subject of Mathematics has undergone changes from time to time in accordance with growth of the subject and emerging needs of society. Senior Secondary stage is a launching stage from where the students go either for higher academic education in Mathematics or for professional courses like engineering, physical and Bioscience, commerce or computer applications. The present revised syllabus has been designed in accordance with National Curriculum Frame Work 2005 and as per guidelines given in Focus Group on Teaching of Mathematics 2005 which is to meet the emerging needs of all categories of students. Motivating the topics from real life situations and other subject areas, greater emphasis has been laid on application of various concepts.

OBJECTIVES

The broad objectives of teaching Mathematics at senior school stage intend to help the pupil :

- to acquire knowledge and critical understanding particularly by way of motivation of visualization of basic facts, concepts, terms, principles and symbols and mastery of underlying processes and skills.
- to feel the flow of reasons while proving a result or solving a problem.
- to apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method.
- to develop positive attitude to think, analyze and articulate logically.
- to develop interest in the subject by participating in related competitions.
- to acquaint students with different aspects of mathematics used in daily life.
- to develop awareness of the need for national integration, protection of environment observance of small family norms, removal of social barriers, elimination of sex biases.
- to develop reverence and respect towards great Mathematicians for their contribution to the field of Mathematics.

COURSE STRUCTURE

| ONE PAPER | THREE HOURS | M.M. 100 |
|-------------------------------|-------------|--------------|
| Units | | Marks |
| 1. Sets And Functions | | 29 |
| 2. Algebra | | 37 |
| 3. Coordinate Geometry | | 13 |
| 4. Calculus | | 06 |
| 5. Mathematical Reasoning | | 03 |
| 6. Statistics And probability | | 12 |
| | | 100 |

1 : Sets and Functions**(Periods 12)**

Sets and their representations, Empty set. Finite and infinite sets, Equal sets, Subsets, Subsets of the set of real numbers especially intervals (with notations). Power set, Universal set, Venn diagrams, Union and intersection of sets. Difference of sets. Complement of a set.

2 : Relations and Functions**(Periods 15)**

Ordered pairs, Cartesian product of sets. Number of elements in the cartesian product of two finite sets. Cartesian product of the reals with itself (upto $\mathbb{R} \times \mathbb{R} \times \mathbb{R}$). Definition of relation, pictorial diagrams, domain, codomain and range of a relation. Function as a special kind of relation from one set to another. Pictorial representation of a function, domain, co-domain & range of a function. Real valued function of the real variable, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum and greatest integer functions with their graphs. Sum, difference, product and quotients of functions.

3. Trigonometric Functions :**(Periods 18)**

Positive and negative angles. Measuring angles in radians & in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $\sin^2 x + \cos^2 x = 1$, for all x . Signs of trigonometric functions and sketch of their graphs. Expressing $\sin(x + y)$ and $\cos(x + y)$ in terms of $\sin x$, $\sin y$, $\cos x$ & $\cos y$. Deducing the identities like following :

$$\sin x + \sin y = 2 \sin \frac{x+y}{2} \cos \frac{x-y}{2}, \quad \cos x + \cos y = 2 \cos \frac{x+y}{2} \cos \frac{x-y}{2}$$

$$\sin x - \sin y = 2 \cos \frac{x+y}{2} \sin \frac{x-y}{2}, \quad \cos x - \cos y = -2 \sin \frac{x+y}{2} \sin \frac{x-y}{2}$$

Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ and $\tan 3x$. General solution of trigonometric equations of the type $\sin q = \sin a$, $\cos q = \cos a$ and $\tan q = \tan a$. Proofs and simple applications of sine and cosine formulae.

Unit -II : Algebra

1. Principle of Mathematical Induction : (06) Periods

Processes of the proof by induction, motivating the application of the method by looking at natural numbers as the least inductive subset of real numbers. The principle of mathematical induction and simple applications.

2. Complex Numbers and Quadratic Equations : (10) Periods

Need for complex numbers, especially i , to be motivated by inability to solve every quadratic equation. Brief description of algebraic properties of complex numbers. Argand plane and polar representation of complex numbers. Statement of Fundamental Theorem of Algebra, solution of quadratic equations in the complex number system.

3. Linear Inequalities : (10) Periods

Linear inequalities, Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Solution of system of linear inequalities in two variables-graphically.

4. Permutations & Combinations : (12) Periods

Fundamental principle of counting. Factorial n . Permutations and combinations, derivation of formulae and their connections, simple applications.

5. Binomial Theorem : (08) Periods

History, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, general and middle term in binomial expansion, simple applications.

6. Sequence and Series : (10) Periods

Sequence and Series. Arithmetic progression (A.P.). arithmetic mean (A.M.) Geometric progression (G.P.) general term of a G.P., sum of n terms of a G.P. geometric mean (G.M.), relation between A.M. and G.M. Sum to n terms of the special series \mathbf{S}_n , \mathbf{S}_n^2 and \mathbf{S}_n^3 .

UNIT-III : COORDINATE GEOMETRY**1. Straight Lines : (09) Periods**

Brief recall of 2D from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a line : parallel to axes, point-slope form, slope-intercept form, two-point form, intercepts form and normal form. General equation of a line. Distance of a point from a line.

2. Conic Sections : (12) Periods

Sections of cone : circles, ellipse, parabola, hyperbola, a point, a straight line and pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola, Standard equation of a circle.

3. Introduction to Three-dimensional Geometry (08) Periods

Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula.

UNIT-IV : CALCULUS**1. Limits and Derivatives : (18) Periods**

Derivative introduced as rate of change both as that of distance function and geometrically, intuitive idea of limit. Definition of derivative, relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.

UNIT-V : MATHEMATICAL REASONING**1. Mathematical Reasoning : (08) Periods**

Mathematically acceptable statements. Connecting words/phrases-consolidating the understanding of “if and only if (necessary and sufficient) condition”, “implies”, “and/or”, “implied by”, “and”, “or”, “there exists” and their use through variety of examples related to real life and Mathematics. Validating the statements involving the connecting words-difference between contradiction, converse and contrapositive.

UNIT-VI : STATISTICS & PROBABILITY**1. Statistics : (10) Periods**

Measure of dispersion; Mean deviation, variance and standard deviation of ungrouped/grouped data. Analysis of frequency distributions with equal means but different variances.

2. Probability :**(10) Periods**

Random experiments : outcomes, sample spaces (set representation).
Events : occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with the theories of earlier classes. Probability of an event, probability of 'not', 'and' & 'or' events.

PRESCRIBED BOOKS

Mathematics

Published by HPBSE Dharmshala

17. ACCOUNTANCY

CODE NO. 158

RATIONALE

The course in Accountancy is introduced at +2 stage of Senior Secondary education, as formal commerce education is provided after first ten years of schooling. With the fast changing economic scenario and business environment in a state of continuous flux, elementary business education along with accountancy as the language of business and as a source of financial information has carved out a place for itself at the Senior Secondary stage. Its syllabus content should give students a firm foundation in basic accounting principles and methodology and also acquaint them with the changes taking place in the presentation and analysis of accounting information, keeping in view the development of accounting standards and use of computers.

Against this background, the course puts emphasis on developing basic understanding about the nature and purpose of the accounting information and its use in the conduct of business operations. This would help to develop among students logical reasoning, careful analysis and considered judgement.

Accounting as an information system aids in providing financial information. The emphasis at Class XI is placed on basic concepts and process of accounting leading to the preparation of accounts for a sole proprietorship firm. Computerised accounting is becoming more and more popular with increasing awareness about use of computers in business. Keeping this in view, the students are exposed compulsorily to the basic knowledge about computers and its use in accounting in the same year.

OBJECTIVES

- To familiarise the students with accounting as an information system;
- To acquaint the students with basic concepts of accounting and accounting standards;
- To develop the skill of using accounting equation in processing business transactions;
- To develop an understanding about recording of business transactions and preparation of financial statements;
- To enable the students with accounting for reconstitution of partnership firms;

- c. To enable the students of understand and analyse the financial statements; and
- c. To familiarise students with the fundamentals of computerised system of accounting.

COURSE STRUCTURE

| | | |
|------------------|----------------|------------------|
| One Paper | 3 Hours | 100 Marks |
| UNITS | PERIODS | MARKS |

PART A : FINANCIAL ACCOUNTING I (Periods 150)

| | | |
|--|------------|-----------|
| 1. Introduction to Accounting | 14 | 7 |
| 2. Theory Base of Accounting | 14 | 7 |
| 3. Recording of Business Transactions | 26 | 16 |
| 4. Trial Balance and Rectification of Errors | 22 | 8 |
| 5. Depreciation, Provision and Reserves | 22 | 12 |
| 6. Accounting for Bills of Exchange Transactions | 22 | 10 |
| | 120 | 60 |

PART B : FINANCIAL ACCOUNTING II

| | | |
|-----------------------------------|-----------|-----------|
| 7. Financial Statements | 44 | 25 |
| 8. Computers in Accounting | 24 | 10 |
| 9. Accounting and Database System | 20 | 5 |
| | 88 | 40 |

PART-A : FINANCIAL ACCOUNTING-I (PERIODS 120)

Unit 1 : Introduction to Accounting

(Periods 14)

- (a) **Accounting** - Meaning, Objectives, Accounting as source of information, internal and external users of Accounting Information and their needs.
- (b) **Qualitative Characteristics of Accounting Information** : Reliability, Relevance, Understandability and Comparability.

- (c) **Basic Accounting Terms** : Asset, Liability, Capital, Expense, Income, Expenditure Revenue, Debtors, Creditors, goods, cost, Gain, Stock, Purchase, Sales, Loss, Profit, Voucher, Discount, Transaction, Drawings.

Unit 2 : Theory Base of Accounting**(Periods 14)**

Accounting Principles : Meaning and nature

Accounting Concepts : Entity, Money Measurement, Going Concern, Accounting Period, Cost Concept, Dual Aspect. Revenue Recognition (Realisation), Matching, Accrual, Full Disclosure, Consistency, Conservatism, Materiality.

Accounting Standards : Concept

Process of accounting-from recording of business transactions to preparation of trial balance.

Bases of Accounting- Cash Basis, Accrual Basis

Unit 3 : Recording of Business Transactions**(Period 26)**

Voucher and Transactions : Origin of Transactions-Source Documents and Vouchers, preparation of Accounting Vouchers ; Accounting Equation Approach- Meaning and Analysis of transactions using Accounting Equation : Rules of Debit and Credit.

Recording of Transactions : Books of original entry-Journal, Special Purpose Books : i) Cash Book- Simple, Cashbook with Bank Column and Petty Cashbook, (ii) Purchases Book, Sales Book, Purchase Returns Book, Sales Returns Book ; Ledger-meaning, utility, format; posting from Journal and Subsidiary books; Balancing of Accounts.

Bank Reconciliation Statement : Meaning, Need and Preparation, Corrected Cash Balance.

Unit 4 : Trial Balance and Rectification of Errors**(Periods 22)**

Trial Balance : Meaning, Objectives and Preparation.

Errors : Types of Errors, errors affecting Trial Balance and Errors not affecting Trial Balance.

Detection and Rectification of Errors (One Sided and Two Sided); use of Suspense Account.

Unit 5 : Depreciation, Provisions and Reserves**(Periods 22)**

Depreciation : Meaning and Need for charging depreciation, Factors affecting depreciation, Methods of depreciation - Straight Line method, Written Down Value Method (excluding change in method), Method of recording depreciation-charging to asset account, creating provision for depreciation/accumulated depreciation account; Treatment of disposal of asset.

Provisions and Reserves : Meaning and importance, difference between Provisions and Reserves, types of Reserves : Revenue Reserve, Capital Reserve, General Reserve, Specific Reserve and Secret Reserves;

Unit 6 : Accounting for Bills of Exchange Transactions**(Periods 22)**

Bills of Exchange and Promissory Note : Definition, Features, Parties, Specimen, Distinction.

Important Terms : Term of Bill, Concept of Accommodation Bill, Days of Grace, Date of Maturity, Bill at Sight, Negotiation, Endorsement, Discounting of bill, Dishonour, Retirement and Renewal of a bill.

Accounting Treatment of bill transactions.

PART B : FINANCIAL ACCOUNTING-II**(Periods 88)****Unit 7 : Financial Statements****(Periods 44)**

Financial Statements : Meaning and Users.

Distinction between capital Expenditure and Revenue Expenditure.

Trading and Profit and Loss Account : Gross Profit, Operating Profit; Net Profit.

Balance Sheet : need, grouping and marshalling of Assets and Liabilities, Vertical Presentation of Financial Statement.

Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued Income, Income received In advance, depreciation and bad debts, provision for doubtful debts, provision for discount on debtors, manager's commission.

Preparation of Trading and Profit & Loss Account and Balance Sheet of sole proprietorship.

Unit 8 : Computers in Accounting**(Periods 24)**

Introduction to Computer and Accounting information System (AIS)

Applications of computers in accounting.

Automation of accounting process, designing accounting reports, MIS reporting, data exchange with other information systems.

Comparison of accounting processes in manual and computerized accounting, highlighting advantages and limitations of automation.

Sourcing of accounting system : readymade and customized and tailor-made accounting system. Advantages and disadvantages of each option.

Unit 9 : Accounts from Database System**(Periods 20)**

Accounting and Database Management System.

Concept of entity and relationship : entities and relationships in an Accounting System : designing and creating simple tables, forms, queries and reports in the context of Accounting System.

PRESCIBED BOOK

- | | |
|-------------------|------------------------------------|
| 1. लेखाशास्त्र-I | एन. सी. ई. आर. टी. द्वारा प्रकाशित |
| 2. लेखाशास्त्र-II | एन. सी. ई. आर. टी. द्वारा प्रकाशित |
| 3. Accountancy-I | NCERT Publication |
| 4. Accountancy-II | NCERT Publication |

18. BUSINESS STUDIES

CODE NO. 159

RATIONALE

The courses in Business Studies and Accountancy are introduced at + 2 stage of Higher Secondary Education as formal commerce education is provided after first ten years of schooling. Therefore, it becomes necessary that instructions in these subjects are given in such a manner that students have a good understanding of the principles and practices bearing in business (trade and industry) as well as their relationship with the society.

Business is a dynamic process that brings together technology, natural resources and human initiative in a constantly changing global environment. To understand the framework in which a business operates, a detailed study of the organisation and management of business processes and its interaction with the environment is required. Information Technology is becoming a part of business operations in more and more organisations. Computerised systems are fast replacing other systems. E-business and other related concepts are picking up fast which need to be emphasized in the curriculum.

The Course in Business Studies will prepare students to analyse, manage, evaluate and respond to changes which affect business. It provides a way of looking at and interacting with the business environment. It recognizes the fact that business influences and is influenced by social, political, legal and economic forces. It allows students to appreciate that business is an integral component of society and develops an understanding of many social and ethical issues.

Therefore, to acquire basic knowledge of the business world, a course in Business Studies would be useful. It also informs students of a range of study and work options and bridges the gap between school and work.

OBJECTIVES

- To develop in students an understanding of the processes of business and its environment;
- To acquaint students with the dynamic nature and inter-dependent aspects of business;
- To develop an interest in the theory and practice of business, trade and industry;
- To familiarize candidates with theoretical foundations of organizing, managing and handling operations of a business firm;

- c To help students appreciate the economic and social significance of business activity and the social costs and benefits arising therefrom;
- c To acquaint students with the practice of managing the operations and resources of business;
- c To prepare students to function more effectively and responsibly as consumers, employers, employees and citizens;
- c To help students in making the transition from school to higher education on to the world of work including self-employment;
- c To develop in students a business attitude and skills to be precise and articulate.

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| BUSINESS STUDIES SYLLABUS |
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| | | |
|------------------|----------------|----------------------|
| One Paper | 3 Hours | 90 Marks |
| UNITS | | PERIODS MARKS |

PART A : FOUNDATIONS OF BUSINESS

| | | |
|--|------------|-----------|
| 1. Nature and Purpose of Business | 20 | 08 |
| 2. Forms of Business Organisations | 24 | 12 |
| 3. Private, Public and Global Enterprises | 20 | 10 |
| 4. Business Services | 18 | 08 |
| 5. Emerging Modes of Business | 10 | 06 |
| 6. Social Responsibility of Business and Business Ethics | 12 | 06 |
| | 104 | 50 |

PART B : CORPORATE ORGANIZATION, FINANCE AND TRADE

| | | |
|--------------------------------|----|----|
| 7. Formation of a company | 16 | 07 |
| 8. Sources of Business Finance | 20 | 10 |
| 9. Small Business | 14 | 07 |
| 10. Internal Trade | 20 | 10 |
| 11. International Business | 12 | 06 |

PART C : PROJECT WORK (PRACTICAL)

| | | |
|--------------------------------|------------|-----------|
| 12. Record of Project and Viva | 22 | 10 |
| | 104 | 50 |

PART A : FOUNDATIONS OF BUSINESS (Periods 104)**Unit 1 : Nature and Purpose of Business****(Periods 20)**

- Concept and characteristics of business.
- Business, profession and employment - distinctive features.
- Objectives of business - economic and social, role of profit in business
- Classification of business activities : Industry and Commerce.
- Industry - types : primary, secondary, tertiary.
- Commerce : Trade and Auxiliaries.
- Business risks - nature and causes.

UNIT 2 : FORMS OF BUSINESS ORGANISATIONS**(Periods 24)**

- Sole Proprietorship; Joint Hindu Family Business-meaning, features, merits and limitations;
- Partnership-meaning, types, registration, merits, limitations, types of partners;
- Cooperative Societies-types , merits and limitations.
- Company : Private Ltd. Public Ltd.- merits, limitations;
- Choice of form of business organizations.
- Starting a business-Basic factors.

Unit 3 : Private, Public & Global Enterprises**(Periods 20)**

- Private Sector and Public Sector.
- Forms of organising public sector enterprises
- Departmental Undertaking
- Statutory Corporation
- Government Company
- Changing role of public sector
- Global Enterprises (Multinational Companies) meaning and features, joint ventures-meaning, benefits.

Unit 4 : Business Services

(Periods 18)

- Nature and types of Business services-Banking, Insurance, Transportation, Ware housing, Communication.
- Banking-types of Banks, Functions of Commercial banks, E-banking
- Insurance-principles, types : life, fire and marine
- Postal and Telecom services.
- Warehousing : types and functions.

UNIT-5 EMERGING MODES OF BUSINESS

(PERIODS 10)

- E-Business-Meaning, scope and benefits, Resources required for successful e-business implementation, On-line transactions, payment mechanism, security and safety of business transactions ;
- Outsourcing-concept, need and scope.

Unit 6 : Social Responsibility of Business and Business Ethics

(Periods 12)

- Concept of social responsibility.
- Case for Social responsibility;
- Responsibility towards owners, investors; employees, consumers, government, community and public in general;
- Business and environmental protection;
- Business ethics : concept and elements.

Part-B : CORPORATE ORGANISATION, FINANCE AND TRADE

(Periods 104)

Unit 7 : Formation of a Company

(Periods 16)

- Stages in the formation of a company;
- Promotion
- Incorporation, and
- Commencement of business

Unit 8 : Sources of Business Finance**(Periods 20)**

- Nature and significance
- Owner's funds and borrowed funds
- Sources of raising Finance :
 - Equity and Preference shares
 - Global Depository Receipt, American Depository Receipt
 - Debentures and Bonds
 - Retained Profits
 - Public deposits
 - Loan from Financial Institutions
 - Loans from commercial Banks
 - Trade Credit.

Unit 9 : Small Business**(Periods 14)**

- Small Scale Industry; Tiny Sector; cottage and rural industry;
- Role of small business in rural India;
- Problems of small business in India.
- Government Assistance and Special Schemes for Industries in rural, backward and hilly areas.

Unit 10 : Internal Trade.**(Periods 20)**

- Meaning and types of internal trade : wholesale and retail ;
- Services of a wholesaler and a retailer.;
- Types of Retail Trade :
 - Itinerant retailers and fixed shops.
 - Departmental store, super market, malls, chain store, mail order business, consumer's cooperative store.
 - Automatic Vending Machine.
- Role of Chamber of Commerce and Industry in promotion of internal trade.

Unit 11 : International Business**(Periods 12)**

- Nature, Importance and complexities involved in International Business;
- Ways of entering into international Business. Export-Import Procedures and documentation. Foreign Trade Promotion. Organizational support and incentives; Nature and importance of Export Processing Zone/ special Economic Zone; International Trade Institutions and Agreement : WTO, UNCTAD, World Bank, IMF.

PART-C**Unit-12 : Project Work (Practical)****3 hrs.****10 Marks****(Periods 22)****SUGGESTIVE/ILLUSTRATIVE PROJECTS****Any one of the following :**

- (i) Find out from local sample business unit (s) the various objectives they pursue.
- (ii) Problems of setting up and running business units.
- (iii) Enquiry into the ethics of running business through questionnaires.
- (iv) Survey of quality of bank services in the local branch office.
- (v) Study of postal and courier mail services.
- (vi) Availability and use of agency services, advertising, packaging, investments in savings schemes, etc.
- (vii) Survey of the popularity of credit cards issued by different banks.
- (viii) Study the profile of a sole trader/partnership commenting on the nature and working of business.
- (ix) Study of a Joint Hindu family business.
- (x) Study of the working of any cooperative society.
- (xi) Study of a small business unit regarding source of finance.
- (xii) Nature of different traders (like hawkers and pedlars in a specific locality) in issue of goods, capital investment, turnover.
- (xiii) Study of weekly bazaar in a locality.
- (xiv) Study of franchise retail store.

- (xv) Study of export/import of any article.
- (xvi) Problems of women entrepreneurs in business.
- (xvii) Waste/garbage disposal.
- (xviii) Study of pavement trade.
- (xix) Prepare a scrapbook and collect articles on the changing role of public sector and any other topics related to the syllabus.

Marks may be suitably distributed over the different parts of the Project Report. (1) Objectives (2) Methodology (3) Conclusions-findings and suggestions. (4) Viva.

PRESCRIBED BOOKS

- | | |
|---------------------|-----------------------------------|
| 1. व्यवसायिक अध्ययन | एन. सी. ई. आर.टी. द्वारा प्रकाशित |
| 2. Business studies | NCERT Publication |

19. PHILOSOPHY

CODE NO. 138

OBJECTIVES

Philosophy, a theoretical enterprise with practical applications, aims at understanding the nature and meaning of life and Reality. It is considered to be the mother of all branches of knowledge . The nature of Philosophy is that in it no answer is left unquestioned . It attempts to understand and explain the fundamental axioms and presuppositions which are taken for granted by all branches of knowledge. The +2 syllabus is designed to give the students a glimpse of the nature of problems and the way they are dealt within its various branches –Logic, Ethics, Classical Indian Philosophy and Western Philosophy.

(THEORY)

| | | |
|------------------|-----------------------|--------------------|
| One Paper | Time : 3 Hours | Marks : 100 |
|------------------|-----------------------|--------------------|

UNIT-WISE WEIGHTAGE

| UNITS | MARKS |
|---|-------|
| Scientific Method | |
| 1. Methods of Natural and Social Sciences | 10 |
| 2. Observation and Experiment | 10 |
| 3. Science and Hypothesis | 10 |
| 4. Mill's Methods of Experimental Inquiry | 10 |
| 5. Nyaya Theory of Knowledge (General Survey) | 10 |
| Logic | |
| 6. The nature and subject matter of logic | 06 |
| 7. Terms & Propositions | 15 |
| Relations between Propositions | |
| 8. Categorical Syllogism | 10 |
| 9. Elements of Symbolic Logic | 06 |
| 10. Buddhist Formal Logic | 13 |

Unit 1 : Methods of Natural and Social Sciences**(Periods 20)**

Value of Science , Nature and aim of Scientific Methods : Difference between Scientific Induction and induction by simple enumeration. Difference between methods of Natural Sciences and Social Sciences.

Unit 2 : Observation and Experiment**(Periods 20)**

Their Differences; fallacies of observation.

Unit 3 : Science and Hypothesis**(Periods 25)**

The place of hypothesis in scientific methods . Formulation of relevant hypothesis . Formal conditions of valid hypothesis . Hypothesis and crucial experiments.

Unit 4 : Mill's Methods of Experimental Inquiry**(Periods 25)**

The method of agreement;
The method of difference
The Joint method of agreement and difference;
The method of concomitant variation;
The method of residue

Unit 5 : Nyaya Theory of Knowledge**(Periods 30)**

General Survey – Prama, Pramana, Pramanya, Pratyaksa, Anumana, Upamana Sabda.

LOGIC**Unit 6 : The Nature and scope of logic****(Periods 14)**

What is Logic ? Use and application of Logic. Difference between Truth and Validity.

Unit 7 : Terms and Propositions**(Periods 30)**

Definition of Term; Denotation and Connotation of Terms . Definitions of proposition and traditional classification of Propositions . Distribution of Terms.

Relation between Propositions (Periods 12)

Traditional Square of Propositions

Unit 8 : Categorical Syllogism (Periods 24)

Its definition : Rules of valid syllogism and Fallacies

Unit 9 : Elements of Symbolic Logic (Periods 14)

Value of using symbols in Logic

Basic Truth-Tables

Unit 10 : Buddhist Formal Logic (Periods 26)

SUGGESTED REFERENCE

1. Bholā Nath Roy Text-book of Inductive Logic
2. -do- Text-book of Deductive Logic
3. I.M. Copi Introduction to Logic
4. S.C. Chatterjee Nyaya Theory of Knowledge
5. S.R. Bhatt and Anu Melhotra Buddhist Epistemology
6. Chatterjee and Dutta Indian Philosophy

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| 20. MUSIC |
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|-------------------------------|
| CODE NO. 145, 146, 147 |
|-------------------------------|

Note :— Any one of the following courses :

- (A) Hindustani (Vocal)
- (B) Hindustani (Instrumental Melodic)
- (C) Hindustani (Instrumental Percussion)

(A) HINDUSTANI (VOCAL)

100 MARKS

| |
|-----------------|
| CODE-145 |
|-----------------|

| | | |
|-------------------------|----------------|-----------------|
| One Theory Paper | 3 Hours | 30 marks |
|-------------------------|----------------|-----------------|

A. Theory

1. Definition of the following :—

Nad, Shruti, Svara, Raga, Mela (Thata) Classification of ragas, Anibadha-Nibadha-gana.

- 2. Description of the ragas prescribed for Class XI.
- 3. Contribution and short life sketch of Tansen, Sadaranga Pt. Bhartkhande and Pt. Vishnu Digamber Paluskar.
- 4. Brief history of Dhrupada and Khyal.
- 5. Writing in Notation of songs and Taals prescribed for Class XI.

One Practical Paper

70 marks

B. Practical Paper

1. (a) One Drut Khayal with simple elaborations in the following ragas :

Alhaiyya—Bilawal, Durga, Jounpuri, Malkauns.

- (b) One Dhurapat, One Swarmalika and one Lakshan geet in any of the prescribed Ragas.
- (c) One composition in the Raga Kaafi.
- 2. The recitation of the Thekas of Ektala and Chautala with Dugan keeping Taal with hand beats.
- 3. Ability to sing Aaroha, Avaroha, Pakar and simple Svara Vistar with Alap and Tal in the prescribed ragas.
- 4. Ability to recognise the prescribed Ragas from the passages of Swaras rendered by the examiner.

(B) HINDUSTANI (INSTRUMENTAL MELODIC)

CODE 146

Any one of the following :

- | | | |
|-----------------------|------------|--------------|
| (i) Sitar | (ii) Sarod | (iii) Violin |
| (iv) Dilruba or Israj | (v) Flute | (vi) Guitar |
-

| | | |
|-------------------------|----------------|-----------------|
| One Theory Paper | 3 Hours | 30 marks |
|-------------------------|----------------|-----------------|

A. Theory**1. Definition of the following :—**

Nad, Shruti, Svara, Raga, Mela (Thata) Classification of ragas, Anibadha-Nibadha-gana.

2. Description of the ragas prescribed for Class XI.
 3. Contribution and short life sketch of Tansen, Sadaranga Pt. Bhartkhande and Pt. Vishnu Digamber Paluskar.
 4. Brief history of Dhrupada and Khayal,
 5. Writing in Notation of songs and Taals prescribed for Class XI.
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| | |
|----------------------------|-----------------|
| One Practical Paper | 70 marks |
|----------------------------|-----------------|

B. Practical Activities

1. (a) One Razakhani gat with simple elaborations in Alhaiyya-Bilawal, Durga, Jounpuri, and
(b) One composition in Raga Kaafi.
2. Ability to play, Aaroha, Avaroha, Pakar, simple Swara—Vistars with Alap and Todas in the prescribed ragas.
3. Ability to recite the Thekas of Ek Tala and Choutala with Dugun Keeping tala with hand beats.
4. Ability to recognise the prescribed ragas from the passages of Swaras song played by the examiner.

(C) HINDUSTANI—(INSTRUMENTAL PERCUSSION)**CODE -147 (TABLA OR PAKHAWAJ)**

| | | |
|-------------------------|----------------|-----------------|
| One Theory Paper | 3 Hours | 30 Marks |
|-------------------------|----------------|-----------------|

A. Theory :**1. Definition of the following term :—**

Nada, Shruti, Savara, Raga, Kayada, Mukhra, Mohra, Tihai, Paran, Anibadha and Nibhada gana, Laya (Vilambit, Madhya Draut), Layakari (Dugum, Teegun, Chaugun), Bole, Paduant, Gat.

2. Description of the talas prescribed for Class XI.**3. Contribution and life sketch of Taansen, Sadarang and Pt. Vishnu Digamber Paluskar.****4. Brief history of Dhrupad and Khayal.****5. Recognition of talas from given portion of the Thekas.****6. Writing of Notation of the prescribed talas in Tihai and dugun.**

| | |
|----------------------------|-----------------|
| One Practical Paper | 70 Marks |
|----------------------------|-----------------|

B. Practical Activites**1. Playing of the Thekas Technical and Ektal with simple elaborations.****2. Playing of the Theka of the following talas on Tabla with Dugun and Chaugun :—**

Teentaal and Ektal.

3. Simple Peshkars 2 Kaydas and a few Tukdras and in Teentaal and Ektal.

3. Practice of different movements of the eyes, hands and face.

4. Practice of Titkara to teentala in the following lays :

Tthaat, Dugun.

5. The students should know the following composition :

| | |
|---|---|
| (i) Tthaat | 1 |
| (ii) Aamad | 2 |
| (iii) Fas Aamad | 2 |
| (iv) Vanda | 1 |
| (v) Tokra/Tora | 4 |
| (vi) Natwari Ka Tukra | 4 |
| (vii) Gatnikas | 3 |
| (viii) Gatbhav | 1 |
| (ix) Paran | 4 |
| (x) Tihayee | 4 |
| (xi) Lar/Laya Baant | 4 |
| (xii) Parhant of Tukra Toda, Paran learnt with Tala | |

(B) BHARATNATYAM DANCE

(CODE -153)

| One Theory Paper | 3 Hours | 30 Marks |
|---|----------|----------|
| 1. A brief history of Indian Dance and Indian Traditional Dance-Drama. 2. Acquaintance with the themes of Ramayana, Mahabharata, Panchatantra, Bhagavata Purana and Geeta Govinda. Acquaintance with other myths and legends pertinent to the Dance form. 3. A history of Bharatnatyam. 4. Acquaintance with its repertoire and literacy contents. | | |
| One Practical Paper | 70 Marks | |
| 1. Practice of basic standing, sitting positions. 2. Practice of exercises of different parts of the human body particularly head, neck, shoulders, arms, chest, waist, hips, thighs, knees, shanks, ankles, feet. 3. Practice of different movement of the eyes, hands and face. | | |

4. Aadvus in Trikala :

- (i) Tattu adavus
- (ii) Nattu adavus
- (iii) Te tei tei ta adavus
- (iv) Kudittu mettu adavus
- (v) Tei ya teiyi standing adavus
- (vi) Tat tei to ha adavus
- (vii) Tat tei tam adavus
- (viii) Kattia adavu and allied utplavana adavus
- (ix) Tadhinginatom
- (x) Kitatakatankita tom.
- (xi) Mandi adavus
- (xii) Sarukkal adavu
- (xiii) Simple Korvais (combinations) in Adi talam
- (xiv) Gati—Simple forward and backward gaits
- (xv) Alarippu—Tisram
- (xvi) Tala—Adi talam and Rupaka talam with clapping and ability to repeat the adavu syllables in trikala in aditalam

22. FINE ARTS

Code No's 148, 149, 150, 151

Note :— Any one the following Courses.

- (A) Painting
- (B) Graphic
- (C) Sculpture
- (D) Applied Arts (Commercial Arts)

(A) PAINTING

(CODE-148)

Objectives :

The purpose of this subject is to provide a series of practical exercises to enable student to develop observations through studies of common objects and geometric forms in pencil and with light and shade.

Theory

30 Marks

One Paper

1 Hour

Story of Indian Art (objective and narrative written paper in English/Hindi languages).

Indus Valley, Jain and Buddhist Art, Tempic Sculpture and South Indian Bronzes.

Practical

| | | |
|------------------|----------------|-----------------|
| One Paper | 6 Hours | 70 Marks |
|------------------|----------------|-----------------|

I. Nature Study and Object Drawing **25 Marks**

Study of two or three natural and geometric forms in pencil with light and shade from a fixed point of view. Natural forms like plants, vegetables, fruits and flowers etc. are to be used. Geometrical forms or objects based on geometrical forms like cubes, cones, prisms, cylinders and spheres should be used.

II. Painting**25 Marks**

- (i) Simple exercises of basic designs in variation of linear geometric and Rythmetic shapes in primary and secondary colours to understand design as organised visual arrangements.
- (ii) Sketches from Life and Nature.

III. Sessional-Submission of port folio consisting of :

- (a) Five selected drawings in any media done during the year including minimum of two still life exercises. **10 Marks**
- (b) Two selected works of paintings done during the year. **10 Marks**

(B) GRAPHICS**(CODE-149)****Objectives**

To make simple compositions in monochrome and colours through the various print-making techniques using methods and material specifically prescribed for adequate results. The student should be introduced to the subject by giving a short history of the print making techniques. They should be given exercises to inculcate respect for the tools and apparatus used in the various processes including their maintenance and proper handling.

THEORY**One Paper****Time : 1 Hour****30 Marks**

Story of Indian Art-objective and narrative written paper in English/Hindi Languages. Indus Valley, Jain and Buddhist Art, Temple Sculptures and South Indian Bronze.

PRACTICAL**One Paper****Time : 6 Hours****70 Marks**

To make Linocut, woodcut or Paper cardboard prin on 1/4 Imperial sheet on a given subject. **50 Marks**

Syllabus for Relief Printing (Linocuts/woodcuts/paper cardboard prints).

1. Introduction to the history of print making.
2. Printing methods and materials.
3. Characteristics of printing inks, solvents & dyers.

4. Registration methods.
5. Simple, colour painting techniques.
6. Mounting and finishing of the prints.

Sessional work

Three selected prints (either form Lincouts/woodcuts/paper card-board prints) prepared during the course by the candidate and certified by the school authorities as the work done in the school will be placed before the examiners for assessment.

Note :— The time-table to be so framed as to allow the students to work continuously for at least two periods together per day.

(C) SCULPTURE

Code-150

Objective

The aim is to introduce the students to the fundamentals of making sculptures. All assignments should be designed to understand problems of volume, weight, play of form in space etc. as against rendering on flat two dimensional surfaces. Adequate technical skills may be provided depending on the facilities available.

THEORY

| | | |
|------------------|----------------------|-----------------|
| One Paper | Time : 1 Hour | 30 Marks |
|------------------|----------------------|-----------------|

Story of Indian Art-(objective and narrative written paper in English Hindi languages).

Indus Valley, Jain and Buddhist Art Temple Sculptures and South Indian Bronzes.

PRACTICAL

| | | |
|------------------|-----------------------|-----------------|
| One Paper | Time : 6 Hours | 70 Marks |
|------------------|-----------------------|-----------------|

1. (a) Modelling in Relief on given subjects from life and nature **25 Marks**
 - (b) Modelling in Round on given subjects from life and nature **25 Marks**
- Handling of clay and its techniques, pinching, coiling, rolling etc.

SESSIONAL WORK**20 Marks**

2. Four selected pieces of works prepared during the course by the candidate and Certified by the school authorities as works executed in the school will be placed before the examiner for assessment.

Note :— *The Time-table to be so arranged that students are given atleast two periods together, if possible more, with a total of eight periods a week.*

(D) APPLIED ARTS (COMMERCIAL ART)**CODE-151****THEORY**

| | | |
|------------------|----------------------|-----------------|
| One Paper | Time : 1 Hour | 30 Marks |
|------------------|----------------------|-----------------|

Story of Indian Art-(objective and narrative written paper in English/Hindi languages).

Indus Valley, Jain and Buddhist Art, Temple Sculptures and South Indian Bronzes.

PRACTICAL

| | | |
|------------------|-----------------------|-----------------|
| One Paper | Time : 6 Hours | 70 Marks |
|------------------|-----------------------|-----------------|

A. One practical in two parts : 50 Marks

- (i) Drawing
(ii) Lettering and Layout

PART I : DRAWING 25 Marks

Drawing from Still-Life and Nature, pencil monochrome colour

PART II : LETTERING 25 MARKS

- (i) Study of Roman and Devnagri Lettering.
(ii) Identification of some Type-faces and their sizes.

Layout :

Making a simple layout with lettering as the main component.

B. Sessional Work :**Submission of Portfolio consisting of :**

- (a) Five selected drawings in any media done during the year including minimum of three still lives. **10 marks**
(b) Two selected works in chosen subject done during the year. **10 Marks**

23. HOME SCIENCE

CODE NO. 143

Home Science as a discipline aims to empower learners by developing understanding of four different areas, namely :

- Food and Nutrition
- Human Development
- Community Resource Management and Extension
- Fabric and Apparel Science

The subject helps students to understand changing needs of Indian society, academic principles as well as develop professional skills.

This would make them competent to meet challenges of becoming a responsible citizen.

OBJECTIVES

The Syllabus at Senior Secondary level develops in the learners an understanding that the knowledge and skills acquired through Home Science facilitates development of self, family and community. It endeavours to-

1. Acquaint learners with the basics of human development with specific reference to self and child.
2. Help develop skills of judicious management at various resources.
3. Enable learners to become alert and aware consumers.
4. Impart knowledge of nutrition and lifestyles to enable prevention and management of disease.
5. Inculcate healthy food habits.
6. Help develop understanding of textiles for selection and care of clothes.
7. Develop skills of communication to assist in advocacy and dissemination of knowledge to community.

COURSE STRUCTURE

THEORY

| One Paper (Theory) | 3 hours | 70 marks |
|--------------------------------|---------|-----------|
| UNIT | | MARKS |
| 1. Concept of Home Science | | 2 |
| 2. Know myself | | 17 |
| 3. Nutrition for Self & Family | | 17 |
| 4. My Resources | | 17 |
| 5. My Apparel | | 17 |
| | | 70 |

UNIT-I CONCEPT OF HOME SCIENCE AND ITS SCOPE**(PERIOD-2)**

Home Science, its scope

UNIT II : KNOW MYSELF : ISSUES RELATED TO ADOLESCENTS**(PERIODS 33)**

Adolescence, meaning, early (12-15 years) and later (16-18 years) adolescence, early and late maturers.

Characteristics : Cognitive Development : Transition from concrete to formal operations; physical Development : Growth spurt, sexual development; Social and Emotional development; importance of peer group, interest in the opposite sex, varied and changing interest, concern about future; adolescence a period of strain and stress.

Important developmental tasks : accepting one's physique; achieving new and more matured relations with agemates of both sexes; achieving a masculine/feminine social gender role; achieving emotional independence from parents; preparing for career; reproductive health and prevention of anemia.

Individual differences : difference between same sex, differences across the two sexes, early and late maturers, role of heredity and environment (family, peers, school and neighbourhood)

Interpersonal Skills : with the family, peers and members of the community.

Special needs of adolescents – (i) Nutrition requirements : qualitative and quantitative; (ii) exercises and entertainment; importance of physical

activity in social development and prevention of obesity (iii) understanding from parents.

Some problems of adolescence : awkwardness due to growth spurt; freedom and control; depression; alcohol, drugs and smoking; delinquency; problem related to sex; ignorance and increased curiosity; prevention of HIV/AIDS and other sexually transmitted diseases ;

Population Education : Some problems of over population; neglect of girl child : causes, prevention, legal and social laws, government incentives to improve status of girl child, desire for male child; small family norms.

UNIT III: NUTRITION FOR SELF AND FAMILY

(PERIODS 45)

Definition and relationship between food, nutrition, health : nutritional status; classification of foods on the basis of nutrients and functions; nutritional status and calorie intake as a basis of poverty line.

Functions of food : body building, energy giving, protective, regulatory; physiological psychological and socio-cultural; signs of good health; physical status, psychological status mental ability, mortality and longevity.

Selection of foods for optimum nutrition and good health : basic knowledge of nutrients – sources, functions, deficiency and prevention; proteins, carbohydrates, fat, dietary fibre, vitamins – A, D, B 1, B 2, niacin, folic acid, B 12 and vitamin C; minerals-calcium, iron and iodine. Basic food groups (ICMR) and their contribution; concept of balanced diet; food and nutrition requirements for family (ICMR tables); factors influencing selection of food : cultural, family food practices, media, peer group and availability of foods.

Maximum nutritive value from food by proper selection, preparation, cooking and storage : Enhancing nutritive value of foods; Selection and storage of foods-perishable, semi-perishable non-perishable; convenience foods; Reasons for spoilage; brief description of household methods of preservation-refrigeration, dehydration, use of chemicals and household preservative. Preparation of food; loss of nutrients during preparation of food and their minimization; Cooking; principles of cooking; Methods of cooking-boiling, steaming, pressure cooking, deep and shallow frying, parboiling, sauteing, roasting and grilling; Effect of cooking on the nutritive value of food; Method of enhancing nutritive value-germination, fermentation, fortification and proper food combination.

UNIT-IV : MY RESOURCES**(Periods 36)**

Resources : meaning, types (i) human-knowledge, skills, time, energy, attitudes; (ii) material : money, goods, property; (iii) community facilities; Schools, parks, hospitals, roads, transport, water, electricity, fuel, fodder; need to manage the resources ; methods of conservation of shared resources.

Management : Meaning and need for management; steps in management ; planning, organizing, controlling, implementing and evaluation; decision making and its role in management.

Time and energy management : need and procedure for managing time for occupation and leisure; work simplification : meaning and methods; activities in the home: sleeping, studying, cooking, eating, bathing, washing, entertaining-need to organize space for these activities; use of colours and accessories to make these centres attractive; role of different members of the family in efficient running of a home.

Work ethics : meaning and importance; discipline at work place; reaching on time, staying in seat, knowing the job, using polite language.

UNIT V : MY APPAREL**(Periods 34)**

Fibre Science : Types of fibres : (i) natural-cotton, silk and wool ; (ii) Man- Made pure Rayon, nylon and polyester) and blend (terrycot, terrysilk, terrywool,)

Fabric Construction : Basic procedure of any yarn making (spinning, Mechanical spinning, chemical spinning, weaving : plain, twill & satin, other methods- knitting and nonwoven effect of weaves on appearance, durability and maintenance of garment.

Finishing : meaning and importance ; types : (i) basic : cleaning, bleaching, stiffening, tantering; (ii) special : mercerisation, shrinkage control, water proofing; Dyeing and printing.

| |
|-------------------|
| PRACTICALS |
|-------------------|

Times : 3 Hours**30 Marks.**

| Unit | Marks |
|--------------------------------|-----------|
| 1. Concept of Home Science | - |
| 2. Know myself | - |
| 3. Nutrition for Self & Family | 8 |
| 4. My Resources | 8 |
| 5. My Apparel | 7 |
| Record | 5 |
| Viva | 2 |
| Total | 30 |

| |
|---|
| UNIT I : CONCEPT OF HOME SCIENCE |
|---|

(Periods 2)

| |
|--|
| Unit II : KNOW MYSELF : ISSUES RELATED TO ADOLESCENTS |
|--|

(Periods 8)

Activity : Observe and test your own strengths and weaknesses ; Discuss about them in class with your teacher and fellow students; take decision about maximum utilization of strength and improvement upon weaknesses.

Activity : Report situations from your life to indicate your interaction within the family with peers and with members of the community.

| |
|---|
| UNIT III : NUTRITION FOR SELF AND FAMILY |
|---|

(Periods 28)

Activity : Look for signs of good health within your family.

Activity : Make a list of foods available in the local market according to food groups.

Activity : Observe how different food stuffs are stored at home and evaluate the effectiveness of the method; practise skills to preserve and optimise nutrients by preparing meals and snacks.

Practical : Preparing meals and snacks

Practical : Household methods of food preservation-Jam,Squash/Syrup Pickles/Chutney.

UNIT-IV : MY RESOURCES**(Periods 30)**

Activity (Observation) : Observe and list resources available at home and in neighbourhood. Make a detailed study on available community resource and its management, suggest improvements.

Activity ; Critically evaluate anyone activity centre of your house. Suggest improvements

Activity : Suggest a work plan for yourself for a day and state where and why will you take help from others.

Practicals : Make flower and foliage arrangements, floor decorations, clean and polish brass, glass, iron, aluminium and plastic surfaces.

UNIT-V : MY APPAREL**(Periods 24)**

Activity : Collect samples of fabrics and study characteristics for identification.

Activity :Collect samples of weaves and identify them.

Practicals : Carry out burning test, slippage test, tearing test and test for colour fastness.

Practical : Dyeing : plain and tie dye printing : use blocks (available or make you own) on small sample.

24. YOGA

CODE NO. 162

YOGA EDUCATION

SYLLABUS CONSISTS OF TWO PARTS :

| | | |
|---------------|--------|------------------------|
| I. Theory | 3 hrs. | 70 Marks |
| II. Practical | 3 hrs. | 30 Marks |
| | | Total 100 Marks |

THEORY

The theory paper will be divided into two parts and will be of 3 hours duration having 35 marks in each part.

PART-A

(HISTORICAL AND PHILOSOPHICAL ASPECTS OF YOGA)

1. Definition of Yoga both in its literal and broader sense as clarified in Patanjali yogsutras and other yogic texts.
2. Aims and objectives of yoga, its importance in present modern world.
3. Different aspects of yoga namely; Karmayoga. Bhaktiyoga, Gyanyoga and Rajyoga.
4. Detailed study of Ashtanga yoga as defined in Patanjali Yogdarshan.
5. Yogic concept of Chitta, its varieties and the method of their control.

PART-B

(THERAPEUTIC AND PHYSIOLOGICAL ASPECTS OF YOGA)

6. Meaning of Asana as defined in yogic texts and benefits of performing yogasanas.
7. Scope of yoga education and its limitations.
8. Physiological basis of Shatkarmas, benefits of doing these purificatory techniques and various methods of doing Shatkarmas.

9. Yoga therapy its importance and limitations.

Treatment of common diseases such as fatigue, Headache, Common Cold, Gastric Acidity, Hypertension, Indigestion and loss of appetite, Hair loss, Weakness of eyesight-their symptoms, causes and treatment through yogic therapeutic measures.

PRACTICAL

3 hours

| | |
|--------------------------------------|-----------------|
| Asanas | 10 Marks |
| Pranayama, Mudras, Bandhas & Dhayana | 10 Marks |
| Shatkarmas | 5 Marks |
| Practical Notebook | 5 Marks |
| TOTAL | 30 Marks |

- (i) Asanas as given in Hatha Yoga Pradeepika, Ghrenda Samhita, Shiva Samhita, yogapanishads and other in vogue.
- (ii) Kriyas-Shatkarmas (Shatkriyas) as described in Hatha Yoga Pradeepika, Ghrenda Samhita and Shatkarma Sangraha.
- (iii) Pranayamas - Anuloma-Viloma, Ujjai, Bhastrika and familiarity with other Pranayamas such as Surayabhedana- Chandrabhedana, Sitli-Shitkari, Bhastrika, Bharamari and Plavani
- (iv) Bandhas-Jalandhar, Uddiyana, Mula and Mahabandha.
- (v) Meditation-Elementary practice of Meditation, Chanting of "OM" and the practice of dhayana in any of the selected postures i.e. Sidhasna. Swastikasana Padmasana, Sukhasana and Vajarasana.
- (vi) Practical Notebook to be prepared by the students illustrating any nine asanas of their choice, any two kriyas any two body systems out of the following i.e. Skeltal, circulatory, Digestive, Human brain and Spinal cord.

LIST OF YOGIC ASANAS REQUIRED TO BE PERFORMED BY THE STUDENTS IS AS UNDER :

STANDING POSTURES :

Tarasana, Trikonasana, Konasana, Padahastasana
Garudasana Ardha-Chandrasana, Khagasana Birbhadrasana
Shirshangusthasana.

SITTING POSTURES :

Padmasana, Vajarasana, Parvatasana, Yogmudrasana, Uttitha-Padmasana, Mandukasana, Paschimottanasana, Akaran-Dhanurasana, Shishankasana, Vakasana, Padamvakasana, Ardha-matsyenbrasana, Gomukhasana, Gorakshasana, Ekpadsikandasana, Dwipadsikandasana, Uttithadwipadsikandasana, Puran-matsyenbrasana, Kukutasana, Onkarasana, Ushtrasana.

LYING POSTURES :

Shavasana, Halasana, Uttanapadasana, Matasyasana, Karanpidasana, Makrasana, Bhujangasana, Dhanurasana, Shalabhasana, Naukasana, Mayurasana, Shirshasana, Sarvangasana, Chakrasana, Gharabhasana, Pawanmuktasana.

REFERENCES

1. Patanjali yogsutras
2. Rajayoga by Swami Vivekananda
3. Asanas by Swami Kuvalayananda.
4. Pranayama by Swami Kuvalayananda.
5. Hathyoga Pradeepika.
6. Gherandasamhita.
7. Suksham vyama by Swami Dharendra Braham Chari.
8. Yoga Therapy by Swami Kuvalayananda and Dr. S.L. Vinkar.
9. Applied Physiology by S.N. Dasgupta.
10. Yoga Philosophy by S.N. Dasgupta.
11. Yog Chakitsa by Swami Ram Dev.

25. FRENCH

CODE NO. 141

One Paper **Time : 3 Hours** **Marks : 100** **Periods**

Section-A : Applied Grammar

25 50

- Filling up blanks with appropriate parts of speech.
- Transformation of sentences.
- Based on chapter 1-17 of Prescribed book

Section-B : Comprehension / Reading

25 30

- One passage from the prescribed book

15

(Prose / Poetry)

- One Unseen passage

10

(variety of comprehension questions. including short answer questions & Vocabulary (word attack)

Section-C : Writing Skills/Composition

20 40

- Writing a story based on outlines provided (120 words) **10**
- One unaided composition based on the topics in the **10**
Prescribed book (120 words)

Section-D : Literature

30

(Short answer questions on prescribed texts)

Prose

20 40

Comprehension of the prescribed text (Chapter 1-17)

Poetry

10 20

Poems to be studied :

- | | |
|--------------------------------------|----------------|
| 1. La Route | by CF Rameez |
| 2. Les Villages | by F Jammes |
| 3. Page d'écriture | by J. Prevert |
| 4. Les enfants dans le jardin public | by Victor Hugo |
| 5. Barcarolle | by Th. Gautier |

PRESCRIBED BOOK : COURS DE LANGUE ET CIVILIZATION

Françaises-II

by G. Mauger

(Chapter 1-17)

Published by Heachette

| |
|------------------------|
| 26. URDU (CORE) |
|------------------------|

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|--------------|
| CODE NO. 139 |
|--------------|

| | | |
|------------------|----------------|------------------|
| One Paper | 3 Hours | 100 marks |
|------------------|----------------|------------------|

| | | |
|------------------|-------------------|--------------------------------|
| SECTION-A | MARKS : 60 | Suggested Periods : 210 |
|------------------|-------------------|--------------------------------|

| | | |
|---|-----------|------------|
| 1. Reading Skills : | 10 | 25 |
| (i) Comprehension of an unseen passage (factual) of about 150 words followed by five questions. | | |
| 2. Writing Skills : | 30 | 76 |
| (a) Paragraph Writing | | |
| | 10 | |
| (b) General study of newspapers, magazines and periodicals in the language with the object of writing : | | |
| (i) Letter to the Editor | | |
| | 10 | |
| (ii) Writing and elaborating small news | | |
| | 5 | |
| (iii) Advertisements | | |
| | 5 | |
| 3. Applied Grammar : | 20 | 25 |
| (a) Knowledge of Parts of Speech : | | |
| (i) Ism Ki Qismein | | |
| | | Marafa |
| | | Nakra |
| (ii) Zameer Ki Qismein | | |
| | | Mutakallim |
| | | Hazir |
| | | Ghaeb |
| (iii) Sifat Ki Qismein | | |
| | | Zati |
| | | Nisbati |
| | | Adadi |
| | | Miqdari |

- (b) Correction and transformation of words and sentences
(all grammatical forms) 05
- (c) Sentence making with the help of idiomatic phrases. 05

| | | |
|------------------|-------------------|--------------------------|
| SECTION-B | MARKS : 40 | SUGGESTED PERIODS |
|------------------|-------------------|--------------------------|

1. Prose : Prescribed Text-books

A. Book-1 **20** **42**

Abbu Khan Ki Bakri By Dr. Zakir Hussain

published by the National Book Trust of India, New Delhi.

- (i) One out of two extract from the prescribed book followed
by short answer type questions for comprehension. **7**
- (ii) One essay type question (100 words) on Content/theme of the
prescribed book. **5**
- (iii) Four short answer type questions on the lesson of the prescribed
book **8**

B. BOOK-II **20**

Dehli Ka Yadgar Mushaira By Farhatullah Beg

Published by Anjuman Taraqqi Urdu New Delhi.

- (i) One out of two extracts from the prescribed book followed
by short answer type questions for comprehension. **7**
- (ii) An essay type questions (100 words) on theme/content. **5**
- (iii) Four short answer type questions on characters/event/ evaluative in
nature. **8**

| |
|-------------------------|
| RECOMMENDED BOOK |
|-------------------------|

- 1. Urdu Qawaid**, published by the NCERT, New Delhi.