PROSPECTUS

UNDERGRADUATE PROGRAMMES

2014-15



DR YASHWANT SINGH PARMAR UNIVERSITY OF HORTICULTURE AND FORESTRY NAUNI-SOLAN (HP) – 173 230 (INDIA)

IMPORTANT	DATES
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Sr No	Particulars	General Seats	Self-financing Seats
1.	Last date for receipt of application without late fee	Friday, 16 th May, 2014	Thursday, 3 rd July, 2014
2.	Last date for receipt of application with late fee of 1000/-	Friday, 23 rd May, 2014	Thursday, 10 th July, 2014
3.	Date of Entrance Test	Sunday, 15 th June, 2014	-
4.	Date of notification of result of entrance test	Wednesday, 1 st July, 2014	-
5.	Date of 1 st counselling	Tuesday, 8 th July, 2014 (10.00 AM)	Friday, 18 th July, 2014 (10.00 AM)
6.	Date of 2 nd counselling	Saturday, 26 th July, 2014 (10.00 AM)	Saturday, 26 th July, 2014 (2.00 PM)
7.	Date of 3 rd counselling	Thursday, 7 th August, 2014 (10.00 AM)	Thursday, 7 th August, 2014 (2.00 PM)

A. CHECK LIST FOR SUBMISSION OF APPLICATION FORM FOR ADMISSION FOR GENERAL SEAT

Before sending/ submitting the application form, please go through the following check list:-

- Application Form completely filled in from Column 1 to Column 20 and declaration duly signed by the candidate.
- Admit Card duly filled in from Column 1 to Column 6 and duly signed by the candidate at appropriate place.
- Affixing latest good quality photograph on the Application Form and Admit Card.
- Incomplete or Unsigned Application Form/ Admit Card will summarily be rejected.
- Demand Draft of ₹1200/- (₹800/- in case of SC/ST/PH category candidates) favouring "The Comptroller, Dr YS Parmar University of Horticulture & Forestry" in case of downloaded application form.

IMPORTANT NOTES

1. Entrance Examination will be conducted at Solan, Palampur, Neri (Hamirpur) and Mandi. The Examination Centre once allotted to the candidate shall not be changed. While every effort shall be made to allot a centre of choice of the

candidate, the University reserves the right to allot/change or cancel any examination centre at its discretion.

- 2. The Candidates appearing in 10+2 examination in March/ April, 2014 can also apply but their admission (in case they qualify the entrance test) shall be subject to fulfilling prescribed qualifications on or before the date of 1st counselling scheduled to be held on 8th July, 2014.
- It is advised to ensure correctness of your mailing address, PIN CODE and 3. telephone number with STD Code. Please note that the University shall not be responsible if you cannot be reached/ contacted due to incomplete or illegible address or telephone number.
- 4. Application form alongwith admit card can be sent by registered/ speed post in the name of the Assistant Registrar (Academic), Office of the Registrar, Dr Yashwant Singh Parmar University of Horticulture & Forestry, Nauni-Solan (HP)-173 230. No application through courier service shall be accepted.
- 5. Application form alongwith admit card can be submitted by hand in the Office of the Registrar, Room No. 213, Administrative Block, Dr Yashwant Singh Parmar University of Horticulture & Forestry, Nauni-Solan (HP) – 173 230.
- 6. The cost of prospectus-cum-application form is non-refundable.
- The candidates are advised to bring alongwith them the card board for resting 7. the answer sheet

B. **CHECK LIST FOR SUBMISISON OF APPLICATION FORM FOR ADMISSION FOR SELF-FINANCING SEAT**

Before sending/ submitting the application form, please go through the following check list:-

- \geq Application form completely filled in from column 1 to column 20, declaration duly signed by the candidate and affixing latest good quality photograph on the application form. Incomplete or unsigned application form will summarily be rejected.
- Demand Draft of ₹1200/- (₹800/- in case of SC/ST/PH category candidates) \geq favouring "The Comptroller, Dr YS Parmar University of Horticulture & Forestry" in case of downloaded application form.
- 10th certificate (for date of birth) \triangleright
- AAA 10+2 detail of marks certificate
- Character certificate from Head of the school/institution last attended.
- HP bonafide/ domicile certificate (for availing fee concession)
- \triangleright Sports/ co-curricular activities certificate (wherever applicable)

DISCLAIMER

- 1. The information contained in this Prospectus is of general nature for the candidates seeking admission in various Undergraduate Degree Programmes of the University. It is neither an exhaustive nor a legal document. The information contained herein is believed to be correct at the time of publication. However, the University reserves the right to make any alteration without any notice in the provisions made in the prospectus, whereupon, the University will not be responsible for any hardship or expense incurred by any student or any other person for such changes, additions, omissions or errors, no matter how they are caused.
- 2. Candidates are advised to refer to the Academic Regulations and other Statutory/ Administrative provisions applicable on a particular point of time on various aspects, viz., system of education, residence in the University hostels, enrolment in the NCC/ NSS, award of Scholarships/ Stipends, Fellowships, Medals, Certificate of Merit, Conduct of the students in the University, etc. They should also note that the provisions of the Act, Statutes and Academic Regulations or any other legal/ administrative notifications, orders, instructions and fee structure can be changed by the Competent Authority at any time without any prior notice.

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CHAPTER- I

GENERAL INFORMATION

1.1 Historical Background

Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan, was established on 1st December, 1985 with the objective to promote education, research and extension education in the fields of horticulture, forestry and allied disciplines. Late Dr. Yashwant Singh Parmar, the 1st Chief Minister and the architect of Himachal Pradesh perceived the importance of horticulture and forestry to develop and improve the State economy which led to the establishment of this University. Its history lies in erstwhile Himachal Agricultural College, Solan, established in 1962 and affiliated to the Panjab University. It became one of the Agriculture campuses of Himachal Pradesh University on its formation in 1970. Consequent upon the establishment of Himachal Pradesh Krishi Vishvavidyalaya in 1978, this campus became its Horticulture Complex and finally in 1985, assumed the status of a State University, being the only University in the country engaged exclusively in teaching, research and extension in horticulture and forestry.

The University is located at Nauni in Solan district of Himachal Pradesh, 13 km from Solan on Solan-Rajgarh road, at an elevation of 1300 metres above mean sea level. Solan town is situated on national highway (NH-22) and is well connected by train and bus services. The "Institute of Biotechnology and Environmental Sciences" at Neri in Hamirpur district is located on Nadaun-Hamirpur state highway, about 6 Km from Hamirpur town and is well connected with bus service.

The University has two constituent colleges located at the main campus, Nauni, one for horticulture and the other for forestry, having 9 and 7 departments, respectively. The degree programmes of B Sc (Honours) Horticulture, B Sc (Honours) Forestry and B Sc (Honours) Biotechnology are being run at the "Institute of Biotechnology and Environmental Science" at Neri PO Khaggal District Hamirpur. In addition, there are 4 Regional Research Stations, 12 Satellite Stations and four Krishi Vigyan Kendras (KVKs) situated in different zones of the State.

1.2. System of Education

The University follows the semester system of education with partially internal and external evaluation which requires continuous hard work and regularity on the part of the students in the classes throughout the semester.

The education aims at an all-round development of the student for which University provides all necessary facilities. Emphasis is laid on the high academic standards and discipline. The University also provides facilities for different games and sports, NCC/ NSS and other co-curricular activities (literary, cultural, hobby development, etc.). These activities are looked after by the Students' Welfare Organization.

1.3. Faculty and Infrastructure

1.3.1 Faculty

The University has a faculty of 222 teachers/ scientists out of which 159 teachers/ scientists are posted at the main campus catering to the needs of teaching, research and extension education activities.

1.3.2 Laboratories & Research Farms

The Colleges have well equipped laboratories and class rooms with state of art instruments and teaching aids. Separate laboratories for conducting undergraduate practicals are available, besides postgraduate laboratories catering to latest research. Being farm University, it has a vast experimental area of about 550 hectare provided with modern facilities like polyhouses, glass houses, mist chambers, sprinklers/ drip irrigation system, precision farming etc. Besides, herbal garden and demonstration areas serve as effective live tools for easy learning.

1.3.3 Satyanand Stokes Library

The University library named after Satyanand Stokes, who was pioneer in introducing Delicious varieties of apple in Himachal Pradesh and heralding a Horticultural revolution and economic prosperity in the state, has the credit of being pioneer in introducing latest information technology to automate library services. It initiated the computerized operations as early as in April 1989. Its

whole collection has been computerized for electronic retrieval by creating inhouse databases. It has been providing access to national and international databases available on CD-ROM and its online catalogue is electronically accessible. Ours is the first SAU library in the country which has been converted into a Wi-Fi Library in the year 2003-04. The scientists/ teachers and students have been given electronic access to 2000 plus e-journals through CERA: Consortium for e-Resources in Agriculture. Besides this 120 journals are subscribed in hard copy form. All the Ph D Theses with effect from 2000 onwards have been digitized under the ICAR Krishi Prabha Project and are available on-line. The Library is centrally located and housed in a beautiful building that offers excellent environment for study. The library has a unique collection of 66000 books in the field of Horticulture, Forestry and allied subjects. For linking the Regional Research Stations of the University with the library, the connectivity facilities have been established in all the Regional Stations of the University so that the scientist/ staff working there can access the latest information and be in a position to communicate fast through E-mail. The library offers PGS-501 course 'Library and Information Services' and PGS-502 course 'Technical Writing and Communication Skills' of 0+1 credit hours to M Sc and Ph D students.

1.3.4 Computer Centre and Information Network

The University has a separate Computer Centre which provides information technology facilities to all staff and students besides connectivity to National Network under Agricultural Research Information System (ARIS) of ICAR. All academic departments and offices within the campus have connectivity through Local Area Network for resource sharing and exchange of information. It is on global network through Internet and E-mail facilities. In addition, each College has full-fledged "Education Technology Cell" providing free service to all the students. There is also one Bioinformatic Sub-Centre which provides support base in bioinformatics and access to various databases and softwares in specific areas of horticulture and forestry.

1.3.5 Students Welfare Activities

The Students' Welfare Organization of the University attends to the residential requirements, sports, cultural/ co-curricular activities, NCC/ NSS and medical care of the students.

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1.3.5.1. Hostels

The University has 10 hostels, 4 for boys and 5 for girls and two international hostels for foreign national students. Each hostel has a common room equipped with TV, facilities for indoor games and a badminton court. Important newspapers and magazines are also subscribed for general reading of the students. The accommodation in the hostels shall be allotted purely on the basis of merit subject to its availability.

1.3.5.2. Other Welfare Activities

The University has a Placement Cell for career Counselling and a big playground where facilities for all outdoor games and sports exists. A newly constructed Dr. L.S. Negi Auditorium has been added as a new facility for various student activities. The students are encouraged to participate in the District, State and Inter-University Competitions. The campus has facilities of well equipped health centre, students centre, shopping centre, banks and post office.

NCC, NSS, sports and games are compulsory for all undergraduate students. However, the girls, foreign nationals and inservice students are exempted from NCC. Physical education is compulsory, except for inservice students.

1.4. Academic Programme

The undergraduate programmes i.e., B Sc (Honours) Horticulture/ Forestry/ Bio-technology shall be of 4 years (8 semesters). The academic session comprises of two semesters of 21 weeks each and two semester breaks of 5 weeks each. NCC/ NSS camps and educational tours are organized during the semester break.

1.5. Financial Assistance

The following financial assistance is provided:

- i) ICAR National Talent Scholarship of ₹1000/- PM.
- ii) College Merit Scholarship of ₹350/- PM (10% of the enrolment).
- Dr OP Awasthi Memorial Merit Scholarship for one boy student of B Sc (Hons) Horticulture, College of Horticulture, Nauni-Solan of ₹500/- per month.

- iv) Mrs Kanti Devi Awasthi Memorial Merit Scholarship for one girl student of B Sc (Hons) Horticulture, College of Horticulture, Nauni-Solan of ₹500/- per month.
- v) Government of India scheduled caste/ tribe and low income group stipend through State Education Department. The value of stipend is equivalent to the tuition and other fees
- vi) National Loan Scholarship of ₹75/- PM awarded by Department of Education, Government of Himachal Pradesh.
- vii) Interest free loan for SC/ ST students from HP Scheduled Castes and Tribes Development Corporation.
- viii) District Soldier Board stipend (amount of stipend is variable).

1.6. Medals

1.6.1 University level

Gold Medals are awarded to the students for topping in each of the following programmes at the University level in accordance with the provision of the Academic Regulations.

- i) B Sc (Honours) Horticulture
- ii) B Sc (Honours) Forestry
- iii) B Sc (Honours) Biotechnology

1.6.2 College Level

The following medals are awarded at the College level:

- i) Lal Bahadur Shastri Memorial Gold Medal for obtaining the highest OGPA in B Sc (Hons) Horticulture in the College of Horticulture, Nauni-Solan.
- ii) Indira Gandhi Memorial Gold Medal for obtaining the highest OGPA in B Sc (Hons) Forestry in the College of Forestry, Nauni-Solan.

1.7. Certificate of Merit

The University awards Certificates of Merit to the students securing an OGPA of 7.50/10 and above.

CHAPTER-II

ADMISSION RULES

2.1 Educational Programme

The educational programme of the University is laboratory and field oriented with the objective of imparting education in Horticulture, Forestry and its allied sciences.

2.2 Programme of Studies & Admission Capacity

The admission shall be made for the following programmes:

2.2.1 College of Horticulture, Nauni, Solan

Programme	Number of Seats										
				Additional Seats							Self-
	HP	ICAR	NEC	VEO	Wards of	Wards of	Displaced	Single	Wards of	Other	financing
					serving/ ex-	serving/	families	girl	IRDP/	backward	Seats*
					defence	retired		child	BPL	classes	
					personnel	CAPFs			families		
						Personnel					
B Sc (Hons)	32	6	4	3	1	1	1	1	2	1	20
Horticulture											

2.2.2. College of Forestry, Nauni, Solan

Programme	Number of Seats										
	Total Seats Additional Seats					Self-					
	HP	ICAR	NEC	HP Forest	Wards of	Wards of	Displaced	Single	Wards of	Other	financing
				Deptt.	serving/	serving/	families	girl	IRDP/	backward	Seats*
				nominees	ex-defence	retired		child	BPL	classes	
					personnel	CAPFs			families		
						Personnel					
B Sc (Hons)	25	5	4	3	1	1	1	1	2	1	25
Forestry											

2.2.3 Institute of Biotechnology and Environmental Sciences, Neri, Hamirpur

Programme/ Degree	Number of Seats							
Awarded	Tota	l Seats		Self-financing				
	HP	ICAR	Single girl child	Wards of IRDP/ BPL families	Other Backward Classes	Seats*		
B Sc (Honours)	8	2	1	1	1	50		
Horticulture								
B Sc (Honours) Forestry	8	2	1	1	1	20		
B Sc (Honours) Biotechnology	8	2	1	1	1	20		

* The detailed information regarding filling up of the self-financing seats is given in chapter-VII at page-44 to Page 52.

2.3 Minimum Qualification

10+2/equivalent examination with English, Physics, Chemistry, Biology/ Mathematics/ Agriculture from a recognized University/ Board with a minimum of 50% aggregate marks (45% marks in case of SC/ ST/PH category candidates/ in-service nominees of HP) in the above subjects.

OR

Examination of a University/ Board/ College/ School in a foreign country recognized by the Academic Council as equivalent to 10+2 with science subjects provided the candidate has obtained at least 60% aggregate marks or 'B' grade/equivalent.

2.4 Submission of Application Form for UGET-2014

The application form duly filled in by the candidate should reach the Registrar, Dr YS Parmar University of Horticulture and Forestry, Nauni PO Nauni Distt. Solan (HP) -173 230 by 16^{th} May, 2014. Application form submitted late upto 23^{rd} May, 2014 should be accompanied with late fee of ₹1000/- through bank draft drawn in favour of the Comptroller, Dr Y S Parmar University of Horticulture and Forestry, payable at SBOP/ UCO Bank, Nauni.

The application form should be accompanied with the following enclosures:

- i) Admit card duly filled in.
- ii) Acknowledgement card.
- Demand Draft of ₹1200/- (₹800/- in respect of SC/ ST/ PH candidates in case of downloaded application form) drawn in favour of the Comptroller, Dr YS Parmar University of Horticulture & Forestry payable at SBOP/ UCO Bank, Nauni.
- iv) Incomplete applications/ applications received after the due date shall not be considered.

2.5 Entrance Test

Admission shall be done through an objective type entrance test. Details of the same are given in Chapter-III. However, the candidates applying for admission for self-financing seats are exempted from entrance test.

2.6 Medical Fitness

Admission shall be subject to the applicant being declared medically fit by the Medical Officer of the University. The Medical Officer shall maintain the record of the blood group of each student and the blood group of the student shall also be entered in their identity card.

2.7 Verification of Antecedents

Each applicant is required to submit character certificate from the Head of the Institution last attended, failing which he/ she will not be considered for admission.

2.8 Migration Certificate

Each admitted student is to submit migration certificate within one year of admission, failing which his/ her admission shall be cancelled.

2.9 Reservation of Seats

Admission shall be open to all eligible candidates subject to the reservation of seats as under:

- a) The seats meant for ICAR quota (open for all) and HP quota shall be filled up in the ratio of 15% and 85% respectively. The ICAR quota seats shall be filled up through an All India Entrance Examination conducted by the Indian Council of Agricultural Research, New Delhi on 12th April, 2014. The HP quota seats shall be filled up through an Entrance Test conducted by the University on 15th June, 2014 in the following manner:
 - i) 60% of the seats shall be reserved for those bonafide/ domicile residents of HP, who have passed their high school (10th Class) from schools located in rural area* and
 - ii) 40% of the seats shall be open for all bonafide/domicile residents of HP.
 - 22.5% of the total seats under HP quota shall be reserved for scheduled caste (15%) and scheduled tribe (7.5%). The benefit of this reservation shall be applicable to the bonafide residents of Himachal Pradesh. In case the candidates in either of the two categories are not available, the seat(s) will be interchangeable.

Note:

In case, the candidates as prescribed in clause (iii) are selected according to their position in the combined general merit list, shall not be counted for covering the prescribed percentage of reservation.

*A candidate passing his/her 10th level examination from a school located outside the limits of Municipal Corporation/ Municipal Council/ Nagar Panchayat/ Cantonment Board shall be deemed to be a candidate hailing from rural area.

- b) The following seats shall be filled over and above the intake capacity:
 - i) Four seats each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry in the College of Horticulture and College of Forestry respectively for nominees of North Eastern Hill Council (NEC).
 - ii) Three seats in B Sc (Hons) Horticulture for VEO's/ HEO's of HP Horticulture Department in the College of Horticulture.
 - iii) Three seats in B Sc (Hons) Forestry for HP forest field staff of HP Forest Department in the College of Forestry.
 - iv) One seat each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry for the wards of serving/ ex-defence personnel in the College of Horticulture and College of Forestry respectively.
 - v) One seat each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry for the wards of serving/ retired CAPFs personnel in the College of Horticulture and College of Forestry respectively.
 - vi) One seat each in B Sc (Hons) Horticulture, College of Horticulture and B Sc (Hons) Forestry, College of Forestry and B Sc (Hons) Horticulture, B Sc (Hons) Forestry and B Sc (Hons) Biotechnology for single girl child in the Institute of Biotechnology & Environmental Science at Neri (Hamirpur) respectively.
 - vii) Two seats each in B Sc (Hons) Horticulture & B Sc (Hons) Forestry at main campus, Nauni and one seat each in B Sc (Hons) Horticulture, B Sc (Hons) Forestry & B Sc (Hons) Biotechnology in the Institute of Biotechnology & Environmental Science, Neri (Hamirpur) for candidates belonging to IRDP/ BPL families of HP.
 - viii) One seat each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry in the College of Horticulture and College of Forestry respectively, for children of displaced families whose land has been acquired for the establishment of this University. The candidates fulfilling eligibility condition will be required to appear in the Entrance Test and produce prescribed certificate.



NOTE: Criteria for filling the seats reserved for the wards of displaced families

The benefit of reservation shall be availed of only by the legal heirs/ sons/ daughters of those families, whose land has been acquired for the establishment of this University. The benefit of reservation shall be extended only once to one family for which an undertaking on the prescribed proforma shall be required to be submitted at the time of counselling. The candidate must produce certificate to this effect on the prescribed proforma issued by the Executive Magistrate.

Besides, 3% of the total seats under HP quota shall be reserved for candidates having permanent disability (PH) of not less than 40% (low vision, hearing impairment, locomotor disability or cerebral palsy) whosoever is found suitable by the admission committee, provided the candidate is otherwise fit for admission. The candidates will be required to perform field operations, activities pertaining to Horticulture/ Forestry and allied disciplines. These seats will be over and above the intake capacity.

2.10 Basis of Admission

The basis of admission shall be merit as determined by the Entrance Test. In case two or more candidates obtain the same percentage of marks, the younger in age shall be considered for admission.

While determining the merit of eligible candidates, the marks to the following extent shall be added to the result of those candidates, who have distinguished themselves in sports and games recognized by the Indian Olympic Association/ state sports bodies and for significant participation in co-curricular activities like declamation, debates, quiz, essay competition, science seminars, model parliaments and youth festival, etc:-

Sr No	Particulars	Weightage in terms of Percentage
А.	Sports/ Games	0
i.	Sportsperson(s) who have represented India in any International Competition like Olympic games/ World Championship and obtained 1 st , 2 nd or 3 rd position.	5%
ii.	Sportsperson(s) who have represented India in any International Competition like Olympic games/ World Championship.	4%

iii.	Sportsperson(s) who have represented the State in a National Competition and obtained 1^{st} , 2^{nd} or 3^{rd} position.	3%
	OR	
	Sportsperson(s) who have represented the State School Teams in the National Sports/ Games for School conducted by the All India School Games Federation and obtained 1 st , 2 nd or 3 rd position.	
iv.	Sportsperson(s) who have represented the State in a National Competition. OR	2%
	Sportsperson(s) who have represented the State School Teams in the National Sports/ Games for School conducted by the All India School Games Federation.	
V.	Sportsperson(s) who have obtained 1 st , 2 nd or 3 rd position at the State Sports/ Games organised by the State Government. OR	2%
	Sportsperson(s) who have obtained 1 st , 2 nd or 3 rd position in the National Championship organized by Navodya Vidyalaya and Central School for their school.	
vi.	Sportsperson(s) who have represented the District Teams at the State School Sports/ Games.	1%
vii.	Sportsperson(s) who have obtained 1^{st} , 2^{nd} or 3^{rd} position at the District Level.	1%
B.	NCC	
i.	NCC Cadets, who have participated in the National Republic Day Parade.	2%
C.	SCOUTING	
i.	Having participated Jamboori organized by Government of India at National Level and having certificate of appreciation from the President of India.	3%
ii. D.	Participated in Jamboori in the State/ Government of India. NSS	2%
i.	Participated in the National Integration Camps or Camp organized by the Government of India outside the State with a minimum attendance of 240 hours.	2%
ii.	Participated in National Integration Camp organized by the Government of India.	1%
	OR	
-	Any Camp organized by the State Government.	
E.	CULTURAL ACTIVITIES	
1. 	Participated at International Level and obtained 1 st , 2 nd or 3 rd Position.	5%
11. 	Participated at International Level.	4%
111.	Participated at National Level and obtained 1", 2" or 3" position.	3%
1V.	Participated at National Level.	2%
v.	1°, 2 ^m or 3 ^m Position at the State Level.	2%
V1.	Participated at the State Level.	1%
V11.	1, 2 or 3 level at District Level.	1%

Provided that:

- 1. The above weightage can be availed of only once and only when the position obtained/ participation made is not earlier than four academic years preceding the year of admission.
- 2. Only one of the above weightage, which is the most beneficial to a candidate, shall be allowed while determining relative merit.
- 3. The games/ sports should have been organized by the Sports Authority of India/ Indian Olympic Association/ All India School Games Federation/ State Government.
- 4. All sports/ games/ cultural activities (literary activities and fine art) recognized by the Government of Himachal Pradesh will only be recognized by the Dr Y S Parmar University of Horticulture & Forestry for giving weightage in admissions to various programmes.

The merit of the candidate will be determined keeping in view the reservation of various categories. In case of nominees against reserved seats, inter-se merit shall be determined.

2.11 Refusal of Admission

The past conduct of a candidate shall be considered while deciding his/ her admission. If it is found that the candidate has been indulging in act of indiscipline or guilty of having organized unlawful activities, he/ she will be refused admission by the admission committee. Such candidates as have been rusticated/ debarred shall not be admitted during the period of disqualification.

The Vice-Chancellor reserves the right to refuse admission to any candidate, whose admission in his opinion, is not in the interest of the University.

2.12 Advisement

Newly admitted students shall present themselves to the Dean of the College on the day notified by the Registrar for advisement. Such students shall be assigned to staff advisors by the Dean of the College.

The advisor helps the student(s) in planning the programme of his/ her studies and also guides the student(s) in determining the credit load which he/ she can carry in each semester. Each advisor maintains a close contact with his/her advisee(s) and keep them abreast of their progress.

2.13.1 Details of Fee

Sr	Particulars	Fee	Remarks		
No		(₹)			
1.	Admission fee	1500	At the time of admission		
2.	Registration fee	600	Annual		
3.	Tuition fee (exempted in case of	6000	Semester-wise		
	girls belonging to HP-BPL families				
	& physically challenged persons)				
4.	Continuation fee	300	Semester-wise from 2 nd semester		
5.	Change of course fee	100	At the time of change of course		
6.	Late admission/ registration	1000	Per day		
7.	Re-registration fee	250	At the time of re-admission		
8.	Sports, games and youth welfare activity	250	Annual		
9.	Examination fee	2000	Semester-wise		
10.	Infra-structure development/	2000	Annual		
	maintenance fund				
11.	Placement guidance fee	100	Semester-wise		
12.	Educational tour	1200	Semester-wise		
13.	Identity card fee	100	At the time of admission		
14.	Library card fee	25	Annual		
15.	Library service charges	100	Semester-wise		
16.	College security (Refundable)	500	At the time of admission		
17.	Library security (Refundable)	500	At the time of admission		
18.	NCC security (Refundable)	200	At the time of admission		
19.	Amalgamated fund	500	Semester-wise		
20.	Medical charges	200	Semester-wise		
21.	Sports & youth welfare fee	200	Semester-wise		
22.	Students' welfare fee	500	Semester-wise		
23.	NCC/NSS fee	100	Semester-wise		
24.	CSA	150	Semester-wise		
25.	Bus fare:				
	Non-hostellers (Except day scholars	10 single	e fares per month at HRTC rates		
	staying at nearby Nauni)	(semester-wise)			
	Hostellers & day scholars staying at	5 single	fares per month at HRTC rates		
	nearby Nauni	(semeste	er-wise)		
	Hostellers Only (For students admit	ted at the	e main campus)		
26.	Room Rent (Exempted in case of	500	Semester-wise		
	SC/ST students)				
27.	Water charges	100	Semester-wise		

28.	Hostel security (Refundable)	300	At the time of admission
29.	Mess security (to be adjusted in the	2000	At the time of admission
	last bill)		
30	Mess helper charges (warden	1000	Semester-wise
	account)		
31.	Maintenance charges	400	Semester-wise
32.	Utensil & crockery charges	200	Semester-wise
33.	Common room charges	200	Semester-wise
34.	Electricity charges	1000	Semester-wise

Note:

- *i)* All the securities must be claimed within one year of leaving the University, failing which the same shall stand forfeited.
- *ii) The above fee structure is liable to be changed at any time without any notice to this effect.*

2.13.2 Club Fee

The University will provide matching grant out of amalgamated fund on the formation of the clubs such as Badminton, Table Tennis, Music, Cultural and Literary, Dramatics and any other club recognized by the University.

2.13.3 Approximate Fee (in ₹) at the time of Admission

A. Main Campus, Nauni-Solan

	Fee	Securities	Bus Fare	Hostel Charges	Hostel Securities	Total
Non-Hosteller	16725	1200	1200	-	-	19125
Hosteller	16725	1200	600	2900	2300	23725

B. Institute of Biotechnology & Environmental Science, Neri, Hamirpur (HP)

	Fee	Securities	Total
Non-Hosteller	16725	1200	17925

2.13.4 Fee (In ₹) for various types of Certificates

Sr No.	Particulars	Rate
1.	Degree Charges	500
2.	Provisional Degree Certificate	200
3.	Transcript of Academic Record	200
4.	Duplicate Provisional Degree Certificate	500

5.	Duplicate Transcript of Academic Record	500
6.	Duplicate Semester Report	100
7.	Inter-University Migration Certificate	200
8.	Duplicate Degree Certificate	1000
9.	Duplicate Migration Certificate	1000

2.13.5 Refund of Fee

- (i) When a student after registering for a degree programme withdraws on or before 25th July, 2014 informing in writing to the Registrar of the University, the entire fee collected from him/ her will be refunded after deduction of processing fee of ₹1000/- (₹One thousand only).
- (ii) When a student after registering for a degree programme withdraws on or before 6th August, 2014 informing in writing to the Registrar of the University, the entire fee collected from him/ her will be refunded after deduction of processing fee and one month proportionate fee of ₹4000/-(₹Four thousand only).

NOTE: No fee shall be refunded, in case, resultant vacant seat is not filled up.

2.13.6 Dress Code

Navy blue coat, sky blue shirt, navy blue sweater, blue tie, grey trousers, grey socks and black formal leather shoes.

NOTE:

- 1. All students shall be in prescribed dress on every Monday, Friday, guest lectures, industrial visits and interviews.
- 2. A fine of ₹50/- per day per student shall be realized for violation of dress code by the Dean of the College.
- 3. No student shall be allowed to possess a vehicle in the campus.
- 4. A teacher shall mentor atleast 5 undergraduate students.

CHAPTER-III

PROCEDURE OF UNDERGRADUATE ENTRANCE TEST (UGET) - 2014

- 3.1 The entrance test will be conducted on 15th June, 2014 (Sunday) at 11.00 AM at the following centres:
 - i) Solan
 - ii) Mandi
 - iii) Neri PO Khaggal District Hamirpur
 - iv) Palampur, District Kangra
- 3.2 Admit card with roll number will be sent by post. If any candidate does not receive the admit card, he/ she is advised to search his/ her roll number, Centre of Examination on the University website on 13th June, 2014 and bring the candidate's copy of the admit card. He/ she shall contact the Centre Superintendent in person atleast 30 minutes before the commencement of the entrance test.
- 3.3 Candidates are expected to take their seats 15 minutes before the commencement of the test.
- 3.4 Candidate who does not possess the 'Admit Card' will not be allowed to enter the examination hall.
- 3.5 The duration of the test will be **2 hours**. Candidate who comes after 30 minutes of the commencement of the test shall not be permitted to sit in the test.
- 3.6 No candidate shall normally be allowed to leave the examination hall till the completion of the test and under no circumstances within the first hour of the test.
- 3.7 Candidates shall not be allowed to carry any material inside the examination hall.
- 3.8 Calculator, cell phone, electronic watches with facilities of calculator, slide rule, log tables, etc. are not allowed inside the examination hall.
- 3.9 The candidate shall forfeit the right of selection, in case of unfair means, impersonation, disturbance, misbehaviour, nonreturn of question book, answer sheet, etc. The decision of the Examination Coordinator shall be final.
- 3.10 Smoking is strictly prohibited. Eatables (Tea, Coffee, cold drinks or snacks,etc.) will not be allowed the examination hall. Candidate using intoxicants will not be allowed to enter in the examination hall.

- 3.11 The dispute relating to entrance test will be subject to Solan jurisdiction.
- 3.12 There will be a composite question paper of 120 marks of two hours duration. The question paper will have three parts of 40 marks each covering Physics, Chemistry and Biology/ Mathematics/ Agriculture. The outline of syllabus is given at page-26 to page-43 as Annexure-I.
- 3.13 The marks obtained in the entrance test and rank of the candidate will be uploaded on the University website (<u>www.yspuniversity.ac.in</u>) and also on HP Govt. website <u>www.himachal.nic.in/yspuhf</u> on 1st July, 2014.
- 3.14 The candidate shall also remain in touch with the University website for further instructions regarding his/ her eligibility to attend the counselling and other related instructions.
- 3.15 No separate/individual letter will be issued for attending the counselling.
- 3.16 There will be no re-checking or re-evaluation of answer sheet.

CHAPTER-IV

GUIDELINES FOR ATTEMPTING THE QUESTION PAPER

- 4.1 The candidate will be provided with a question paper and an answer sheet. The candidate will fill the roll number on the flap attached with the answer sheet and mention choice for the relevant section(s). The candidate will not write his/her name or roll number at any other place on the answer sheet.
- 4.2 The question paper for entrance test will be of objective type carrying 120 marks (40 each in Physics, Chemistry and Mathematics/ Biology/ Agriculture).
- 4.3 Each question has four responses marked as A, B, C and D and out of these only one is the most appropriate.
- 4.4 The answer sheet will have 120 boxes arranged section-wise numbered as per serial number of questions in the question paper. Candidate is to fill the boxes according to serial number of question with appropriate response i.e., A, B, C or D with ball point pen.
- 4.5 **Scoring**: Each question carries one mark and for each correct response the candidate will get one mark. The candidates are advised to put 'X' against question not attempted and should not leave the column blank. When a box is left blank, it will be treated as (X) i.e., not attempted. More than one answer indicated against a question will be deemed as incorrect response. Erasing, cutting or overwriting is not allowed.
- 4.6 The candidate should not do any rough work on the answer sheet. All rough work is to be done in question paper itself or on the plain paper attached with it.
- 4.7 At the end of the examination, the candidate shall return the question paper and answer sheet to the invigilator.

CHAPTER-V

COUNSELLING

The University shall notify the result of the entrance test (UGET-2014) showing percentage of marks obtained in respect of each candidate which shall be uploaded on the university website (<u>www.yspuniversity.ac.in</u>) and also on HP Government website <u>www.himachal.nic.in/yspuhf</u> on **1st July, 2014**. The admissions for the available seats, category-wise, shall be made through counselling according to the merit drawn on the basis of marks obtained in the entrance test (UGET-2014) and weightage for participation in sports/ games/ co-curricular activities, by the counselling committee. No separate/individual letter will be issued for attending the counselling.

NOTE:

- i) The candidate who brings incomplete certificates at the time of counselling shall be rejected there and then by the Counselling Committee.
- ii) It is mandatory for the candidate to report for counselling on the specified date and time and putting signatures in the appropriate register kept for the purpose beyond which his/ her candidature will not be entertained and his/ her right to admission will be forefeited.
- iii) It will be the sole responsibility of the candidate to check up his/ her selection.

The 1st counselling shall be conducted as per the following procedure:-

5.1.1 The candidates called for attending the counselling shall be required to present themselves at counselling venue i. e., Dr L S Negi Auditorium located in the Main Campus of the University at Nauni at 10:00 AM on 8th July, 2014. After marking their attendance in the prescribed register with date and time, the candidate shall fill the prescribed counselling proforma and submit the same before 11.30 AM at counter with all the requisite documents.

NOTE: The category shall be decided on the basis of the documents supplied/ annexed by the candidate with the counselling proforma. The weightage for participation in sports/ games/ co-curricular activities shall

also be added to the percentage of marks secured in UGET-2014 on the basis of copies of documents supplied with counselling proforma.

- 5.1.2 The list of candidates selected for admission shall be displayed same day.
- 5.1.3 Personal appearance before the counselling committee is compulsory; otherwise the offer of seat shall be treated as withdrawn and shall be offered to the candidates falling next in the merit of the respective category.
- 5.1.3 Candidates found indulging in impersonation will be debarred from counselling and shall be dealt as per Law.
- 5.1.4 The candidates appearing for counselling should bring the following documents **IN ORIGINAL** along with **a set of attested copies** of all the original certificates for verification failing which they shall not be allowed to participate in the counselling.
 - i) 10^{th} certificate (for date of birth)
 - ii) 10+2 detail of marks certificate
 - iii) Character certificate from the school/ institution last attended.
 - iv) HP bonafide/ domicile certificate (compulsory for all)
 - v) The following certificates (wherever applicable)
 - SC/ ST/ OBC certificate.
 - Rural area certificate as per form-I (Page 62).
 - IRDP/ BPL certificate.
 - Proof of wards of serving/ ex-defence personnel.
 - Proof of wards of serving/ retired CAPFs personnel.
 - Proof of being single girl child.
 - Proof of wards of displaced family as per prescribed format.
 - Sports/NCC/NSS/Scouts/ co-curricular activities certificate.
 - Physical disability certificate issued from a duly constituted and authorized medical board.
 - Any other certificate in support of the application.
 - vi) The counselling shall be held for the following HP quota seats:

Under no circumstances candidates without original certificates shall be allowed to participate in the counselling.

College of Horticulture, Nauni (Solan)

B Sc (Hons) Horticulture

То	tal Seats	= 30	
Rural		Open	
Rural SC	3	Open SC	2
Rural ST	1	Open ST	1
Rural General	14	Open General	9

College of Forestry, Nauni (Solan)

B Sc (Hons) Forestry

	Total Seats	= 25	
Rural		Open	
Rural SC	2	Open SC	2
Rural ST	1	Open ST	1
Rural General	12	Open General	7

Institute of Biotechnology and Environmental Science, Neri (Hamirpur)

B Sc (Hons) Horticulture

	Tot	al Seats	= 8	
Rural			Open	
•	Rural SC	1	Open SC	-
•	Rural General	4	Open General	3

B Sc (Hons) Forestry

	Fotal Seats	= 8	
Rural		Open	
Rural SC	1	Open SC	-
Rural General	4	Open General	3

B Sc (Hons) Biotechnology

	Total Seats	= 8	
Rural		Open	
Rural SC	1	Open SC	-

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Apart from above, the seats mentioned as under shall also be filled through counselling:

- a) One seat each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry in the College of Horticulture and College of Forestry respectively shall be filled from amongst the **wards of serving/ ex-defence personnel**.
- b) One seat each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry in the College of Horticulture and College of Forestry respectively shall be filled from amongst the **wards of serving/retired CAPFs personnel**.
- c) One seat each in B Sc (Hons) Horticulture, B Sc (Hons) Forestry at the main campus, Nauni and also in B Sc (Hons) Horticulture, B Sc (Hons) Forestry and B Sc (Hons) Biotechnology at the Institute of Biotechnology & Environmental Science, Neri (Hamirpur) shall be filled from amongst the candidates belonging to **other backward classes (OBC)** of Himachal Pradesh.
- d) One seat each in B Sc (Hons) Horticulture & B Sc (Hons) Forestry shall be filled from amongst the **wards of displaced families**, whose land has been acquired for the establishment of the main campus of the University.
- e) One seat each in B Sc (Hons) Horticulture & B Sc (Hons) Forestry in the College of Horticulture & College of Forestry respectively and one seat each in B Sc (Hons) Horticulture, B Sc (Hons) Forestry and B Sc (Hons) Biotechnology at the Institute of Biotechnology & Environmental Science, Neri (Hamirpur) shall be filled from amongst **single girl child** candidates.
- f) Two seats each in B Sc (Hons) Horticulture & B Sc (Hons) Forestry in the College of Horticulture and College of Forestry respectively at the main campus, Nauni and one seat each in B Sc (Hons) Horticulture, B Sc (Hons) Forestry & B Sc (Hons) Biotechnology at the Institute of Biotechnology & Environmental Science, Neri for candidates belonging to IRDP/ BPL families of Himachal Pradesh.
- g) One seat each in B Sc (Hons) Horticulture and B Sc (Hons) Forestry in the College of Horticulture and College of Forestry respectively shall be filled from amongst the **physically challenged candidates**.

The admissions shall be made category-wise only on the production of original relevant certificate(s) by the candidate(s) at the time of counselling.

The **non-refundable** amount of ₹2000/- (₹Two thousand) only chargeable from the selected candidates in the shape of Demand Draft drawn in favour of "The Comptroller, Dr YS Parmar University of Horticulture & Forestry" payable at Nauni/ Solan at the time of counselling includes part payment on account of registration fee @₹ 1000/- and counselling fee @ ₹ 1000/-.

Procedure for 2nd Counselling:-

- 5.2.1 The following candidates shall be eligible for attending the 2nd counselling:-
- i) The candidates selected for admission to various undergraduate programmes during 1st counselling and have deposited fee and got themselves registered between 23rd July and 24th July, 2014 for change of discipline.
- ii) The candidates who have marked their attendance in the 1st Counselling.
- 5.2.2 The candidates willing to attend the 2nd counselling for admission against vacant seats, if any, shall be required to present themselves at counselling venue i. e., **Dr L S Negi Auditorium** located in the Main Campus of the University at Nauni at **10:00 AM** on **26th July, 2014**. After marking their attendance in the prescribed register with date and time, the candidate shall fill the prescribed counselling proforma and submit the same before 11.30 PM at counter with all the requisite documents.

NOTE: The category of the candidate shall be decided of the basis of the documents supplied/annexed with the counselling proforma. The weightage for participation in sports/ games/ co-curricular activities shall also be added to the percentage of marks secured in UGET-2014, on the basis of copies of documents supplied with counselling proforma.

- 5.2.3 The list of candidates selected for admission shall be displayed same day.
- 5.2.4 Personal appearance before the counselling committee is compulsory, otherwise the offer of seat shall be treated as withdrawn and shall be offered to the candidates falling next in the merit of the respective category.
- 5.2.5 Candidates found indulging in impersonation will be debarred from counselling and shall be dealt as per Law.

Procedure for 3rd Counselling:-

- 5.3.1 The following candidates shall be eligible for attending the 3rd counselling:
 - i) The candidates selected for admission to various undergraduate programmes during 1st counselling and have deposited fee and got themselves registered between 23rd July and 24th July, 2014 or the candidates selected for admission to various undergraduate programmes during 2nd counselling and have deposited fee and got themselves registered between 28th July and 30th July, 2014 for change of discipline.
 - ii) The candidates who have marked attendance in the 1st counselling/ 2nd counselling.
- 5.3.2 The candidates willing to attend the 3rd counselling for admission against vacant seats, if any, shall be required to present themselves at counselling venue i. e., **Dr L S Negi Auditorium** located in the Main Campus of the University at Nauni at **10:00 AM** on **7th August, 2014**. After marking their attendance in the prescribed register with date and time, the candidate shall fill the prescribed counselling proforma and submit the same before 11.00 AM at counter with all the requisite documents.

NOTE: The category of the candidate shall be decided of the basis of the documents supplied/annexed with the counselling proforma. The weightage for participation in sports/ games/ co-curricular activities shall also be added to the percentage of marks secured in UGET-2014 on the basis of copies of documents supplied with counselling proforma.

- 5.3.3 The list of candidates selected for admission shall be displayed same day.
- 5.3.4 Personal appearance before the counselling committee is compulsory, otherwise the offer of seat shall be treated as withdrawn and shall be offered to the candidates falling next in the merit of the respective category.
- 5.3.5 Candidates found indulging in impersonation will be debarred from counselling and shall be dealt as per Law.

Right of Petition

No Representation/ petition against the selection will be entertained after the lapse of one month from the date of counselling.

CHAPTER-VI

INSTRUCTIONS FOR COMPLETING THE APPLICATION FORM

Please read carefully the instructions given in this section before filling the application form. The application form must be filled in English only, using capital letter except signature.

- 6.1 The candidate must mention nature of application i.e., whether applied for general seat or for self-financing seat. The candidate willing to appear in the entrance test will mention general seat.
- 6.2 Write name in full as entered in High school/ equivalent certificate only.
- 6.3 a) Father's Name: Write the name of father in full and his occupationb) Mother's Name: Write the name of mother in full and her occupation
- 6.4 **Nationality**: Write whether you are Indian or Non-Indian
- 6.5 **Gender**: Write male or female
- 6.6 **Date of birth**: Enter the date, month and year of your birth as per English calendar as recorded in high school/equivalent certificate
- 6.7 **Permanent address**: Write permanent address (indicate Pin Code) where your parents/ guardian are residing clearly mentioning landline phone number, mobile numbers and e-mail ID
- 6.8 **Address for correspondence**: Write complete postal address including telephone number and PIN code for communication
- 6.9 (a) Clearly mention category: Open/ Rural(b) Sub-category: General/ SC/ ST
- 6.10 Whether applied for additional seats i.e., (i) Ward of IRDP/BPL Family (ii) Ward of serving/ ex-defence personnel (iii) Ward of serving/ retired CAPF personnel (iv) Single Girl Child (v) Physically challenged (vi) Ward of displaced family (vii) Other Backward Classes
- 6.11 (a) Whether you claim for weightage for participation in (i) Sports/ games (ii) NCC (iii) Scouting (iv) NSS (v) Cultural activities

(b) If yes at (a), mention code for the same as per table-I (Page-58 to Page 59)

- 6.12 **Educational qualification:** Write under appropriate column, name of board, name of school from where the examination passed, year of passing, maximum marks and marks obtained.
- 6.13 **Declaration by the applicant**: This must be signed by the applicant otherwise the application will be treated as incomplete.

ANNEXURE-I

Outline of syllabus for Entrance Examination

Section I

PHYSICS

Physical World and Measurement: Physics - Scope and excitement; nature of physical laws; Physics, technology and society. Need for measurement: Units of measurement; systems of units; SI units, fundamentals 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.

Kinematics: 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.

Laws of Motion: 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)

Work, Energy and Power: 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 & potential energies); non-conservative forces: elastic & inelastic collisions in one & two dimensions.

Motion of System of Particles & Rigid Body: Centre of mass of a two-particle system, momentum conservation & 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 & equations of

rotational motion, comparison of linear & 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.

Gravitation: Kepler's Laws of planetary motion. The universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential. Escape velocity. Orbital velocity of a satellite. Geostationary satellites

Properties of Bulk Matter: Elastic behaviour, stress-strain relationship, Hooke's law, Young'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. Viscocity, 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.

Thermodynamics: 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.

Behaviour of Perfect Gas and Kinetic Theory: Equation of state of a perfect gas, work done on compressing of a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic energy and temperature; rms speed of gas molecules; degrees of freedom, law of equilibrium of energy (statement only) and application to specific heats of gases, concept of mean free path, Avogadro's number.

Oscillations and Waves: Periodic motion - period, frequency, displacement as a function of time, periodic functions. Simple harmonic motion (SHM) and its equation; phase; oscillations of a spring-restoring force and force constant; energy in SHM- kinetic and potential energies; simple pendulum - derivation of expression for its time period; free, forced and damped oscillations (qualitative idea only). Resonance.

Equilibrium: 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.

Electrostatics: Electric charges; conservation of charge, Coloumb's law - force between two point charges, forces between multiple charges; superposition

principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines; electric dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinitely plane sheet and uniformly charged thin spherical shell (field inside and outside). Electric potential, potential difference; electric potential due to a point charge, a dipole and system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitor and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates; energy stored in a capacitor. Van de Graaff generator

Current Electricity: Electric current, flow of electric charges in a metallic conductor, drift velocity and mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics, (linear and non-linear) electrical energy and power, electrical resistivity and conductivity, Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance. Internal resistance of a cell, Potential difference and emf of a cell, combination of cells in series and in parallel. Kirchhoff's laws and simple applications, Wheatstone bridge, Metre bridge. Potentiometer – principle and its applications to measure potential difference and for comparing emf of two cells; measurement of internal resistance of a cell.

Magnetic Effects of Currents and Magnetism: Concept of magnetic field, Oersted's experiment. Biot-Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire, straight and toroidal solenoids. Force on a moving charge in uniform magnetic and electric fields, Cyclotron. Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current carrying conductorsdefinition of ampere. Torque experienced by a current loop in uniform magnetic field; moving coil galvanometer - its current sensitivity and conversion to ammeter and voltmeter. Current loop as a magnetic dipole moment and its magnetic dipole moment; magnetic dipole moment due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and magnetic elements; para, dia and ferro-magnetic substances with examples, electromagnets and factors affecting their strengths, permanent magnets.

Electromagnetic Induction and Alternating Currents: Electromagnetic induction, Faraday's laws, Induced emf and current, Lenz's law, Eddy currents, self and mutual inductance. Need for displacement current. Alternating currents, peak and rms value of alternating current/voltage, reactance and impedence; LC oscillations, (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, wattless current. AC generator and transformer.

Electromagnetic Waves: Electromagnetic waves and their characteristics (qualitative ideas only). Transverse nature of electromagnetic waves. Electromagnetic spectrum (radiowaves, microwaves, infrared, visible, ultraviolet, X-rays, *gamma* rays) including elementary facts about their uses.

Optics: Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lens-maker's formula, Magnification, power of a lens, combination of thin lenses in contact. Refraction and dispersion of light through a prism. Scattering of light – blue colour of the sky and reddish appearance of the sun at sun rise and sunset.

Optical Instruments – Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia, presbyopia and astigmatism) using lenses. Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

Wave Optics: wave front and Huygen's principle; reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's Principle. Interference – Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Resolving power of microscopes and astronomical telescopes. Polarisation, plane polarised light, Brewster's law, uses of plane polarised light and polaroids

Dual Nature of Matter and Radiation: Dual nature of radiation. Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation - particle nature of light. Matter waves – wave nature of particles, de-Broglie relation, Davisson-Germer experiment.

Atomic & Nuclei: Alpha-particle - scattering experiment, Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum. Composition and size of nucleus, atomic masses, isotopes, isobars; isotones. Radioactivity - *alpha, beta* and *gamma* particles/rays and their properties; radioactive decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, nuclear fission and fusion.

Electronic Devices: Semiconductors; semiconductor diode I-V characteristics in forward and reverse bias, diode as a rectifier; I-V characteristics of LED,

photodiode, solar cell and Zener diode; Zener diode as a voltage regulator, Junction transistor, transistor action, characteristics of a transistor; transistor as an amplifier (common emitter configuration) and oscillator, Logic gates (OR, AND, NOT, NAND and NOR); transistor as a switch.

Communication Systems: Elements of communication systems (block diagram only); bandwidth of signals (speech, TV and digital data); bandwidth of transmission medium. Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation. Need for modulation. Production and detection of an amplitude-modulated wave.

Section II

CHEMISTRY

Some Basic Concepts of Chemistry: 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.

Structure of Atom: 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's exclusion principle and Hund's rule, electronic configuration or atoms, stability of half filled and completely filled orbitals.

Classification of Elements and Periodicity in Properties: 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, inert gas radii. Ionization enthalpy, electron gain enthalpy, electronegativity, valence.

Chemical Bonding and Molecular Structure: 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.

States of Matter: gases and liquids: 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 number. 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)

Thermodynamics: 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.

Equilibrium: 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).

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

Hydrogen: 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.

S-block Elements (Alkali and Alkaline Earth Metals)

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.

Some P-block Elements: 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 alkalis.

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.

Organic Chemistry – Some Basic Principles and Techniques: 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, carbions, electrophiles and nucleophiles, types of organic reactions.

Classification of Hydrocarbons

Alkanes – Nomenclature, isomerism, conformations (ethene only), physical properties, chemical reactions including free radical mechanism or halogenations, combustion and pyrolysis.

Alkenes – Nomenclature, structure of double (ethane) 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.

Alkynes – 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, halogenations, Friedel Craft's alkylation and acylation, directive influence of functional group in mono-substituted benzene; carcinogenicity and toxicity.

Environmental Chemistry: Environmental pollution – air, water and soil pollution, chemical reactions in atmosphere, smog, major atmospherical 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.

Solid State: Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea), unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties.

Solutions: Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties – relative lowering of vapour pressure, elevation of B.P. depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass.

Electrochemistry: Redox reactions, conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration, Kohlrausch's law, electrolysis and laws of electrolytes (elementary idea), dry cell-electrolytic cells and Galvanic Cells; lead accumulator, EMF of a cell standard electrode potential, Nernst equation and its application to chemical cells, fuel cells; corrosion.

Chemical Kinetics: Rate of a reaction (average and instantaneous), factors affecting rates of reaction, concentration, temperature, catalyst, order and molecularity of a reaction; rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment).

Surface Chemistry: Adsorption – physisorption and chemisorption factors affecting adsorption of gases of solids, catalysis; homogeneous and heterogeneous activity and selectivity: enzyme catalysis; colloidal state: distinction between true solutions, colloids and suspensions; lyophilic, lyophobic multimolecular and macromolecular colloids, properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation; emulsion – types of emulsions.

General Principles and Processes of Isolation of Elements: Principles and methods of extraction – concentration, oxidation, reduction, electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and iron.

P-block Elements

Group 15 Elements: Elements introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; nitrogen – preparation, properties and uses; compounds of nitrogen: preparation, properties of ammonia and nitric acid, oxides of nitrogen (structure only); Phosphorous - allotropic forms; compounds of phosphorous, preparation and properties of phosphine, halides (PCl₃, PCl₅) and oxoacids (elementary idea only).

Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; dioxygen – preparation, properties and uses; simple oxides, ozone. Sulphur - allotropic forms; compounds of sulphur: preparation, properties and uses of sulphur dioxide; sulphuric acid; industrial process of manufacture, properties and uses, oxoacids of sulphur (structures only).

Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens: preparation, properties and uses of chlorine and hydrochloric acid, interhalogen compounds, oxoacids of sulphur (structures only).

Group 18 Elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties; uses.

d-and f-block Elements: General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals- metallic character, ionization enthalpy, oxidation states, ionic radii, colour catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and KMnO₄.

Lanthaniods – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction.

Actinoids - Electronic configuration, oxidation states.

Coordination Compounds: Coordination compounds – introduction, legends and coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, isomerism, importance of coordination compounds (in qualitative analysis, extraction of metals.

Haloalkanes: Nomenclature, nature of C-X bond, physical and chemical properties, mechanism of substitution reactions.

Haloarenes: Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only). Uses and environmental effects of dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only); identification of primary, secondary and tertiary alcohols; mechanism of dehydration, uses, some important compounds - methanol and ethanol.

Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols

Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties and mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.

Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

Organic Compounds containing Nitrogen

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Cynides and Isocynides: will be mentioned at relevant places in context.

Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

Biomolecules

Carbohydrates: Classification (aldoses and ketoses). Monosaccharides (glucose and fructose). Oligosaccharides (sucrose, lactose, maltose), Polysaccharides (starch, cellulose, glycogen), importance.

Proteins: Elementary idea of α -amino acids, peptide bond, polypeptides, proteins, primary structure, secondary structure, tertiary structures and quaternary structure (qualitative idea only), denaturation of proteins; enzymes.

Vitamins: Classification and functions

Nucleic Acids: DNA & RNA

Polymers: Classification, natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers: natural and synthetic like polythene, nylon, polyesters, Bakelite, rubber.

Chemistry in Everyday Life

Chemicals in medicine: analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.

Chemicals in food: Preservatives, artificial sweetening agents.

Cleansing agents: Soaps and detergents, cleansing action

Section III BIOLOGY

Diversity in Living World: 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 upto phylum level and chordates upto class level) and plant (major groups; Angiosperms upto subclass) classification. Botanical gardens, herbaria, zoological parks and museums.

Structural Organization in Animals and Plants: 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)

Cell: Structure and Function: 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 bodies. Structure and functions of carbohydrates, proteins, lipids and nucleic acids. Enzymes: types, properties and function.

Plant Physiology: Movement of water, food, nutrients and gases, plants and water mineral nutrition. Respiration. Photosynthesis. Plant Growth and development.

Human Physiology: Digestion and absorption. Breathing and respiration. Body fluids and circulation. Excretory products and elimination. Locomotion and movement. Control and coordination.

Sexual Reproduction: Pollination and fertilization in flowering plants. Development of seeds and fruits. Human reproduction: reproductive system in male and female, menstrual cycle. Production of gametes, fertilization, implantation, embryo development, pregnancy and parturition. Reproductive health - birth control, contraception and sexually transmitted diseases.

Genetics and Evolution: Mendalian inheritance. Chromosome theory of inheritance, deviations from Mendalian ratio (gene interaction - incomplete dominance, co-dominance, complementary genes, multiple alleles). Sex determination in human beings : XX, XY, linkage and crossing over. Inheritance pattern of haemophilia and blood groups in human beings. DNA: replication, transcription, translation. Gene expression and regulation. Genome and Human Genome Project. DNA fingerprinting. Evolution: Theories and evidences.

Biology and Human Welfare: Animal husbandry. Basic concepts of immunology, vaccines. Pathogens. Parasites. Plant Breeding, tissue culture, food production. Microbes in household food processing, industrial production, sewage treatment and gene generation. Cancer and AIDS. Adolescence and drug/alcohol abuse.

Biotechnology and its Applications: Recombinant DNA technology. Applications in Health, Agriculture and Industry. Genetically Modified (GM) organisms; biosafety issues. Insulin and BT cotton.

Ecology & Environment: Ecosystems: components, types and energy flow. Species, population and community. Ecological adaptations. Centres of diversity

and conservation of biodiversity. National Parks and sanctuaries, Environmental issues.

MATHEMATICS

Sets and Functions: Sets and their representations. Empty set. Finite and infinite sets, equal sets, sub sets, 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.

Relations and Functions: Types of relations; reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function, Binary operations. 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 R x R x R). Definition of relation, pictorial diagrams, domain, co-domain 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 and 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.

Inverse Trigonometric Functions: Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.

Trigonometric Functions: 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 $Sin^2x + Cos^2x = 1$, 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 and cos y. Deducing the identities like following:

	$\mathbf{x} + \mathbf{y}$	х - у
$\cos x + \cos y = 2 \cos x$		cos
-	2	2
	$\mathbf{x} + \mathbf{y}$	x - y
$\cos x - \cos y = -2 \sin x$		sin
-	2	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 $\emptyset = \tan \alpha$. Proof and simple applications of sine and cosine formulae.

Algebra

Matrices: Concept, notation, order, equality, types of matrices, zero matrix, transpose of a matrix, symmetric and skew symmetric matrices. Addition, multiplication and scalar multiplication of matrices, simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists; (here all matrices will have real entries).

Determinants: Determinant of a square matrix (up to 3 X 3 matrices), properties of determinants, minors, cofactors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Principle of Mathematical Induction: 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.

Complex Numbers and Quadratic Equations: Need for complex number especially $\sqrt{-1}$, 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.

Linear Inequalities: 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.

Permutations and Combinations: Fundamental principle of counting. Factorial *n*. Permutations and combinations. Derivation of formulae and their connections, simple applications.

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

Sequence and Series: 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 of *n* terms of the special series $\sum n, \sum n^2, \sum n^3$

Calculus

Continuity and Differentiability: Continuity and differentiability, derivative of composite functions, chain rule, derivatives of inverse trigonometric functions, derivative of implicit function, concept of exponential and logarithmic functions of implicit function. Concept of exponential and logarithmic differentiation. Derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretations.

Applications of Derivatives: Applications of derivatives; rate of change, increasing/ decreasing functions, tangents & normals, approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool) simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).

Integrals: Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts. Definite integrals as a limit of a sum. Fundamental theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals

Applications of the Integrals: Applications in finding the area under simple curves especially lines, areas of circles/parabolas/ellipses (in standard form only), area between the two above said curves (the region should be clearly identifiable).

Differential Equations: Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type:

dx
---- +
$$p(x) y = q(x)$$
, where $p(x)$ and $q(x)$ are functions of x.
dx

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

Vectors and Three-dimensional Geometry

Vectors: Vectors and scalars, magnitude and direction of a vector. Direction cosines/ ratios of vectors. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of vector by a scalar, position vector of a point dividing a line segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors.

Three-dimensional Geometry: Direction cosines/ratios of a line joining two points. Cartesian and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Angle between (i) two lines (ii) two planes (iii) a line and a plane. Distance of a point from a plane

Linear Programming: Introduction, definition of related terminology such as constraints, objective function, optimization, different types of linear programming (LP) problems, mathematical formulation of LP problems, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optional feasible solutions (up to three non-trivial constraints).

Mathematical Reasoning: 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

COORDINATE GEOMETRY

Straight lines: 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

Conic Sections: 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 hyperbolas. Standard equation of a circle

Introduction to Three-dimensional Geometry: Coordinate axes and coordinate planes in three dimensions. Co-ordinates of a point. Distance between two points and section formula.

STATISTICS AND PROBABILITY

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

Probability: Multiplication theorem on probability. Conditional probability, independent events, total probability. Baye's theorem. Random variable and its probability distribution, mean and variance of haphazard variable. Repeated independent (Bernoulli) trials and Binomial distribution.

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, connections with the theories of earlier classes. Probability of 'not', 'and' and 'or' events.

AGRICULTURE

Agrometeorology, Genetics and Plant Breeding, Biochemistry and Microbiology

Agrometerology: Elements of weather - rainfall, temperature, humidity, wind velocity, sunshine, weather forecasting, climate change in relation to production.

Genetics & Plant Breeding: Cell and its structure, cell division - mitosis and meiosis and their significance. Organization of the genetic materials in chromosomes, DNA and RNA, Mendal's laws of inheritance. Reasons for the success of Mendal in his experiments. Absence of linkage in Medal's experiments. Quantitative inheritance, continuous and discontinuous variation in plants. Role of genetics in Plant Breeding, self and cross-pollinated crops, methods of breeding in field crops - introduction, selection, hybridization and polyploidy, tissue and cell structure, Plant Biotechnology - definition and scope in crop production.

Biochemistry: Classification of carbohydrates, proteins, lipids; vitamins and enzymes.

Microbiology: Micro-organisms - Algae, Bacteria, Fungi, Actinomycetes, Protozoa and Viruses. Role of micro-organisms in respiration, fermentation, organic matter decomposition.

Livestock Production

Scope and importance: Importance of livestock in agriculture and industry, white revolution in India. Important breeds Indian and exotic, distribution of cows, buffaloes and poultry in India.

Care and Management: Systems of cattle and poultry housing. Principles of feeding, feeding practices. Balanced ration - definition and ingredients. Management of calves, bullocks, pregnant and milch animals as well as chicks crockrels and layers, poultry. Signs of sick animals, symptoms of common diseases in cattle and poultry. Rinderpest, black quarter, foot and mouth, mastitis and haematology septicaemia coccidiosis, fowl pox and Ranikhet disease, their prevention and control.

Artificial Insemination: Reproductive organs, collection, dilution and preservation of semen and artificial insemination, role of artificial inseminaton in cattle improvement. Livestock products, processing and marketing of milk and milk products.

Crop Production

Introduction: Targets and achievements in food grain production in India since independence and its future projections, sustainable crop production, commercialization of agriculture and its scope in India, Classification of field crops based on their utility –cereals, pulses, oils, seeds, fibre, sugar and forage crops.

Soil Fertility, Fertilizers and Manures: Soil, soil pH, soil texture, soil structure, soil organisms, soil tilth, soil fertility and soil health. Essential plant nutrients, their functions and deficiency symptoms. Soil types of India and their characteristics. Organic nature, common fertilizers including straight, complex, fertilizer mixtures and bio-fertilizers; integrated nutrient management system.

Irrigation and Drainage: Sources of irrigation (rain, canals, tanks, rivers, wells, tube wells). Scheduling of imagination based on critical stages of growth, time interval, soil moisture content and weather parameters. Water requirement of crops. Methods of irrigation and drainage. Watershed Management.

Weed Control: Principles of weed control, methods of weed control (cultural, mechanical, chemical, biological and Integrated Weed Management)

Crops: Seed bed preparation, seed treatment, time and method of sowing/planting, seed rate; dose method and time of fertilizer application, irrigation and weed control; common pests and diseases caused by bacteria, fungi, virus and nematode, integrated pest management, harvesting, threshing, post-harvesting technology: storage, processing and marketing of major field crops - rice, wheat, maize, sorghum, pearl millet, groundnut, mustard, gram, sugarcane, cotton, berseem.

Horticulture: Importance of fruits and vegetables in human diet. Crop diversification and processing industry. Orchard - location and layout, ornamentals gardening and kitchen garden. Planting system, training, pruning, intercropping, protection from frost and sunburn. Trees, shrubs, climbers, annuals, perennials – definition and examples. Propagation by seed, cutting, budding, layering and grafting. Cultivation practices, processing and marketing of:

- (i) Fruits mango, papaya, banana, guava, citrus, grapes.
- (ii) Vegetables radish, carrot, potato, onion, cauliflower, brinjal, tomato, spinach and cabbage.
- (iii) Flowers gladiolus, canna, chrysanthemums, roses and marigold.
- (iv) Principles and methods of fruit and vegetable preservation.
- (v) Preparation of jellies, jams, ketchup, chips and their packing.

NOTE: Besides above syllabi, any other question of scientific and educational importance may be asked.

CHAPTER- VII

ADMISSION FOR SELF-FINANCING SEATS

i) College of Horticulture, Nauni, Solan

B Sc (Hons) Horticulture

ii) College of Forestry, Nauni, Solan

B Sc (Hons) Forestry

iii) Institute of Biotechnology and Environmental Science, Neri, Hamirpur

B Sc (Hons) Horticulture B Sc (Hons) Forestry B Sc (Hons) Biotechnology

7.1 Minimum Qualification

10+2/equivalent examination with English, Physics, Chemistry, Biology/ Mathematics/ Agriculture from a recognized University/ Board with a minimum of 50% aggregate marks (45% marks in case of SC/ ST/ PH category candidates) in the above subjects.

OR

Examination of a University/ Board/ College/ School in a foreign country recognized by the Academic Council as equivalent to 10+2 with science subjects provided the candidate has obtained at least 60% aggregate marks or 'B' grade/ equivalent.

7.2 Submission of Application Form

The application form duly filled in by the candidate should reach the Registrar, Dr Y S Parmar University of Horticulture and Forestry, Nauni Distt. Solan (HP) -173 230 by 3^{rd} July, 2014. Application form submitted late upto 10^{th} July, 2014 should be accompanied with late fee of ₹1000/- through bank draft drawn in favour of the Comptroller, Dr Y S Parmar University of Horticulture and Forestry, payable at SBOP/ UCO Bank, Nauni.

The application form should be accompanied with the following enclosures:

- i) Copy of 10th Certificate (Detail of marks)
- ii) Copy of 10+2 Certificate (Detail of marks)
- iii) Copy of HP domicile certificate (for availing fee concession)
- iv) Copy of character certificate from the institution last attended
- Wherever applicable, photocopies of distinction in sports/ games/cocurricular activities certificate (necessary for adding weightage to overall marks)
- vi) Acknowledgement card
- vii) Demand Draft of ₹1200/- (₹800/- in respect of SC/ ST/ PH candidates in case of downloaded application form)
- viii) Incomplete applications/ applications without relevant certificates/ documents and applications received after due date shall not be considered.

Under no circumstances, incomplete applications (without above documents) shall be considered / allowed to participate in the Counselling.

7.2 Basis of Admission

The basis of admission shall be merit drawn on the basis of marks obtained at 10+2 level examination in four subjects, i.e., English, Physics, Chemistry and Biology/ Mathematics/ Agriculture plus weightage of participation in sports/ co-curricular activities. In case two or more candidates obtain the same percentage of marks, the candidate who is younger in age shall be considered for admission.

While determining the merit of eligible candidates, the marks to the following extent shall be added to the result of those candidates, who have distinguished themselves in sports and games recognized by the Indian Olympic Association/ state sports bodies and for significant participation in co-curricular activities like declamation, debates, quiz, essay competition, science seminars, model parliaments and youth festival, etc:-

A. Sports/ Games

- i. Sportsperson(s) who have represented India in any International 5% Competition like Olympic games/ World Championship and obtained 1st, 2nd or 3rd position.
- ii. Sportsperson(s) who have represented India in any International 4% Competition like Olympic games/ World Championship.
- iii. Sportsperson(s) who have represented the State in a National Competition 3% and obtained 1st, 2nd or 3rd position.

OR

Sportsperson(s) who have represented the State School Teams in the National Sports/ Games for School conducted by the All India School Games Federation and obtained 1^{st} , 2^{nd} or 3^{rd} position.

- Sportsperson(s) who have represented the State in a National Competition. 2% iv. OR Sportsperson(s) who have represented the State School Teams in the National Sports/ Games for School conducted by the All India School Games Federation. Sportsperson(s) who have obtained 1st, 2nd or 3rd position at the State Sports/ 2% V. Games organised by the State Government. OR Sportsperson(s) who have obtained 1^{st} , 2^{nd} or 3^{rd} position in the National Championship organized by Navodava Vidvalava and Central School for their school vi. Sportsperson(s) who have represented the District Teams at the State School 1% Sports/ Games. Sportsperson(s) who have obtained 1^{st} , 2^{nd} or 3^{rd} position at the District 1% vii.
- vii. Sportsperson(s) who have obtained 1st, 2nd or 3rd position at the District 1% Level.
- B. NCC
- i. NCC Cadets, who have participated in the National Republic Day Parade. 2%
- C. SCOUTING
- i. Having participated Jamboori organized by Government of India at National 3% Level and having certificate of appreciation from the President of India.

2%

- ii. Participated in Jamboori in the State/ Government of India.
- D. NSS

- i. Participated in the National Integration Camps or Camp organized by the 2% Government of India outside the State with a minimum attendance of 240 hours.
- ii. Participated in National Integration Camp organized by the Government of 1% India.

OR

Any Camp organized by the State Government.

с.	CULIURAL ACTIVITIES	
i.	Participated at International Level and obtained 1 st , 2 nd or 3 rd Position.	5%
ii.	Participated at International Level.	4%
iii.	Participated at National Level and obtained 1 st , 2 nd or 3 rd position.	3%
iv.	Participated at National Level.	2%
v.	1^{st} , 2^{nd} or 3^{rd} Position at the State Level.	2%
vi.	Participated at the State Level.	1%
vii.	1^{st} , 2^{nd} or 3^{rd} level at District Level.	1%

Provided that:

- > The above weightage can be availed of only once and only when the position obtained/ participation made is not earlier than four academic years preceeding the year of admission.
- Only one of the above weightage, which is the most beneficial to a candidate, shall be allowed while determining relative merit.
- The games/ sports should have been organized by the Sports Authority of India/ Indian Olympic Association/ All India School Games Federation/ State Government.
- All sports/ games/ cultural activities (literary activities and fine art) recognized by the Government of Himachal Pradesh will only be recognized by the Dr Y S Parmar University of Horticulture & Forestry for giving weightage in admissions to various programmes.

7.3 Counselling

The admissions against the self-financing seats shall be made through counselling according to the merit drawn on the basis of marks obtained at 10+2 level with English, Physics, Chemistry and Biology/ Mathematics as subjects and weightage assigned, if any, for participation in sports/ co-curricular activities by the counselling committee.

7.4.1 Procedure of 1st counselling:-

a) The list of shortlisted candidates, shall be displayed on the university website <u>www.yspuniversity.ac.in</u> on 16th July, 2014. The shortlisted candidates shall be required to present themselves at counselling venue i.
e., Dr L S Negi Auditorium located in the Main Campus of the University at Nauni at 10:00 AM on 18th July, 2014. After marking their attendance in the prescribed register with date and time, the candidate shall fill the prescribed counselling proforma and submit the same before 12.30 AM at counter with all the requisite documents.

NOTE: The weightage for participation in sports/ games/ co-curricular activities shall also be added to the percentage of marks secured in 10+2 level examination on the basis of copies of documents supplied with the application form.

- b) The list of candidates selected for admission shall be displayed same day.
- c) Personal appearance before the counselling committee is compulsory, otherwise the offer of seat shall be treated as withdrawn and shall be offered to the candidates falling next in the merit.

- d) Candidates found indulging in impersonation will be debarred from counselling and shall be dealt as per Law.
- e) The candidates appearing for counselling should bring the following documents **IN ORIGINAL** along with **a set of attested copies** of all the original certificates for verification failing which they shall not be allowed to participate in the counselling.
 - i) 10th certificate (for date of birth)
 - ii) 10+2 detail of marks certificate
 - iii) Character certificate from head of the school/ institution last attended.
 - iv) HP bonafide/ domicile certificate (for availing fee concession)
 - v) Sports/ co-curricular activities certificate (wherever applicable)

Under no circumstances candidates without original certificates shall be allowed to participate in the counselling.

The **non-refundable** amount of ₹2000/- (₹Two thousand) only chargeable at the time of counselling in the shape of demand draft in favour of the Comptroller, Dr YS Parmar University of Horticulture & Forestry, Nauni-Solan includes part payment on account of registration fee @₹ 1000/- and counselling fee @₹ 1000/-.

7.4.2 Procedure for 2nd Counselling:-

The following candidates shall be eligible for attending the 2nd counselling:-

- i) The candidates selected for admission to various undergraduate programmes during 1st counselling and have deposited fee and got themselves registered between 23rd July and 24th July, 2014 for change of discipline.
- ii) The left-out candidates called for attending the 1st counselling and have marked their attendance but could not get the chance of admission in accordance with their merit.
- a) The candidates willing to attend the 2nd counselling for admission against vacant seats, if any, shall be required to present themselves at counselling venue i. e., **Dr L S Negi Auditorium** located in the Main Campus of the University at Nauni at **2:00 PM** on **26th July, 2014**. After marking their attendance in the prescribed register with date and time, the candidate shall fill the prescribed counselling proforma and submit the same before 3.00 PM at counter with all the requisite documents.

NOTE: The weightage for participation in sports/ games/ co-curricular activities shall also be added to the percentage of marks secured at 10+2



level examination in English, Physics, Chemistry and Biology/ Mathematics, on the basis of copies of documents supplied with the application form.

- b) The list of candidates selected for admission shall be displayed same day.
- c) Personal appearance before the counselling committee is compulsory, otherwise the offer of seat shall be treated as withdrawn and shall be offered to the candidates falling next in the merit of the respective category.
- d) Candidates found indulging in impersonation will be debarred from counselling and shall be dealt as per Law.
- e) The candidates appearing for 2nd counselling should bring all the requisite documents **IN ORIGINAL** along with **a set of attested copies**.

7.4.3 Procedure for 3rd Counselling:-

The following candidates shall be eligible for attending the 3rd counselling:-

- i) The candidates selected for admission to various undergraduate programmes during 1st counselling and have deposited fee and got themselves registered between 23rd July and 24th July, 2014 or the candidates selected for admission to various undergraduate programmes during 2nd counselling and have deposited fee and got themselves registered between 28th July and 30th July, 2014 for change of discipline.
- ii) The left-out candidates called for attending the 1^{st} counselling/ 2^{nd} counselling and have marked their attendance but could not get the chance of admission in accordance with their merit.
- a) The candidates willing to attend the 3rd counselling for admission against vacant seats, if any, shall be required to present themselves at counselling venue i. e., Dr L S Negi Auditorium located in the Main Campus of the University at Nauni at 02:00 PM on 7th August, 2014. After marking their attendance in the prescribed register with date and time, the candidate shall fill the prescribed counselling proforma and submit the same before 03.00 PM at counter with all the requisite documents. NOTE: The weightage for participation in sports/ games/ co-curricular activities shall also be added to the percentage of marks secured at 10+2 level examination with English, Physics, Chemistry and Biology/ Mathematics as subjects, on the basis of copies of documents supplied with the application form.
- b) The list of candidates selected for admission shall be displayed same day.
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- c) Personal appearance before the counselling committee is compulsory, otherwise the offer of seat shall be treated as withdrawn and shall be offered to the candidates falling next in the merit of the respective category.
- d) Candidates found indulging in impersonation will be debarred from counselling and shall be dealt as per Law.
- e) The candidates appearing for 3rd counselling should bring all the requisite documents **IN ORIGINAL** along with **a set of attested copies**.

7.4 General Rules for Admission:

- i) Students admitted under this scheme are exempted from appearing in entrance test.
- ii) Students admitted under this scheme will pay tuition fee at the time of registration in each semester through bank draft drawn in favour of Comptroller of the University.
- iii) All the dues will be deposited in the office of the respective Dean of the College/ Director, Institute of Biotechnology and Environmental Science like other students.
- iv) The students admitted under this scheme shall be treated at par with other students for the purpose of scholarships as per the rules of the University.
- v) The approved self-financing seats shall not be converted into general seats. These seats can be increased/ decreased keeping in view the availability of infrastructure and faculty.

Sr	Particulars	Fee	Remarks
No		(₹)	
1.	Admission fee	1500	At the time of admission
2.	Registration fee	600	Annual
3.	Tuition fee:		
	HP domiciles	35000	Semester-wise
	Non HP domiciles	45000	Semester-wise
4.	Continuation fee	300	Semester-wise from 2nd Semester
5.	Change of course fee	100	At the time of change of course
6.	Late admission/ registration	1000	Per day
7.	Re-registration fee	250	At the time of re-admission
8.	Sports, games and youth welfare	250	Annual
0	Examination foo	2000	Samastar wisa
9.	Examination ree	2000	Semester-wise
10.	Infra-structure development/	2000	Annual
	maintenance fund		

7.5 Details of Fee

11.	Placement guidance fee	100	Semester-wise
12.	Educational tour	1200	Semester-wise
13.	Identity card fee	100	At the time of admission
14.	Library card fee	25	Annual
15.	Library service charges	100	Semester-wise
16.	College security (Refundable)	500	At the time of admission
17.	Library security (Refundable)	500	At the time of admission
18.	NCC security (Refundable)	200	At the time of admission
19.	Amalgamated fund	500	Semester-wise
20.	Medical charges	200	Semester-wise
21.	Sports & youth welfare fee	200	Semester-wise
22.	Students' welfare fee	500	Semester-wise
23.	NCC/NSS fee	100	Semester-wise
24.	CSA	150	Semester-wise
25.	Bus fare:		
	Non-hostellers (Except day scholars	10 singl	e fares per month at HRTC rates (semester-
	staying at nearby Nauni)	wise)	
	Hostellers & day scholars staying at	5 single	fares per month at HRTC rates (semester-
	nearby Nauni	wise)	
	Hostellers Charges (For students adr	nitted at	the main campus only)
26.	Room rent (Exempted in case of	500	Semester-wise
	SC/ST students)		
27.	Water charges	100	Semester-wise
28.	Hostel security (Refundable)	300	At the time of admission
29.	Mess security (to be adjusted in the	2000	At the time of admission
	last bill)		
30	Mess helper charges (warden	1000	Semester-wise
	account)		
31.	Maintenance charges	400	Semester-wise
32.	Utensil & crockery charges	200	Semester-wise
33.	Common room charges	200	Semester-wise
24	F1 (1)	1000	Generates and a

Note:

ii) The above fee structure is liable to be changed at any time without any notice to this effect.

7.6 Approximate fee (In ₹) at the time of admission

A. Main Campus, Nauni-Solan

HP Domiciles	Fee	Securities	Bus Fare	Hostel Charges	Hostel Securities	Total
Non-Hosteller	45725	1200	1200	-	-	48125
Hosteller	45725	1200	600	2900	2300	52725

i) All the securities must be claimed within one year of leaving the University, failing which the same shall stand forfeited.

Non-HP Domiciles	Fee	Securities	Bus Fare	Hostel Charges	Hostel Securities	Total
Non-Hosteller	55725	1200	1200	-	-	58125
Hosteller	55725	1200	600	2900	2300	62725

B. Institute of Biotechnology & Environmental Science, Neri, Hamirpur

	Fee	Securities	Total
HP Domiciles	45725	1200	46925
Non-HP Domiciles	55725	1200	56925

7.7 Refund of Fee

- (i) When a student after registering for a degree programme withdraws on or before 25th July, 2014 informing in writing to the Registrar of the University, the entire fee collected from him/ her will be refunded after deduction of processing fee of ₹1000/- (₹One thousand only).
- When a student after registering for a degree programme withdraws on or before 6th August, 2014 informing in writing to the Registrar of the University, the entire fee collected from him/ her will be refunded after deduction of processing fee and one month proportionate fee of ₹8800/- (₹Eight thousand eight hundred only).

NOTE: No fee shall be refunded, in case, the resultant vacant seat is not filled up.

CHAPTER-VIII

INSTRUCTIONS/ REGULATIONS REGARDING RAGGING

8.1 Ragging

Ragging in any form is strictly banned and is a cognizable offence as per the directions of Hon'ble Supreme Court. If any incident of ragging comes to the notice of the authority, the authority would take stern action including expulsion from the University/ Institution as per Academic Regulations. At the time of admission, every student and his/ her parents shall be required to sign a declaration in the format (as per annexure-II, Page 57) that on admission he/she submits himself/herself to the several authorities of the University who may be vested with the powers to exercise discipline under the Act, the Statutes and the Academic Regulations that have been framed there-under by the University.

8.2 Preamble

Any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student, or indulging in rowdy or in-discipline activities by any student or students which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear of apprehension thereof in any fresher or any other student or asking any student to do any act which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame, or torment to embarrassment so as to adversely affect the physique or psyche of such fresher or any student, with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student, in the University. Therefore, to provide conducive and healthy environment for proper physical and psychological development of all students, the Dr. Yashwant Singh Parmar University of Horticulture and Forestry in accordance with the UGC guidelines and the Himachal Pradesh Educational Institutions (Prohibition of Ragging) Act, 2009, brings forth the Regulations to curb the menace of ragging.

8.3 **Ragging includes the following acts:**

i) any conduct by any student or students whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness any fresher or any other student.

- ii) indulging in rowdy or in-disciplined activities by any student or students which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in any fresher or any other student.
- iii) asking any student to do any act or perform something which such student will not in the ordinary course do and which has the effect of causing or generating a sense of shame or torment or embarrassment so as to adversely affect the physique or psyche of a fresher or any other student.
- iv) any act by a senior student that prevents, disrupts or disturbs the regular academic activity of any other student or a fresher.
- v) exploiting the services of a fresher or any other student for completing the academic tasks assigned to an individual or a group of students.
- vi) any act of financial extortion or forceful expenditure burden put on a fresher or any other student by students.
- vii) any act of physical abuse including all variants of it; sexual abuse, homosexual assaults, stripping, forcing obscene and lewd acts, gestures, causing bodily harm or any other danger to health of a person.
- viii) any act or abuse by spoken words, e-mails, post, public insults which would also include deriving perverted pleasure, vicarious or sadistic thrill from actively or passively participating in the discomfiture to fresher or any other student.
- ix) any act that affects the mental health and self-confidence of a fresher or any other student with or without an intent to derive a sadistic pleasure or showing off power, authority or superiority by a student over any fresher or any other student.

8.4 Administrative Action in the event of Ragging:

The University shall punish a student found guilty of ragging after following the procedure and in the manner prescribed hereinunder:

The Anti-ragging Committee of the University shall take an appropriate decision, in regard to punishment or otherwise, depending on the facts of each incident of ragging and nature and gravity of the incident of ragging established in the recommendations of the Anti-ragging Squad. The Anti-ragging Committee may, depending on the nature and gravity of the guilt established by the Anti-Ragging Squad, award, to those found guilty, one or more of the following punishments:

- cancellation of admission
- suspension from attending the classes
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- withholding/ withdrawing scholarship/ fellowship and other benefits
- debarring from appearing in any test/ examination or other evaluation process
- withholding results
- debarring from representing the University in any regional, national or international meet, tournament, youth festival, etc
- suspension/ expulsion from the hostel
- rustication from the University for period ranging from one to four semesters
- expulsion from the University and consequent debarring from admission to any other institution/ university for a specified period.
- Fine of ₹ 25,000/-
- Collective punishment: when the persons committing or abetting the crime of ragging are not identified, the University shall resort to collective punishment as a deterrent to ensure community pressure on the potential raggers.

8.5 Action to be taken by the Vice-Chancellor:

On the receipt of any information concerning any reported incident of ragging, the Vice-Chancellor shall immediately determine, if a case under the penal laws is made out and if so, either on his/her own or through a member of the anti-ragging committee authorized by him/her in this behalf, proceed to file a first information report (FIR), within twenty four hours of receipt of such information or recommendation, with the police and local authorities, under the appropriate penal provisions relating to one or more of the following, namely:-

- i) Abetment to ragging
- ii) Criminal conspiracy to rag
- iii) Unlawful assembly and rioting while ragging
- iv) public nuisance created during ragging
- v) violation of decency and morals through ragging
- vi) injury to body, causing hurt or grievous hurt
- vii) wrongful restraint
- viii) wrongful confinement
- ix) use of criminal force
- x) assault as well as sexual offences or unnatural offences
- xi) extortion
- xii) criminal trespass



- xiii) offences against property
- xiv) criminal intimidation
- xv) attempts to commit any or all of the above mentioned offences against the victim(s)
- xvi) threat to commit any or all of the above mentioned offences against the victim(s)
- xvii) physical or psychological humiliation
- xviii) all other offences following from the definition of "Ragging"

Provided further that the University shall also continue with its own enquiry initiated under this regulation and other measures without waiting for action on the part of the police/ local authorities and such remedial action shall be initiated and completed immediately and in no case later than a period of seven days of the reported occurrence of the incident of ragging.

Contacts in case of "Ragging"

Sr No	Designation	E-mail Address	Telephone Numbers (10.00 AM to 5.00 PM)
1.	Vice-Chancellor	vcuhf@yahoo.com	252363
2.	Dean, College of Horticulture	deancoh.uhf@gmail.com	252344
3.	Dean, College of Forestry	dean_cof@yahoo.co.in	252354
4.	Students' Welfare Officer	swo1985uhf@gmail.com	252312
5.	Registrar	regr.uhf@rediffmail.com	252219

Fax No. 01792-252 242 and 01792-252 009

Annexure-II

AFFIDAVIT BY THE STUDENT (Note: To be submitted by the admitted candidates only)

I, ______ S/O, D/O Shri/ Smt. ______, having been admitted to ______, have received a copy of the Academic Regulations on ragging carefully read and fully understood the provisions contained in the said regulations.

2) I am fully aware as to what constitutes ragging and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.

4) I hereby solemnly aver and undertake that

- a) I will not indulge in any behaviour or act that may be constituted as ragging under Academic Regulations.
- b) I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under the regulations.
- 5) I hereby affirm that, if found guilty of ragging, I am liable for punishment under the regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any law for the time being in force.
- 6) I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this _____day of ______ month of ______ year.

Signature of Deponent Name:

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or mis-stated therein.

Verified at on this the day of month year

Counter Signature of Parent/ Guardian

Signature of Deponent

Solemnly affirmed and signed in my presence on this the _____ day of _____ month of _____ year after reading the contents of this affidavit.

OATH COMMISSIONER

TABLE-I

List of codes for claiming weightage in terms of percentage of marks for participation in sports/ co-curricular activities

CODE	SPORTS/ GAMES	Per cent
A-1	Sportsperson(s) who have represented India in any International Competition like Olympic games/ World Championship and obtained 1^{st} , 2^{nd} or 3^{rd} position.	5%
A-2	Sportsperson(s) who have represented India in any International	4%
A-3	Sportsperson(s) who have represented the State in a National Competition and obtained 1 st , 2 nd or 3 rd position. OR Sportsperson(s) who have represented the State School Teams in the National Sports/ Games for School conducted by the All India School Games Federation and obtained 1 st , 2 nd or 3 rd position.	3%
A-4	Sportsperson(s) who have represented the State in a National Competition. OR Sportsperson(s) who have represented the State School Teams in the National Sports/ Games for School conducted by the All India School Games Federation.	2%
A-5	Sportsperson(s) who have obtained 1 st , 2 nd or 3 rd position at the State Sports/ Games organised by the State Government. OR Sportsperson(s) who have obtained 1 st , 2 nd or 3 rd position in the National Championship organized by Navodaya Vidyalaya and Central School for their school.	2%
A-6	Sportsperson(s) who have represented the District Teams at the State School Sports/ Games.	1%
A-7	Sportsperson(s) who have obtained 1 st , 2 nd or 3 rd position at the District Level.	1%
B-1	NCC Cadets, who have participated in the National Republic Day Parade.	2%
C-1	Having participated Jamboori organized by Government of India at National Level and having certificate of appreciation from the President of India.	3%
C-2	Participated in Jamboori in the State/ Government of India.	2%
D-1	Participated in the National Integration Camps or Camp organized by the Government of India outside the State with a minimum attendance of 240 hours.	2%

D-2	Participated in National Integration Camp organized by the Government	1%
	of India.	
	OR	
	Any Camp organized by the State Government.	
	CULTURAL ACTIVITIES	
E-1	Participated at International Level and obtained 1 st , 2 nd or 3 rd Position.	5%
E-2	Participated at International Level.	4%
E-3	Participated at National Level and obtained 1 st , 2 nd or 3 rd position.	3%
E-4	Participated at National Level.	2%
E-5	1^{st} , 2^{nd} or 3^{rd} Position at the State Level.	2%
E-6	Participated at the State Level.	1%
E-7	1 st , 2 nd or 3 rd level at District Level.	1%

Sr. No.	Particulars	1 st Semester	2 nd Semester
1.	1 st counselling of fresh students under HP quota	08.07.2014	-
2.	1 st counselling of fresh students under self-financing seats	18.07.2014	-
3.	Registration of new entrants admitted during 1 st counselling under HP quota/ self-financing seats	23.07.2014 to 24.07.2014	-
4.	Registration of new entrants under ICAR quota/ NEC quota/ Foreign Nationals/ In-service candidates without late fee	23.07.2014 to 24.07.2014	-
5.	Registration of new entrants under ICAR quota/ NEC quota/ Foreign Nationals/ In-service candidates with late fee	25.07.2013 to 26.07.2013	-
6.	2^{nd} counselling of fresh students under HP quota/ self-financing seats	26.07.2014	-
7.	Registration of new entrants admitted during 2 nd counselling under HP quota/ self-financing seats	28.07.2014 to 30.07.2014	-
8.	Registration of continuing students without late fee	30.07.2014 to 31.07.2014	27.01.2015 to 29.01.2015
9.	Commencement of classes	01.08.2014	30.01.2015
10.	Registration of continuing students without late fee	01.08.2014 to 02.08.2014	30.01.2015 to 31.01.2015
11.	Registration of ICAR quota/ NEC quota candidates from waiting list/foreign nationals/ Inservice candidates	28.07.2014 to 05.08.2014	-
12.	3 rd counselling of fresh students under HP quota/ self-financing seats for vacant seats, if any	07.08.2014	-

ACADEMIC CALENDAR

13.	Registration of new entrants admitted during 3 rd counselling under HP quota/ self-financing seats	07.08.2014 to	-
		11.08.2014	
14.	Addition of courses	12.08.2014	07.02.2015
15.	Withdrawal of courses without charges	12.08.2014	07.02.2015
16.	Mid-semester examination	13.10.2014	06.04.2015
		to	to
		28.10.2014	21.04.2015
17.	Mid-semester report by Instructor to Dean	31.10.2014	23.04.2015
18.	Withdrawal of courses with charges	01.11.2014	27.04.2015
19.	End-semester examination	08.12.2014	08.06.2015
		to	to
		24.12.2014	22.06.2015
20.	Semester break	25.12.2014	23.06.2015
		to	to
		26.01.2015	25.07.2015

Note:- i) If the date fixed happens to be a holiday, the next working day will be considered as the date fixed for that particular purpose.

ii) During the semester breaks, the students will register for NCC Camp/NSS Camp/Educational Tour.

SPECIMEN OF CERTIFICATES TO BE SUPPLIED BY THE CANDIDATE FOR CLAIMING RESERVATION

<u>FORM-I</u>

PROFORMA OF CERTIFICATE FOR HAVING PASSED HIGH SCHOOL FROM RURAL AREA OF HIMACHAL PRADESH

Signature with stamp of the Executive Magistrate/SDM

FORM-II

CERTIFICATE FOR BONAFIDE/ DOMICILE RESIDENT OF HIMACHAL PRADESH

Certified that Mr/ Ms		son/daughter of Shri
resident of	Village/ town	Post Office
Tehsil	District	is:-

A bonafide Himachali having his/ her permanent home in Himachal Pradesh.

OR

- 1. A Government employee residing in Himachal Pradesh for a period of 20 years or above; or
- 2. Residing in Himachal Pradesh for a period of 25 years or above; or
- 3. Having his permanent home in Himachal Pradesh but living outside Himachal Pradesh on account of his/her occupation.

Signature with Stamp of the Executive Magistrate/ SDM

FORM-III

	CERTIFICATE OF OTHER BACKWARD CLASSES Tehsildar
	District
	SEAL
village/	It is certified that son/ daughter of Shri resident of town Post office Tehsil District District District belongs to community which is recognized as Other
Backwa	rd Class (OBC) by the Himachal Pradesh Government.
village/	Shri and his/ her family ordinarily reside in town town Post office Tehsil District of Himachal Pradesh. District District
mention	This also to certify that he/she does not belong to the persons/ Section (Creamy Layer) ed in the schedule.
Date	Executive Magistrate
2.	Representation of the Peoples Act, 1950. Where the certificate is issued by Gazetted Officers of the Union Government or State Government, they should be in the same form but countersigned by the District Magistrate or Deputy Commissioner. (Certificates issued by Gazetted Officers and attested by District Magistrate/ Deputy Commissioner is not sufficient).
	FORM-IV CERTIFICATE OF SCHEDULED CASTE Tehsildar District
	SEAL
village/	It is certified that son/ daughter of Shri resident of town Post_office Tehsil District of Himachal Pradesh State belongs to caste which is recognized tule Caste by the Himachal Pradesh Government
as senec	
village/	Shri and his/ her family ordinarily reside in town Post office Tehsil District of Himachal Pradesh.
Date	Executive Magistrate

FORM-V

CERTIFICATE OF S Tehsilda District SEA	CHEDULED TRIBE ar AL
It is certified that so of village/ town Post office	n/ daughter of Shri resident Tehsil District
OF Himachal Pradesh State recognized as Schedule Tribe by the Himachal Pra	belongs to Tribe which is adesh Government.
Shri Post office Village/ town of Himachal Pradesh.	and his/ her family ordinarily reside in Tehsil District
Date	Executive Magistrate
FOR	и-VI
WARDS OF SERVING/ EX	-DEFENCE PERSONNEL
Certified that son is serving/ ex-defence personnel belongs to Villa District and his rank is/	/daughter of Shri who uge/ town Post office Tehsil was
	Signature with Stamp Commanding Officer/ Deputy Director, Zila Sainik Board
FORM	 1-VII
WARDS OF SERVING/ RET	IRED CAPFs PERSONNEL
Certified that	son/daughter of Shri
who is serving/ retired personnel of Police Force) belongs to Village/ town District and his	(Name of Central Armed Post office Tehsil /her rank is/ was

Signature with Stamp Commanding Officer

FORM- VIII (i)

PROFORMA OF THE CERTIFICATE FOR THE WARDS OF DISPLACED FAMILY

Cer	tified that _			son/ daughter of Shri			son/
legal heir d	of Shri			resident of Village			Post
Office		Tehsil		District		whose	land
comprised	of Khata	No./Khatauni	No.	Khasra	No		area
	was acqui	ired for the esta	ablishr	nent of the Dr Yashwant	Singh Parmar	Universi	itv of

Horticulture & Forestry, Nauni, Solan (HP).

Tehsildar/ Executive Magistrate
Solan District Solan

FORM-VIII (ii)

PROFORMA OF THE AFFIDAVIT/ UNDERTAKING TO BE FURNISHED FOR ADMISSION AGAINST SEAT RESERVED FOR WARDS OF DISPLACED FAMILY

Affidavit by Parent

Ι	son/ daughter of Shri					
resident of Village		, Post Office		Tehsil		
District	Himach	al Pradesh do	hereby undertal	ke that my sor	n/ daughter	
	has applied for	admission to	Undergraduate	Programme	in the Dr	
Yashwant Singh Parm	ar University of H	orticulture & Fo	prestry for the A	cademic Sessio	on 2014-15	
and that the benefit of reservation available for the wards of displaced families has never been						
extended to any member of my family. I also affirm that in case the declaration is found to be						
untrue, I am aware that the admission of my son/ daughter is liable to be cancelled.						
Declared, this	day of	month of	year.			
			Signatu	re of the dei	nonent	

Signature of the deponent Name

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or mis-stated therein.

Verified at _____ on this the ___ day of ____ month ___ year.

Signature of the deponent

Solemnly affirmed and signed in my presence on this the _____ day of _____ month of _____ year after reading the contents of this affidavit.

OATH COMMISSIONER