

PANJAB UNIVERSITY CHANDIGARH



(Established under the Panjab University Act VII of 1947-
Enacted by the Government of India)

PROSPECTUS PU-CET (P.G.) – 2015

Date of Test: 13th June to 14th June 2015

**Last date for the submission of Online
Application Form: 12.5.2015 (Tuesday)**

(No application form will be received after the closing of the last date)

PU-CET (PG) FEE

General Category Rs. 1760/-

SC/ST Category Rs. 880/-

Additional Form Rs. 770/-
(for each paper, if required)

PANJAB UNIVERSITY ANTHEM

तमसो मा ज्योतिर्गमयः
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पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे
मन में तेरा आदर मान
और मोहब्बत सदा रहे
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे
तू है अपना भविष्य विधाता
पंख बिना परवाज़ सिखाता
जीवन पुस्तक रोज़ पढ़ा र
सही गलत की समझ बढ़ाता
जीवन पुस्तक रोज़ पढ़ा र
सही गलत की समझ बढ़ाता
तेरी जय ॥ शंख बजायें
रौशन तारे बन जायें
वखरी तेरी शोहरत
तेरी शोहरत सदा सदा रहे
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे
तमसो मा ज्योतिर्गमयः
तमसो मा ज्योतिर्गमयः

Tamso ma jyotirgamaya:
Tamso ma jyotirgamaya:
Tamso ma jyotirgamaya:
Tamso ma jyotirgamaya:
Panjab vishaw vidyalaya
Teri shaan-o-shauqat sada rahe
Mann mein tera aadar maan
Aur mohabbat sada rahe
Panjab vishaw vidyalaya
Teri shaan-o-shauqat sada rahe
Tu hai apna bhavishya vidhata
Pankh bina parwaaz sikhata
Jeevan pustak roz padha kar
Sahi galat ki samajh badhata
Jeevan pustak roz padha kar
Sahi galat ki samajh badhata
Teri jai ka shankh bajayein
Roshan tare ban jaayein
Vakhari teri shohrat
Teri shohrat sada sada rahe
Panjab vishaw vidyalaya
Teri shaan-o-shauqat sada rahe
Panjab vishaw vidyalaya
Teri shaan-o-shauqat sada rahe

Tamso ma jyotirgamaya:
Tamso ma jyotirgamaya:

PU- CET (P.G.) – 2015

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PANJAB UNIVERSITY, CHANDIGARH
Tentative Number of Seats in Various Courses

Sr. No.	Courses	Name of the Departments/Institutions offering the Course: and where the forms for admission after qualifying the entrance Test need to be submitted	No. of Seats (General including reserved seats)	Seats for Foreign Nationals/ NRI Candidates ^{###}
1.	LL.M. (One-Year Course) (Semester System)	Department of Laws, P.U., Chandigarh.	42	4****
2.	i. M.C.A. (Three year course) (Semester System)	Department of Computer Science and Applications P.U., Chandigarh.	34+2*	05
		P.U., Regional Centre, Muktsar	20+2*	03
		Department of Computer Science and Applications, Panjab University Swami Sarvanand Giri, Regional Centre, Hoshiarpur	50+3 ^{###}	-
	ii. M.C.A. (Evening) Self financing course	Department of Computer Science and Applications, P.U., Chandigarh.	46 +2*	06
3.	M.A. Journalism and Mass Communication (Two-Year Course)	School of Communication Studies P.U., Chandigarh.	30	05
4.	Masters in Public Health	Centre for Public Health University Institute for Emerging Areas in Science & Technology, PU, Chandigarh	17+5 ^{*****}	2
5.	M.A. (English)	Department of English, P.U. Chandigarh	95+5 ^{***}	15
6.	M.A. (Geography)	Department of Geography	51	7
7.	Masters in Disaster Management		25+3 ⁿ	
8.	Masters in Remote Sensing & GIS		25+3 ⁿ	
9.	M. Tech. (Nanoscience and Nanotechnology)	Centre for Nano Science & Nano Technology (UIEAST) P.U., Chandigarh	10+3 (SC/ST)	02
10.	M.E. (Chemical)	University Institute of Chemical Engg. & Tech., P.U., Chandigarh	20	-
11.	M.E. (Food Technology)		10	-
12.	M.E. (Chemical with specialization in Environmental Engg.)		10	-
13.	M.Tech. (Polymer)		15+5 (Part time)	-
14.	M.Sc. (Industrial Chemistry)	University Institute of Chemical Engg. & Tech., P.U., Chandigarh	17	-
		SGGS Khalsa College, Mahilpur (Hoshiarpur)	20	-

15.	ME Electrical Engg. (Instrumentation & Control) Regular programme	NITTTR, Sector 26, Chandigarh	06	-
16.	M.E. (Electronics & Communication Engineering) Regular Programme		08	-
17.	ME Computer Science & Engg. (Regular Programme)		05	-
18.	ME Civil Engineering (Construction Technology & Management) Regular Programme		05	-
19.	ME Mechanical Engineering (Manufacturing Technology) Regular Programme		05	-
20.	Master of Business Economics (M.B.E.)	DAV College, Sector-10, Chandigarh	60	-
		GGDSD College Sector 32, Chandigarh	60	-
		Guru Nanak Girls College, Model Town, Ludhiana	60	-
		Arya College Ludhiana	60	
21.	Master of Entrepreneurship and Family Business	GGDSD College, Sector . 32, Chandigarh	60	-
22.	M. Com. (Hons.)	University Business School, P.U., Chandigarh.	27	-
23.	M.Com (Business Innovation)	S.C.D. Government College, Ludhiana	60	-
24.	MBA (Commerce & Information Technology) MBACIT	MTSM College for Women, Ludhiana This course (MBACIT) is only for Girls	80	-
25.	Master of Business Administration for Executives (MBAfEX)	University Business School, P.U., Chandigarh	30	-
26.	Master of Physical Education	Department of Physical Education, P.U., Chandigarh	28	02
27.	Bachelor of Physical Education	Department of Physical Education, P.U., Chandigarh	34	02
M. Sc. (Hons. School)				
28.	Biochemistry	Department of Biochemistry, P.U., Chandigarh.	05	04
29.	Biophysics	Department of Biophysics, P.U., Chandigarh.	--	04
30.	Computer Science	Department of Computer Science & Applications P.U., Chandigarh	11	02

31.	Mathematics	Department of Mathematics P.U., Chandigarh	30	05
		Sant Longowal Institute of Engineering & Technology, Longowal, Distt. Sangrur	20	-
32.	Physics & Electronics**** (Self financing course)	Department of Physics, P.U., Chandigarh	20	03
33.	Geology	Department of Geology, P.U., Chandigarh.	01	-
M. Sc. (Two year Course)				
34.	Bioinformatics	DAV College, Sector-10, Chandigarh	40	-
		GGDSD College Sector 32, Chandigarh	40	-
35.	Environment Science	Department of Environment Studies, P.U., Chandigarh	20	03
36.	Human Genomics	National Centre for Human Genomics Studies & Research, P.U., Chandigarh	15	-
37.	Nuclear Medicine	Centre for Nuclear Medicine, P.U., Chandigarh	08	2
38.	System Biology and Bioinformatics	Centre for System biology and Bioinformatics P.U., Chandigarh	13	2
39.	Microbial Biotechnology	Centre for Microbial Biotechnology, P.U., Chandigarh	20	02
		Post Graduate Govt. College for Girls, Sector 42, Chandigarh	40	-
		Sri Guru Gobind Singh College, Sector 26, Chandigarh	40	-
40.	Medical Physics	Centre for Medical Physics, P.U., Chandigarh	08	02
M. Sc. (Hons. School/ 2 years Course)				
41.	Biotechnology**	Department of Biotechnology, P.U., Chandigarh	5+2 (SC)	2
		DAV College, Sector 10, Chandigarh	40	
		GGDSD College, Sector 32, Chandigarh	40	
		SGGS College, Sector-26, Chandigarh	40	
		DAV College, Abohar	40	
		Guru Nanak Girls College, Model Town, Ludhiana	40	
42.	Botany	Department of Botany, P.U., Chandigarh	25	04
		S. Govt. College, of Sci. Education & Research, Jagraon (Ludhiana)	40	02
		Post Graduate Govt. College for Girls, Sector 11, Chandigarh	40	-
		Post Graduate Govt. College for Girls, Sector 42, Chandigarh	40	-

43.	Chemistry	Department of Chemistry, P.U., Chandigarh.	15	02
		Post Graduate Govt. College, Sector 11, Chandigarh	40	-
		Post Graduate Govt. College for Girls, Sector 11, Chandigarh	40	-
		S. Govt. College, of Sci, Education & Research, Jagraon (Ludhiana)	40	02
		DAV College, Abohar	40	
		Guru Nanak Girls College, M.T. Ludhiana	40	
		GHG Khalsa College, Gurusar Sadhar, Ludhiana	40	-
		SGGS Khalsa College, Mahilpur Hoshiarpur	40	
		DAV College, Sector-10, Chandigarh	40	
		JCDAV College, Dasuya (Hoshiarpur)	40	
		Sant Longowal Institute of Engineering & Technology, Longowal, Distt. Sangrur	20	
44.	Physics*****	Department of Physics, P.U., Chandigarh	40	06
		DAV College, Sector 10, Chandigarh	40	-
		GGDSD College, Sector 32, Chandigarh	40	
		JCDAV College, Dasuya (HSP)	40	
		DAV College, Abohar	40	
		Guru Nanak Girls College, M.T., Ludhiana	40	
		SGGS Khalsa College, Mahilpur	40	
		Dev Samaj College, Ferozepur	40	
		GHG Khalsa College, Gurusur Sudhar	40	
		S.P.M. College, Mukerian	40	
		Sant Longowal Institute of Engineering & Technology, Longowal, Distt. Sangrur	20	
45.	Zoology	Department of Zoology, P.U., Chandigarh.	14	02
		DAV College, Sector 10, Chandigarh	40	-
		JC DAV College, Dasuya, Hoshiarpur	40	-
		Post Graduate Govt. College for Girls, Sector 42, Chandigarh	40	-
		Post Graduate Govt. College for Girls, Sector 11, Chandigarh	40	-
		Sri Guru Gobind Singh College, Sector 26, Chandigarh	40	-

- * For candidates who have studied computer science as one of the subjects for three years or the subject as a full course at the under graduate level.
- ** Only those students who have cleared B.Sc. Biotechnology or B.Sc. with Biotechnology as elective/vocational/ add on course subject are eligible.
- *** For students who have passed B.A. with Functional English.
- **** Foreign and original *bona fide* NRI students having done their graduation from other countries be exempted from Entrance Test for admission to LL.M. course from the session 2009-10.
- ***** The candidates appearing in Physics/ Physics & Electronics courses are eligible for admission to these courses.

***** Only regular employees in Government organization and having atleast one year service experience be admitted under, %a-service+ category. The candidate has to produce %No objection certificate+at the time of admission.

Economically weaker section

10% seats over and above the total number of regular seats in each course are reserved for the Foreign Nationals/ NRI candidates. The decision of the Syndicate / Senate where the seats have already been granted more than the 10% seats will also prevail.

^ Sponsored by Govt. / Institutions

Eligible Foreign Nationals/Persons of Indian Origin/NRI Candidates, who are in India and desirous of seeking admission in this category, will compete amongst themselves for the seats created for them by appearing in the Entrance Test. **Those living abroad at the time of entrance test will be exempted from the entrance test.** The fee structure for all such candidates will be prescribed by the Panjab University in the Admission Brochure. Foreign students shall have to comply with Visa and other requirements of the Govt. of India, U.T. Administration, Chandigarh as well as Panjab University, Chandigarh, as prescribed by them from time to time.

Important Notes Common to all the Courses

1. ***This prospectus is valid for only one Online Application form. A separate Online Application form is required to be submitted for the Entrance Test of additional course/s as each course will have separate merit list. The cost of an additional Online Application form is ₹ 770/- each.***
2. **The Online Application forms for General and SC/ST categories are priced differently. Please pay the correct fees to avoid complication at the time of admission. The cost of submitting additional form is the same for General and SC/ST categories i.e. ₹ 770/- each.**
3. **No application form will be received under any circumstances after the closing of the last date.**
4. ***This is an online prospectus for Entrance Test only.*** The information/instructions for admission to courses that are based on the entrance test are not contained herein.
5. **Only the candidates who have *passed or are appearing* in the qualifying examination for a particular Course can apply for the Entrance Test.**
6. **The admission of candidates in the **Entrance Test** shall be provisional. It shall stand cancelled if the candidate fails to satisfy the requisite eligibility conditions by the date fixed for the purpose by the concerned Institution/Department/Centre**
7. **THE CANDIDATES SHALL HAVE TO APPLY FOR ADMISSION TO THE COURSE (S) THEY ARE INTERESTED IN, SEPARATELY WITHIN THE PRESCRIBED TIME LIMIT, DIRECTLY AND INDEPENDENTLY TO THE RESPECTIVE INSTITUTIONS / DEPARTMENTS / CENTERS IN WHICH THEY WANT TO SEEK ADMISSION. THIS INFORMATION FOR APPLYING ON LINE WILL BE AVAILABLE IN THE HAND BOOK OF INFORMATION AND ON THE UNIVERSITY WEBSITE AFTER THE ADVERTISEMENT OF THE ADMISSION NOTICE IN THE NEWSPAPERS.**
8. **The exact number of seats available for various M.Sc. (Honours School) courses in the General category may vary depending upon the result of the B.Sc. (Honours School) of the respective department.**
9. **The result of the entrance test will be available on the University web site only. **No separate Result Cards will be issued.****
10. **The University will publish merit list of the candidates for all courses on the basis of attainment of a minimum of 20% (15% in case of candidates belonging to Scheduled Castes/ Scheduled Tribes/Backward Classes) of aggregate of maximum marks in the entrance test taken as a whole.**

The cut-off marks for passing the Entrance Test for admission to MA (Journalism & Mass Communication) stands increased to 21 marks (33% of the total marks) from 13 marks out of 65 marks, as it is a professional course.

The pass percentage in case of entrance test in English stands increased to 35% (30% in case of candidate belonging to SC/ST/BC) w.e.f the session 2013-2014.

11. **The Scheme of Test for MBA (Executive) will be of 85 marks and consists 85 multiple-choice questions of one mark each.**
12. ***Candidates securing equal marks shall be bracketed together.*** Their *inter-se* merit will be determined by the Institution/Department/Centre to which they are seeking admission in accordance with the following criteria:
 - (i) A candidate getting higher percentage of marks in the qualifying examination shall rank higher in order of merit.
 - (ii) If the marks in qualifying examination are also the same then the candidate obtaining more marks in the immediate lower examination, shall rank higher in order of merit.
 - (iii) If two or more candidates secure equal marks in (i) & (ii) above, the candidate senior in age shall rank higher in the order of merit.

13. *The final merit for admission shall be computed by the concerned Departments/Institutes/ Centers after taking in to account the relative weight age for final merit for admission in respective courses. The relative weight ages as applicable to different departments are as follows:*

Course	Weight age (%)	
	Entrance Test	Qualifying Examination
LLM (Master of Laws)	80	20
M.C.A. (Master of Computer Application)	50	50
M.A. (Journalism and Mass Communication)	50	50
Master in Public Health	50	50
M.A. (English)	50	50
M.A. (Geography)	50	50
Masters in Disaster Management	50	50
Masters in Remote Sensing & GIS	50	50
M. Tech. (Nanoscience and Nano Technology)	50	50
M.E. (Chemical)	50	50
M.E. (Food Technology)	50	50
M.E. (Chemical with specialization in Environmental Engg.)	50	50
M.Tech. (Polymer)	50	50
M.Sc. (Industrial Chemistry)	50	50
M.E. Electrical Engg. (Instrumentation & Control) Regular Programme	50	50
M.E. (Electronics and Comm. Engg.) (Regular Programme)	50	50
M.E. (Computer Science and Engg.) (Regular Programme)	50	50
M.E. Civil Engineering (Construction Tech. & Mgt.) (Regular Programme)		
M.E. Mechanical Engineering (Manufacturing Tech.) Regular Programme	50	50
M.B.E.	50	50
M.E.F.B.	85	15*
M. Com (Hons.)	85	15*
M.Com (Business Innovation)	50	50
MBACIT	50	50
MBA (Executive)	85	15
M.P.Ed (Master of Physical Education)	50	50
B.P.Ed (Bachelor of Physical Education)	50	50
M.Sc. (Hons. School)	50	50
Biochemistry/ Biophysics /Computer Science/ Mathematics/ and Geology		
M.Sc. (Two Year Course)	50	50
Bioinformatics (being offered in the colleges affiliated to P.U.), Environment Science/ Human Genomics /Nuclear Medicine/ System Biology and Bioinformatics and Microbial Biotechnology/ Medical Physics/Physics & Electronics		
M.Sc. (Hons. School / Two year Course)	50	50
Biotechnology/ Botany/ Chemistry/ Physics /Zoology		

* 7.5% marks Group discussion and 7.5% marks for personal interview.

Note: *The candidates who have passed/appeared in the qualifying examination from any of the following universities (declared as fake by the UGC) are ineligible to appear in the Entrance Tests, as these institutions have been derecognized by the Panjab University.*

1. Maithlli University/ Vishwavidyalaya, Darbhanga, Bihar
2. Mahila Gram Vidyapith/ Vishwavidyalaya, (Women's University) Prayag, Allahabad (U.P.)
3. Varanaseya Sanskrit Vishwavidyalaya, Varanasi (U.P.), Jagatpuri, Delhi
4. Commercial University Ltd., Daryaganj, Delhi
5. Indian Education Council of U.P., Lucknow (U.P.)
6. Gandhi Hindi Vidyapith, Prayag, Allahabad (U.P.)
7. National University of Electro Complex, Homeopathy, Kanpur
8. Netaji Subhash Chandra Bose University (Open University), Achaltal, Aligarh (U.P.)
9. D.D.B. Sanskrit University, Putur, Trichi, Tamil Nadu
10. St. John's University, Kishanttam, Kerala
11. United Nations University, Delhi
12. Vocational University, Delhi
13. Uttar Pradesh Vishwavidyalaya, Kosi Kalan, Mathura (U.P.)
14. Maharana Partap Shiksha Niketan Vishwavidyalaya, Partapgarh (U.P.)
15. Raja Arabic University, Nagpur
16. Kesarwani Vidyapith, Jabalpur (M.P.)
17. Badaganvi Sarkar World Open University Educaiton Society, Gokak, Belgaum (Karnataka)
18. ADR-Centric Juridical University, ADR House, 8J, Gopala Tower, 25 Rajendra Place, New Delhi-110008
19. Gurukul Vishwavidyalaya, Vrindawan (U.P.)
20. C.M.J. University, Shillong (Meghalaya)

Eligibility Conditions and Scheme of Test

Master of Laws (L.L.M. One-Year Course) (Semester System)

Eligibility Conditions

A person who has passed one of the following examinations shall be eligible after qualifying the entrance test to join the first semester class of the LL.M. Course:-

- (a) LL.B. 3 Year Degree/ B.A. LL.B. / B.Com. LL.B. 5 Years degree examination of this University with minimum 55% marks (50% in case of SC/ST/BC candidates);

OR

- (b) Any equivalent examination of another University recognized by the Syndicate for this purpose.

Scheme of Test

The duration of the Entrance Test will be of 1 hour and 30 minutes. The Entrance Test will be of 75 marks consisting of 20 marks for Constitution, 10 marks for Current Affairs and 45 marks for Other Laws as per the existing syllabus. There will be 75 multiple choice questions.

Master of Computer Applications (M.C.A. Three Year Course) (Semester System) and (M.C.A. Evening Self Financing Course)

Eligibility Conditions

The minimum qualification for admission to the first year of the course shall be:

- i) A recognized first degree of minimum three years duration in any discipline from Panjab University with at least 50% marks and with Mathematics at 10+2 or at graduation level (all three years);

Or

- ii) B.C.A. from Panjab University with 50% marks

Or

- iii) Any examination recognized by the Panjab University as equivalent to any of the above examinations i) or ii)

Scheme of Test

The test of 1 hour 30 minutes duration shall contain 75 Objective Type (Multiple choice questions with four responses i.e. A, B, C, & D) carrying one mark each.

The questions will be based upon following four components:

Component	No. of Questions
1. Mathematics (10+2 level)	40
2. Computer Science	15
3. English	10
4. Reasoning & Aptitude.	10

M.A. Journalism and Mass Communication (Semester System/ Two-Year Course)

Eligibility Conditions

The Entrance Test is open to all such candidates who have any one of the following qualifications:

- (i) A Bachelor's degree obtaining at least 45% marks in the subject of Journalism and Mass Communication or Bachelor's degree in any subject attaining atleast 50% marks in the aggregate of this University or any other University the examination of which has been recognized as equivalent thereto.
OR
- (ii) BA/BSc with Honours in Journalism and Mass Communication.
OR
- (iii) Master's Degree examination in any subject of this University or any other University the examination of which has been recognized as equivalent thereto.

Scheme of Test

The test of 1 hour and 30 minutes duration will comprise of Objective & Subjective Type Questions for 65 marks out of the total 75 marks. The remaining 10 marks would be divided equally between the group discussion and interview to be held consequent to the entrance test. The test will be divided into five following components:

1. Article writing on current events
2. Precis writing
3. Feature, writing on personalities, reviews etc.
4. English Comprehension
5. Interpretative passage

Candidates who clear the entrance test have to apply afresh in the School of Communication Studies. The cutoff marks for passing the Entrance Test for admission to MA (Journalism & Mass Communication) is 21 marks (33% of the total marks) [increased from 13 marks out of 65 marks, as it is a professional course].

Master in Public Health

Eligibility Conditions

Bachelor's degree in any discipline with at least 50% marks from recognized University/Institute..

Scheme of Test

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each. There will be 25 from Biological Sciences, 10 from Social Sciences, 25 from Health Sciences and Medical Vocabulary, 15 on Environment Sciences.

M.A. (English) (Semester System)

Eligibility Conditions

A person who has passed one of the following examinations from Panjab University or from any other University whose examination has been recognized equivalent to the corresponding examination of this University:

- i. B.A. with Honours in English
- ii. Bachelor's degree in any faculty with at least 50% marks in the aggregate.
- iii. Diploma in Physical Education examination or Postgraduate Diploma in Library Science after having passed B.A. or B.Sc.
- iv. B.A. (Pass)/B.Sc. (Pass) examination in full subjects obtaining at least 45% marks in the Elective English.

- v. Obtained B.A. degree through English only regulation obtaining at least 45% marks in the Elective English.
- vi. Obtained B.A. after passing examination in an Oriental Classical Language or a Modern Indian Language with at least 45% marks (out of the aggregate excluding the additional paper) at the Honours in Oriental Titles or Modern Indian Languages examination in English.
- vii. Master's degree examination in another subject or another Faculty.
- viii. B.A. examination under Social Service Regulations or under War Regulations and has subsequently passed in the subject concerned at the B.A. examination obtaining at least 45% marks.
- ix. B.Sc. (Hons. School).

The pass percentage in case of entrance test in English stands increased to 35% (30% in case of candidate belonging to SC/ST/BC) w.e.f the session 2013-2014.

Scheme of Test

The written Test will be of 1 hour and 30 minutes duration and will carry 75 marks. The pattern of the CET should be as follows:

1. Write at least two paragraphs (total 400 words) on any of the one given topics / issues.
30 marks
2. Critical appreciation of a poem.
25 marks
3. Four short note (approx 100 words) based on Topics related to literature.
20 Marks

MA (Geography)

Eligibility Conditions

A person shall be eligible only if:-

1. he/she has passed in Geography in the B.A. or B.Sc. examination obtaining at least 45 marks;

OR

2. has obtained Post-graduate diploma in Cartography with atleast second division.

Scheme of Test

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each.

Masters in Disaster Management

Eligibility Condition

The candidates, except those sponsored by the government / institution should have passed the written Entrance Test conducted by Panjab University, Chandigarh. The merit list will be prepared considering the marks obtained in the Entrance Test and the qualifying Examination as per the following criteria:-

Written Entrance Test: 50%

Qualifying Examination: 50%

Academic and other weightage(s), if any, will be based on the percentage of marks obtained by the eligible candidates in the Qualifying Examination as prescribed and admissible in PU rules. The candidates will have to appear for a personal interview as per the merit list. However, there will be no marks awarded for the interview.

To qualify, a candidate must obtain 50% of the marks assigned to the written test. Candidates will be admitted as per merit, based on performance in the written test.

Scheme of Test

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each.

Masters in Remote Sensing & GIS

Eligibility Condition

Bachelor's Degree with Geography / Geology / Geophysics/ Mathematics / Physics / Botany/ Environment Science / Computer Science / Urban Planning / Regional Planning / B.Tech./ B.C.A. or Master's Degree in Geography/ Geology/ Geophysics/ Mathematics/ Physics/ Botany / Environment Science / Computer Science/ M.C.A./ Urban Planning/ Regional Planning with at least 50% marks in aggregate. The admission to the course shall be through Entrance Test in which a minimum score of 50% marks is mandatory.

B.A./B.Sc./M.A./M.Sc. Geography students will be given additional weightage of 15% of the academic score at Bachelor's level.

Scheme of Test

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each.

M.Tech. (Nanoscience and Nanotechnology) (Semester System)

Eligibility Conditions

Bachelor's degree (4-years after 10+2) in Engineering/Technology, i.e. B.E. /B. Tech. (in any Branch).

Or

Master's degree in Physics/Chemistry/Biophysics/Biochemistry/Microbiology/Biotechnology/Nano Science/Electronics with minimum 50% marks in the aggregate.

Scheme of Test

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each. The syllabus will be based broadly on the course contents on fundamentals of Physics, Chemistry, Mathematics, Biology and Computer background covered during their qualifying exams including undergraduate level.

M.E. (CHEMICAL)

Eligibility Conditions:

B.E./B.Tech.(Chemical) (04 years) or Five Year Integrated B.E.(Chem.)with MBA with a CGPA of 6.00 or at least 60% marks in the aggregate (where % marks are awarded) in the qualifying examination i.e. B.E./B.Tech. (chemical)(04 years) or Five Year Integrated B.E.(Chem.)with MBA or any other equivalent qualifying degree as approved by the Syndicate. The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh.

GATE qualified candidates will be exempted from the PU-CET (P.G.) test. However, in case of eligible GATE qualified candidates the merit list will be as per the GATE Score obtained and shall be offered the seat in the first instance.

Scheme of Test:

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each. The syllabus will be based broadly on the course contents generally covered during qualifying examinations.

M.E. (FOOD TECHNOLOGY)

B.E./ B.Tech. degree in Food Technology / Dairy Technology/ Agricultural Engineering / Food Engineering / Chemical Engineering / Chemical Technology (4 years) or Five Year Integrated B.E. (Chemical) with MBA or any other equivalent qualifying degree as approved by the

Syndicate with a CGPA of 6.00 or at least 60% marks in the aggregate (where % marks are awarded).

The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh.

GATE qualified candidates will be exempted from the PU-CET (P.G.) Test. However, in case of eligible GATE qualified candidates the merit list will be as per the GATE Score obtained and shall be offered the seat at the first instance.

Scheme of Test:

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each. The syllabus will be based broadly on the course contents generally covered during qualifying examinations.

M.E. (Chemical with specialization in Environmental Engineering)

Eligibility Conditions:

B.E./B.Tech.(Chemical) (04 years) or Five Year Integrated B.E.(Chem.)with MBA with a CGPA of 6.00 or at least 60% marks in the aggregate (where % marks are awarded) in the qualifying examination i.e. B.E./B.Tech. (Chemical)(04 years) or Five Year Integrated B.E.(Chem.)with MBA or any other equivalent qualifying degree as approved by the Syndicate. The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh.

GATE qualified candidates will be exempted from the PU-CET (P.G.) test. However, in case of eligible GATE qualified candidates the merit list will be as per the GATE Score obtained and shall be offered the seat at the first instance.

Scheme of Test:

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each. The syllabus will be based broadly on the course contents generally covered during qualifying examinations.

M.TECH. (POLYMER)

B.E./B.Tech. (chemical) (04 years) or Five Year Integrated B.E.(Chem.)with MBA with a CGPA of 6.00 or at least 60% marks in the aggregate (where % marks are awarded) in the qualifying examination i.e. B.E./B.Tech. (chemical) (04 years) or Five Year Integrated B.E.(Chem.)with MBA or any other equivalent qualifying degree as approved by the Syndicate.

OR

Masters degree in Technical Chemistry/Applied Chemistry/Industrial Chemistry/Chemistry (with mathematics upto graduation or an equivalent examination) with at least 55% marks in the aggregate from Panjab University or any other university recognized by Panjab University as equivalent thereto.

The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh.

GATE qualified candidates will be exempted from the PU-CET (P.G.) test. However, in case of eligible GATE qualified candidates the merit list will be as per the GATE Score obtained and shall be offered the seat in the first instance.

Scheme of Test:

The duration of the Entrance Test will be 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each. The syllabus will be based broadly on the course contents generally covered during qualifying examinations.

M.Sc. (INDUSTRIAL CHEMISTRY)

B.Sc. (Three Year Course) with Mathematics and Chemistry as compulsory subjects/B.Sc. (Hons. School) Chemistry/B.Sc. (Hons.) Chemistry with Maths as a compulsory subject/B.Sc. (Three Year Course) with Industrial Chemistry and mathematics as compulsory subject or any other equivalent examination as approved by the syndicate, Panjab University, Chandigarh. A candidate seeking admission must have obtained a minimum CGPA of 5.5 OR 55% marks (where % marks are awarded) in the qualifying examination mentioned above.

Scheme of Test:

The duration of the Entrance Test will be of 1 hour 30 minutes and it will consist of 75 multiple-choice questions of one mark each consisting of 20 questions in Physics, 20 questions in Chemistry, 20 questions in Industrial Chemistry & 15 questions in Maths. The syllabus will be based broadly on the course contents generally covered during the qualifying examinations.

M.E. Electrical Engg. (Instrumentation & Control) Regular Programme**Eligibility Conditions**

B.E. / B. Tech or equivalent in Instrumentation and Control/ Electronics/Electrical Engineering with atleast 60% marks in the aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto. Admission is on the basis of entrance test PU . CET (P.G.)-2015 to be conducted by the Panjab University and interview. GATE qualified candidates will be exempted from the PU . CET (P.G.) Test. However, in case of eligible GATE qualified candidates, the merit list will be as per the GATE Score obtained and shall be offered the seat at the first instance.

Scheme of Test

The duration of the Entrance Test shall be of 1 hour 30 minutes. The question paper will consist of 75 multiple choice questions from the syllabi prescribed for PU . CET (P.G.)-2015 M.E. Electrical Engg. (Instrumentation & Control) Regular Programme. Each question will be of one mark.

M.E. (Electronics and Communication Engineering) Regular Programme**Eligibility Conditions**

B.E. or B. Tech or equivalent in Electronics /Electronics & Communication Engineering /Electronics and Telecom Engineering with at least 60% marks in the aggregate from Panjab University or any other university recognized by Panjab University as equivalent thereto.

GATE qualified candidates will be exempted from the PU . CET (P.G.)-2015 Test. However, in case of eligible GATE qualified candidates, the merit list will be as per the GATE score obtained and shall be offered the seat at the first instance.

Scheme of Test

The duration of the Entrance Test will be 1 hour 30 minutes. The question paper will consist of 75 multiple-choice questions from the syllabi prescribed for PU . CET (P.G.)-2015 M.E. (Electronics and Communication Engineering) Regular Programme. Each question will be of one mark.

M. E. (Computer Science & Engineering) Regular Programme

Eligibility Conditions

B.E. or B. Tech or equivalent in Computer Science and Engineering/Information Technology with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.

GATE qualified candidates shall be exempted from the PU . CET (P.G.) . 2015 test. However, in case of eligible GATE qualified candidates, the merit list will be as per the GATE score obtained and shall be offered the seat in the first instance.

Scheme of Test

The duration of Entrance test will be 1 hour 30 minutes. The question paper will consist of 75 multiple-choice questions from the syllabi prescribed for PU . CET (P.G.)-2015 M.E. (Computer Science and Engineering and Information Technology) Regular Programme. Each question will be of one mark.

ME Civil Engineering (Construction Technology & Management) Programme:

A Bachelor's Degree in Civil Engineering from a recognized University or its equivalent with a minimum CGPA of 6.75 or 60% marks in aggregate. Admission (against vacant seats) is on the basis of entrance test (PU-CET (P.G.)-2015) to be conducted by the Panjab University and interview. GATE qualified candidates will be exempted from the (PU-CET (P.G.)-2015 test. However, in case eligible GATE qualified candidates, the merit list will be as per the GATE score obtained and shall be offered the seat at the first instance.

Scheme of Test:

The duration of the Entrance Test shall be of 1 hour and 30 minutes. The question paper will consist of 75 multiple choice questions from the syllabi prescribed for (PU-CET (P.G.)-2015 ME Civil Engineering (Construction Technology & Management) Programme. Each question will be of one mark.

ME Mechanical Engineering (Manufacturing Technology) Programme:

Eligibility Conditions:

A Bachelor's Degree in Mechanical Engg./ Production Engg./ Industrial Engg./ Automobile engineering/ Manufacturing Technology from a recognized University or its equivalent with a minimum CGPA of 6.75 or 60% marks in aggregate. Admission (against vacant seats) is on the basis of entrance test (PU-CET (P.G.) to be conducted by the Panjab University and interview, GATE qualified candidates will be exempted from the (PU-CET (P.G.) TEST. However, in case of eligible GATE qualified candidates, the merit list will be as per the GATE score obtained and shall be offered the seat at the first instance.

Scheme of Test:

The duration of the Entrance Test shall be of 1 hour and 30 minutes. The question paper will consist of 75 multiple choice questions from the syllabi prescribed for (PU-CET (P.G.)-2015 ME Mechanical Engineering (Manufacturing Technology) Programme. Each question will be of one mark.

M.B.E. (Master of Business Economics) (Semester System)

Eligibility Conditions

- (i) A Bachelor's/ Master's degree in any discipline of the University or a Degree of any other University which has been recognized by the Syndicate as equivalent thereto, with not less than 50% marks in the aggregate.

Or

- (ii) Pass in the final examination conducted by (a) The Institute of Chartered Accountants of India, (b) The Institute of Cost and Works Accountants of India and (c) the Institute of Company Secretaries of India.

Scheme of Test

The question paper of 1 hour 30 minutes duration will consist of 75 Objective Type Questions (Multiple Choice) with four responses i.e. A, B, C & D carrying a total of 75 marks. The standard of the question paper shall be based on the latest syllabus prescribed for Bachelor's degree in Economics/Commerce of Panjab University (1st, 2nd and 3rd year together).

MEFB (Master of Entrepreneurship and Family Business) (Semester System)

Eligibility Conditions

- (i) A Bachelor's/Master's degree in any discipline of the University or a Degree of any other University which has been recognized by the Syndicate as equivalent thereto, with not less than 50% marks in the aggregate.

Or

- (ii) A pass in the final examination conducted by (a) The Institute of Chartered Accounts of India, (b) The Institute of Cost and Works Accountants of India and (c) The Institute of Company Secretaries of India.

Scheme of Test

The question paper of 1 hour 30 minutes duration will consist of 75 Objective Type Questions (Multiple Choice) with four responses i.e. A, B, C & D carrying a total of 75 marks. The question paper will include questions related to General Knowledge, Verbal/Reasoning ability, Data interpretation and Commerce/Economics.

M.Com. (Honours) (Semester System)

Eligibility Conditions

- a) B. Com. / B. Com. (Hons.) / BBA with not less than 45% marks in the aggregate.

Or

- b) B. Com. (Hons.) Degree with not less than 45% marks in the aggregate

Or

- c) A graduate with Honours in Economics or Mathematics or Statistics or Commerce with not less than 45% marks in the aggregate;

Or

- d) A graduate with 50% marks in the aggregate having offered either Economics, Mathematics, Statistics, Commerce, Computer Application, Information Technology or Computer Science as a subject in the examination. Provided that in case of candidates having Bachelors degree of the University through Modern Indian Languages [Hindi/Urdu/Punjabi(Gurmukhi Script)] and/or in a classical language (Sanskrit/Persian/Arabic) or degree of any other University obtained in the same manner recognized by the Syndicate; 50% marks in the aggregate shall be calculated by taking into account full percentage of marks in all the papers in Language excluding the additional optional papers, English and Elective subject taken together.

Or

- e) A pass of the Final examination conducted by the Institute of Chartered Accountants of India or England/Institute of Cost and Works Accountants of India or England/Institute Company Secretaries of India;

Or

- f) Any other qualification recognized by the Syndicate for this purpose.

Provided that a candidate who seeks admission on the basis of qualifications mentioned in I, (d), (e) above shall be required to qualify within one year from the date of Admission (either with Semester-I examination or with Semester-II examination) in a special examination in two paper (s) on (i) Commercial and Taxation Laws and (ii) Accounting and Auditing, in accordance with the Syllabus as may be prescribed by the Senate. Further that the maximum marks shall be 100 in each paper and the pass marks shall be 35% as in B.Com examination. There shall be no internal assessment in these papers and marks in these papers will not be counted for the Semester Examination.

Scheme of Test

The Entrance Test of 1 hour 30 minutes duration shall comprise of one paper of 85 multiple choice (having four responses A, B, C & D) objective type questions of one mark each in the area of Accounting, Management, Laws and Economics.

Merit list

The admission will be made on the basis of the Entrance Test (85% weightage), Group Discussion (7.5% weight age) and Personal Interview (7.5% weightage). The result of the Entrance Test, however, will not be sent to the candidates but will be conveyed confidentially to the Chairman, University Business School (UBS) who will compile comprehensive result after the Group Discussion and Interview and notify the same on the department's notice board.

Note:

- (a) The number of candidates to be called for Group Discussion and Personal Interview will be equal to eight times the total number of seats of the course in each category or the actual number of eligible candidates whichever is lower;
- (b) Attendance in Group Discussion and Personal Interview is a must. If any candidate does not attend any one of the components, GD or PI, his / her candidature shall stand cancelled.

M.Com (Business Innovations) (Semester System)

Eligibility Conditions

The Entrance Test for M.Com (Business Innovations) shall be open to all such candidates who possess the qualifications as mentioned below:

- (a) A Bachelor's degree in Commerce (B.Com) or Business Administration (B.B.A) with not less than 45% marks in the aggregate; OR
- (b) B.Com (Hons.) Degree with not less than 45% marks in the aggregate; OR
- (c) A graduation with Honours in Economics OR Mathematics OR Statistics OR Commerce with not less than 45% marks in the aggregate; OR
- (d) A graduation with 50% marks in the aggregate in any other discipline of the University or a degree of any other University which has been recognized by the Syndicate as equivalent thereto. Provided that in case of candidates having Bachelor's degree of the University through Modern Indian Languages (Hindi/Urdu/Punjabi/Gurmukhi script) and / or in a classical language (Sanskrit/Persian/ Arabic) or degree of any other University obtained in the same manner recognized by the Syndicate. 50% marks in the aggregate shall be calculated by taking into account full percentage of marks in all the papers in Language excluding the additional optional paper, English and the elective subject taken together;
- (e) A pass in the final examination conducted by the Institute of Chartered Accountants of India or England/ Institute of Cost Accountants of India or England;

- (f) A pass in the final examination conducted by the Institute of Company Secretaries of India; OR
- (g) Any other qualification recognized by the Syndicate for this purpose.

Scheme of Test:

The Entrance Test of 1 hour 30 minutes duration shall comprise one paper of 75 marks containing 75 Objective Type questions of multiple choices (having four responses A, B, C & D) carrying one mark each.

The Breakup of questions shall be as follows:

- | | |
|--------------------------|--------------|
| 1. General Knowledge | 15 Questions |
| 2. Business Aptitude | 20 Questions |
| 3. Quantitative Aptitude | 20 Questions |
| 4. Test of Reasoning | 20 Questions |

Merit

Admission to M.Com (Business Innovation) at S.C.D. Government College, Ludhiana shall be on the basis of the entrance test (Weightage 50%), and qualifying examination (Weightage 50%).

MBACIT (Master in Business Administration, Commerce and Information Technology) (Semester System)

Eligibility Conditions

BA /B.Sc. / B.Com. / any other Graduation Degree with 50% from Panjab University or any other University recognized by the Syndicate as equivalent thereto.

Scheme of Test

The question paper of 1 hour 30 minutes duration will consist of 75 Objective Type Questions (Multiple Choice) with four responses i.e. A, B, C & D carrying a total of 75 marks. The question paper will include 15 questions each on subject knowledge of Commerce, Economics, IT, Verbal ability/Reasoning and General awareness.

Master of Business Administration for Executives (MBAfEX)

Eligibility Conditions:

The minimum qualification for admission to the first semester of the course shall be .

- (i) A Bachelor's or Master's Degree in any discipline with not less than 50% marks in the aggregate or any other examination with 50% marks recognized by the University as equivalent thereto;

OR

A pass in the final examination conducted by the Institute of Chartered Accountants of India or England / Institute of Cost Accountants of India or Chartered Institute of Management Accountants of England / Institute of Company Secretaries of India;

OR

Diploma in Personnel Management and Labour Welfare or Diploma in Marketing Management with not less than 60% marks in the aggregate, provided the candidate holds a Bachelor's degree.

- (ii) Two years whole time executive experience in a commercial or industrial establishment after having passed the qualifying examination as given above. Members of All India or State Administrative / Technical Services and Defence Personnel holding administrative positions with not less than two years of executive experience will also be eligible. Organizational sponsorship is essential.

Scheme of Test:

The Entrance Test will carry 85 marks and will be of 1 hour 30 minutes duration. It will consist of 85 multiple-choice questions of one mark each and having four responses A, B, C & D. The

components of the test will include: General Knowledge; Economics and Business Environment Awareness; Data interpretation and problem solving; Numerical Ability; Verbal Ability/ Reasoning and English Comprehension.

Merit List

The admission will be made on the basis of the Entrance Test (85% weightage), Group Discussion (7.5% weightage) and Personal Interview (7.5% weightage). The result of the Entrance Test, however, will not be sent to the candidates but will be conveyed confidentially to the Chairman, University Business School (UBS) who will compile comprehensive result after the Group Discussion and Interview and notify the same on the department's notice board.

Master of Physical Education (M.P.Ed.) (Two-Year Course/Semester System)

Eligibility Conditions

A person who has passed/appeared in any one of the following examinations:

- a) Bachelor of Physical Education (B.P.Ed.) or equivalent with at least 50% marks.

OR

Bachelor of Science (B.Sc. in Health and Physical Education) with at least 50% marks.

- b) The reservation in seats and relaxation in the qualifying marks for SC/ST/OBC/PWD and other categories shall be as per the rules of the Central Government/ State Government whichever is applicable.
- c) Any other qualification recognized by the Syndicate as equivalent to (a) and (b).

Admission Procedure

Admission shall be made on merit on the basis of marks obtained in the entrance examination (written test, fitness test, interview and percentage of qualifying examination) as per the policy of Panjab University.

Scheme of Test

The Entrance Test of 1 hour 30 minutes duration shall comprise one paper of 75 marks, containing 75 Objective Type questions of multiple choices (having four responses A, B, C & D) carrying one mark each. Questions will be based on the following three areas of Physical Education and Sports: (a) Aptitude (b) General Knowledge (c) Reasoning Ability.

Bachelor of Physical Education (B.P.Ed.) (One-Year Course/ Semester System)

Eligibility Conditions

A person who has passed/appeared in any one of the following examinations:

- a) Bachelor's Degree in any discipline with 50% marks and having at least participation in the Inter-College/Inter-Zonal District/School competition in sports and games as recognized by the AIU/IOA/SGFI/Govt. of India;

OR

Bachelor's Degree in physical education with 45% marks;

OR

Bachelor's Degree in any discipline with 45% marks and studied physical education as compulsory elective subjects;

OR

Bachelor's Degree with 45% marks and having participated in National / Inter University / State competitions or secured 1st, 2nd or 3rd position in Inter College / Inter-Zonal / District / School competition in sports and games as recognized by the AIU/ IOA/SGFI/Govt. of India;

OR

Bachelor's degree with participation in International competitions or secured 1st, 2nd or 3rd position in National / Inter-University competition in sports and games as recognized by respective federations / AIU/ IOA/SGFI/Govt. of India;

OR

Graduation with 45% marks and at least three years of teaching experience (for deputed in-service candidates i.e. trained physical education teachers / coaches)

- b) The relaxation in the percentage of marks in the qualifying examination and in the reservation of seats for SC/ST/OBC and other categories shall be as per the rules of the Central Government / State Government, whichever is applicable.
- c) Any other qualification recognized by the Syndicate as equivalent to above points.

Scheme of Test

The Entrance Test of 1 hour 30 minutes duration shall comprise one paper of 75 marks containing 75 Objective Type questions of multiple choices (having four responses A, B, C & D) carrying one mark each. Questions will be based on the following three areas of Physical Education and Sports: (a) Aptitude (b) General Knowledge (c) Reasoning Ability

M.Sc. (Hons. School) Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Mathematics, Physics, Physics & Electronics and Zoology (Semester Systems)

Eligibility Conditions

B.A./ B. Sc. (Pass or Honours) examination with 50% marks (45% marks in case of SC/ST/BC) of the Panjab University or any other examination recognized by the Panjab University as equivalent thereto with the subject desirous of seeking admission in M.Sc. (Honours School) Course as an elective subject for three years. For Entrance Test to **M. Sc. (Hons. School) Mathematics** B.A. / B. Sc. (General) with Mathematics from the colleges affiliated to Panjab University or from other Universities as recognized by the Panjab University. **Note:** B.Sc. (MLT) Course has not been made equivalent to B.Sc. (Hons. School) Biochemistry of Panjab University. The candidates who are already students of Panjab University Teaching Department and have passed/appeared/appearing in the B.Sc. (Honours School) final examination of the University during the current session in the relevant subject are not required to appear in the **M.Sc. (Honours School) Admission Entrance Test**. Their admission to the course shall be governed by the relevant rules and regulations of the University. **For M.Sc. (Hons. School) Biophysics** B.Sc.(H.S.) in Biophysics of Panjab University or B.Sc/B.Sc.(Hons.) in Biophysics/ Bioinformatics / Biotechnology of the Panjab University or any other examination recognized as equivalent or B.Sc. with i) Physics, ii) Chemistry and iii) any one of the subject from life sciences during all the three years of the graduation.

For M.Sc. (Hons. School) Chemistry:- B.Sc. examination with (i) Chemistry (ii) Physics (iii) Mathematics and or Botany/ Zoology during all the three years of graduation with 50% marks (45% marks in case of SC/ST/BC).

For M.Sc. (Hons. School) Biotechnology:- B.Sc. Biotechnology with 50% marks or B.Sc. (50% marks) with Biotechnology as Elective/Vocational/ Add on subject (studied for 3 years) are eligible

Scheme of Test

The question paper will be on the concerned subject for which the admission to M.Sc. (Honours School) is being sought by the candidate. It will consist of 75 Objective Type Questions (Multiple Choice with four responses i.e. A, B, C & D) carrying a total of 75 marks. The question paper will be of 1 hour 30 minutes duration. The standard of the question paper shall be based on latest syllabus prescribed for Bachelor's degree of Panjab University (1st, 2nd and 3rd year together) in the relevant subject

M.Sc. (Hons. School) Computer Science

Eligibility Conditions

BCA/B.Sc. (Hons. School) in Computer Science/ B. Tech. / B.E. (Computer Science/ Engineering) or any other examination recognized as equivalent thereto with 50% marks.

Scheme of Test

The Entrance Test will be of 75 marks. It will be of 1 hour 30 minutes duration consisting of 75 multiple choice questions of Computer Science subject at the level of examinations as mentioned in the eligibility conditions.

M.Sc. (Hons. School) Geology

Eligibility Conditions

For vacant seats based on PU-CET (P.G.) merit and approval of Syndicate/Senate, B.Sc. 3 Years course with Geology as one of the subjects, 50% marks in B.Sc. & 50% marks in subject of Geology in B.Sc.

Scheme of Test

The Entrance Test will be of 75 marks. It will be of 1 hour 30 minutes duration consisting of 75 multiple choice questions (with only one correct answer).

M.Sc. (Two Year Course) Bioinformatics, Biotechnology, Botany, Physics, Chemistry, Medical Physics, Nuclear Medicine and Zoology (Semester Systems)

Eligibility for different courses

Bioinformatics:

Bachelor's degree in Science (General or Honours) with Bioinformatics, Biotechnology, Biochemistry, Biology, Botany, Chemistry, Electronics, Genetics, Life Science, Mathematics, Mathematics & computing, Microbiology, Physics, Statistics, Zoology, Agriculture, computer Science, Engineering, Medicine, Pharmacy and Veterinary Science with at least 50% marks (45% for candidates belonging to SC/ST/BC category).

Biotechnology:

Bachelor's degree (under the 10+2+3 pattern of Education) in Physical, Biological, Pharmaceutical, Agricultural, Veterinary or Fishery Sciences or Bachelor's degree in Engineering/ Technology, Home Science, Medicine (MBBS) from any University/ Institute recognized by the Panjab University. The candidate must have obtained at least 55% marks at the Bachelor's degree level.

Botany:

B.Sc. pass with Botany having at least 50% marks in the aggregate from Panjab University or from any other University recognized by Panjab University Syndicate as equivalent thereto.

Physics and Chemistry:

- a. B. Sc. Honours School examination of the Panjab University in the subject of M. Sc. Course

- b. B. Sc. Examination of the Panjab University or any other University recognized by Syndicate securing at least 50% marks in aggregate and with Physics & Mathematics for M.Sc. Physics Course and with Chemistry & Mathematics for M. Sc. Chemistry course along with anyone of the following subjects:-
Biochemistry, Botany, Chemistry, Geology, Physics, Statistics, Zoology

Provided that a student who had not taken Mathematics as one of the subjects in B. Sc. Examination may be admitted to M.Sc. (2-Year Course) in Chemistry on the condition that he / she passes an additional paper in Mathematics (50 hour course) in the first year examination securing at least 40% marks.

- c. Awarded B. Sc. Pass degree under the old B. Sc. Honours School regulations by the Syndicate on the recommendation of the Board of Control:
d. B. Sc. Honours School examination in the subject of the M. Sc. From any other University recognized by the Syndicate as equivalent to (a);

Medical Physics

B.Sc. with at least 50% marks in the aggregate from Panjab University or from any other University recognized by the Syndicate or equivalent thereto with Physics and Chemistry (non-medical stream) or Chemistry and Biology (medical stream) as Core subjects. The candidates having B.Sc. in Nuclear Medicine/biophysics/Radiation Sciences shall also be eligible.

The duration of the course is 3 years (2 years teaching + one year internship in the Radiation Therapy, Department of PGIMER, Chandigarh).

Nuclear Medicine:

B.Sc. with at least 50% marks in the aggregate from Panjab University or from any other University recognized by the Syndicate or equivalent thereto with Physics and Chemistry (non-medical stream) or Chemistry and Biology (Medical stream) as Core subjects. Candidates having B.Sc. in Nuclear Medicine/biophysics shall also be eligible for admission to the course.

Zoology:

B.Sc. with Zoology having at least 50% marks in the aggregate from Panjab University or from any other University recognized by the Syndicate as equivalent thereto.

Scheme of Tests for above courses

The scheme of the test for admission to M. Sc. (Two Year Courses) as given above offered at different colleges affiliated to Panjab University will be same as applicable for M. Sc. (Hons School) in the respective subjects except Bioinformatics. The candidates may be admitted to M.Sc. (Hons. School) at Panjab University Campus or affiliated colleges on the basis of final merit lists.

For M.Sc. Bioinformatics: The question paper will consists of 75 objective type questions (Multiple choice with four responses i.e. A, B, C & D) carrying a total of 75 marks. The question paper will be of 1 hour 30 minutes duration. The syllabi and standard for the question paper shall be the one as currently prescribed for Bachelor's Degree of Panjab University (1st, 2nd and 3rd year together).

M. Sc. Microbial Biotechnology (Two- Year Course) (Semester System)

Eligibility Conditions

Candidates having Bachelors Degree from any field of Biological Sciences including Biotechnology is eligible.

Scheme of Test

The Entrance Test will be of 1 hour 30 minutes duration. It shall comprise 75 multiple-choice questions (with only one right answer) of one mark each. The questions will be based on fundamentals of Microbiology and Biotechnology.

Master's Degree Programme in Environment Science (Two-Year Course) (Semester System)

Eligibility Conditions

Graduates from Science/Engineering stream or any other stream with Honours in Geography as one of the subjects from Panjab University or any other University recognized by Panjab University as equivalent thereto.

Scheme of Test

The Entrance Test will be of 1 hour 30 minutes duration. It shall comprise 75 multiple-choice questions (with only one right answer) of one mark each from the Botany, Chemistry, Geography, Geology, Mathematics, Physics, Sociology, Statistics, Zoology and General Awareness subjects of graduation level. It shall attempt to test the intelligence, comprehension of the scientific principles and general knowledge expected of a science graduate.

M.Sc. (Human Genomics) (Two-Year Course) (Semester System)

Eligibility Conditions

B. Sc. (Pass or Honours) under 10+2+3 pattern examination of the Panjab University or any other examination recognized by the Panjab University as equivalent thereto in Physical, Chemical, Biological, Pharmaceutical Sciences or Medicine with at least 55% marks.

Scheme of Test

The Entrance Test will be of 75 marks. It will be of 1 hour 30 minutes duration consisting of 75 multiple choice questions (with only one correct answer) of 1 Mark each from six disciplines representing Physics, Chemistry, Mathematics, Biology, Pharmaceutical Sciences and Medicine.

M.Sc. (Systems Biology and Bioinformatics) (Two-Year Course) (Semester System)

Eligibility Conditions

Bachelor's degree in Science (General or Hons.) with Bioinformatics, Biotechnology, Biochemistry, Biology, Botany, Chemistry, Electronics, Genetics, Life Science, Mathematics, Mathematics & computing, Microbiology, Physics, Statistics, Zoology, Agriculture, Computer Science, Engineering, Medicine, Pharmacy and Veterinary Science with at least 50% marks (45% for candidates belonging to SC/ST/BC category).

Scheme of Test

The question paper will consist of 75 objective type questions (Multiple choice with four responses i.e. A, B, C & D) carrying a total of 75 marks. The question paper will be of 1 hour 30 minutes duration. The syllabi and standard for the question paper shall be the one as currently prescribed for Bachelor's Degree of Panjab University (1st, 2nd and 3rd year together).

GENERAL RULES

1. The result of the entrance test shall, *ipso facto*, not entitle a candidate to get admission in an institution/department/centre concerned where he/she intends to seek admission. It will be the responsibility of the candidate to make sure about his/her eligibility and fulfillment of such other conditions as may be prescribed for admission in the rules and regulations of University/Institution concerned. Merely because a candidate is allowed to appear in the entrance test does not mean that he/she is eligible and his/ her appearance therein will not stop or debar the university/ institution concerned from satisfying itself about his/her eligibility at any subsequent stage.

Notwithstanding anything contained in this prospectus, the eligibility conditions for admission to any particular course, shall be governed by the respective rules/regulations as enshrined in the P.U. calendar, volumes I, II and III (latest editions) and / or the general guidelines for admissions/ Handbook of Information-2015 issued by the university and / or decisions of the university senate/ syndicate. In case of any conflict or inconsistency between the prospectus on one hand and the aforesaid Panjab University rules and regulations/ guidelines / Handbook of Information-2015 / decisions of Senate/ Syndicate, on the other, the latter shall prevail.

2. The Entrance Test will be held only in **CHANDIGARH** on the scheduled dates.
3. A candidate desirous of taking the Entrance Test should submit his / her fee in any branch of State Bank of India using website generated challan latest by 15-05-2015 (Friday) upto 4:00 p.m.;
4. ***Last date for uploading of photograph, signature with rest of the information on the website is 18.05.2015 (Monday).***
5. No application form will be received under any circumstances after the closing of the last date i.e. 12-05-2015 (Tuesday).
6. In no case the fee for the PU-CET (P.G.) 2015, once paid, shall be refunded.
7. In case of Objective Type question papers, the candidates shall be required to answer questions on the OMR Answer-sheet provided for the purpose only following all the rules/ norms as stated on the Answer sheet. However, entrance test for admission to M.A. English and M.A. Journalism and Mass Communication shall not be on OMR sheet.
8. The Entrance Test shall be English only.
9. Thirty minutes extra would be given to the visually handicapped/ physically handicapped candidates (as approved by the Vice-Chancellor).
10. In case of Objective Type question papers, the candidates shall be required to hand-over the Question booklet and OMR Answer sheet to the Centre Superintendent.
11. The candidates shall be required to hand over their OMR answer-sheets and the question paper in full to the Centre Superintendent. No page/part of the Question paper/OMR Answer Sheet is to be removed/torn/taken out of the Examination Centre under any of the circumstances, failing which the candidates shall be disqualified from the entire Entrance Test.
12. ***The use of calculators is not allowed*** in any subject/paper.
13. The University will provide logarithmic table. Borrowing or bringing along the log table or other such material is not allowed.
14. If any candidate who submits two online application forms for the same Course his/her candidature shall be cancelled.

15. The candidates must bring their own stationary items such as **Black Gel Pen. Borrowing of material inside the Test Centre is strictly prohibited.**
16. In case of Objective Type question papers, **rough work** should be done in the space provided for this purpose. No rough work shall be done on the OMR Answer Sheet under any circumstances.
17. In case of Objective Type Question Papers having OMR sheets, **there shall be NEGATIVE MARKING FOR WRONG ANSWERS i.e. marks will be deducted for wrong answers.** If for each correct answer 1 mark is to be awarded, for a wrong answer $\frac{1}{4}$ mark will be deducted.
18. **There shall be no re-evaluation/re-checking/re-assessment of answer-sheets under any of the circumstances. Request for seeing the Question Booklet / answer-sheets/answer-books by the candidates shall not be entertained at all. The evaluation once done by the University shall be absolutely final.**
19. In case of Objective Type question papers, the candidate must ensure that the answers to the questions are attempted on the specifically prescribed OMR answer sheet only. No answer attempted on the question booklet will be considered for evaluation. Only those questions answered on the OMR sheet shall be taken into account.
20. Candidates securing equal marks will be bracketed together. Their *inter-se* merit will be determined by the institution to which they are seeking admission.
21. **The candidates shall have to apply, within the prescribed time limit, directly and independently to the respective Institutions/Departments/Centers in which they want to seek admission. Application Forms along with the Handbook of Information will be available after advertisement of Admission Notice in the Newspapers.**
22. The admission shall be based on the relative merit of the candidates as determined by the marks obtained in the qualifying degree examination and the result of the Entrance Test being held in the year of admission, subject to such reservation and weightage as are prescribed in the rules of admission of the University Department/Institution/Centre concerned.
23. Carrying of any communication equipment such as **mobile phones / pager/ wireless set, scanner/ pen scanner/ camera or any such electronic / digital gadget etc** in the examination hall shall not be permitted and will lead to **disqualification.**
24. Candidates should not carry eatables, drinks etc. into the test centre. Smoking inside and around the Centre is not permitted.
25. Any candidate who creates disturbance of any kind during examination or otherwise misbehaves in or around the examination hall or refuses to obey the Superintendent/Deputy Superintendent/Assistant Superintendent /any other official on examination duty or changes his/her seat with any other candidate or occupies any seat, other than the one allotted to him/her shall be expelled from the examination hall. **("Expulsion" for this purpose would mean cancellation of the Entire Entrance Test).** The Centre Superintendent/Observer/any other authorized University Officer/Official shall be competent to expel a candidate from the examination centre.
26. Any candidate having in his possession or accessible to him/her paper/books or notes which may possibly be of any assistance to him or is found giving or receiving assistance, or copying from any paper/book or note or from anywhere else or allowing any other candidate to copy from his/her answer book or found writing on any other paper, questions set in the question paper, during examination or using or attempting to use any other unfair means or indulging in any kind of misconduct shall be expelled from the examination hall. **("Expulsion" for this purpose would mean cancellation of the Entire Entrance Test).** The Centre Superintendent/Observer/any other authorized University Officer/Official shall be competent to expel a candidate from the examination centre.
27. If any answer sheet of a candidate shows or it is otherwise established that he/she has received or attempted to receive help from any source in any manner or has given help or

attempted to give help to any other candidate in any manner, the relevant answer-sheet shall be cancelled. The cancellation of the answer-sheet shall mean cancellation of all answer-sheets of the Common Entrance Test. The decision of the Controller of Examinations, Panjab University, Chandigarh in this regard shall be final.

28. ***If a candidate writes his/her name or puts any kind of identification mark or discloses his/her identity by any method whatsoever on the cover or anywhere else in the Question Booklet/Answer Sheet, the same shall be treated as cancelled. The cancellation of the answer-sheet shall mean cancellation of all answer-sheets of the Entrance Test. The decision of the Controller of Examinations, Panjab University, Chandigarh in this regard shall be final.***
29. Any person who impersonates a candidate shall be disqualified from appearing in any University examination including this examination for a period of five years, if that person is a student on the rolls of a recognized School or College or University. But if the person is not on the rolls of a recognized School or College or University, he/she shall be declared as a person not fit and proper to be admitted to any examination of the University for a period of 5 years and the case, if necessary, shall also be reported to the police for any further action in the matter. The candidate who is being impersonated shall also be disqualified for a period of Five Years from appearing in any examination of this University apart from any other action which the University may take against him, as deemed fit
30. If it is found that a candidate has knowingly or willfully concealed or suppressed any information/fact which renders him/her ineligible to take the Entrance Test, his/her result of the Test as also admission to a Institution/Department/Centre of the University, if granted, shall stand cancelled and he/she shall have no claim whatsoever against the Institution/Department/Centre concerned and the case, if necessary shall be reported to the police.
31. In order to avoid bias, the result of the entrance test in case of such course like Masters in Journalism & Mass communication where weightage of performance in Interview and/ or Group discussion is to be added shall remain confidential till the process of compilation is not completed.
32. If a dispute or controversy of any kind arises before, during or after conduct of Entrance Test, the decision of the Controller of Examinations, Panjab University, in all such cases, shall be final.
33. ***The candidates shall be admitted to the test only on the production of the Admit Card at the Test Centre. No candidate shall be allowed to take the test without the Admit Card under any circumstances. The candidates must retain the admit card with them till the admission process is over, since it will be required again at the time of counseling.***
34. ***The Admit Cards will be issued to the candidates only provisionally, at their sole risk and responsibility subject to the final confirmation of their eligibility at the time of admission. It is further clarified that the candidates shall be taking the test at their own risk and responsibility as far as their eligibility is concerned and the University shall, in no way, be responsible if they are found to be ineligible, later, leading to cancellation of their result or any other consequence(s) emanating from the same.***
35. No candidate is allowed to leave the examination hall/room before the expiry of the time allotted for the respective paper.
36. The result of the PU-CET (P.G.) 2015 will be made available on the University website: <http://www.results.puchd.ac.in>.
37. "4-5" days after the test, the question papers and their keys will be put on the University website. The candidate can file their objections regarding discrepancies and accuracy of the key, in writing, within 48 hours of this announcement. The valid concerns thus expressed will be given due consideration while evaluation. If a candidate wishes to verify his/her result, he/she will be provided a photocopy of his/her answer sheet on payment of Rs. 10,000/- within 10 days after the declaration

of the entrance test result and the office should process the whole procedure within three working days. In case, a discrepancy is found in the result of the candidate, the result would accordingly be revised and the fee deposited will be refunded.

38. The final date by which Roll No will be available online is 29.05.2015 (Friday). Admit Card required to be downloaded from the website by the candidate using their own Login and Password (provided while generating Bank Challan). **There will be no physical communication for this purpose.**
39. No separate Result Card will be issued.
40. **The following functionaries may be contacted only in case of extremely urgent enquiry from 9.00 a.m. to 5.00 p.m. (on working days only)**
- | | |
|---------------------------------|--------------------------------|
| 1. Assistant Registrar (C.E.T.) | 0172-2534829 |
| 2. Controller of Examinations | 0172-2534811 |
| 3. P.U., Main Enquiry | 0172-2534818, 2534819, 2534866 |
41. **Ragging in any form is banned in Educational Institutions. If a student is found to have indulged in Ragging, strict action including expulsion from the Institution will be taken against that student.**
42. **For Blind Candidate:** The maximum qualification of a writer for a blind candidate for the PU-CET (P.G.) entrance test is 10+2. The writer should not have passed the mentioned qualification more than one year prior to the examination. The candidate should contact the Assistant Registrar, CET Cell one week before the commencement of the entrance test to fulfill all the formalities for the writer.

INSTRUCTIONS FOR GIVING ANSWERS ON OMR ANSWER SHEET

- 1 All questions are to be attempted on the answer sheet as per instructions printed on the question booklet and OMR Answer Sheet.
- 2 **The Answer Sheet is designed for computer evaluation. Please follow the instructions given on the answer sheet strictly otherwise it may make evaluation by the computer difficult. Any resultant loss to the candidate on the above account i.e. not following the instructions completely shall be of candidate only.**
- 3 Each question is followed by four answer choices labeled A, B, C and D. Select the answer you think is the best response and darken the bubble bearing the correct response label against the serial number of the question. For example if you think that the answer to question number 2 is D, then mark as follows:

Q. 2 ☐ A ☐ B ☐ C ☒ D

The Answer marked as under shall be considered as wrong:

or or or or or

☒ A ☐ B ☐ C ☐ D ☐ A ☒ B ☐ C ☐ D ☐ A ☐ B ☒ C ☐ D ☐ A ☐ B ☐ C ☒ D ☐ A ☐ B ☐ C ☒ D ☐ A ☒ B ☐ C ☐ D

- 4 For marking answers **use Black Gel Pen only to darken the corresponding circles.**
- 5 *If you do not want to answer any question, leave all the bubbles corresponding to that question blank. It will be considered as an unattempted question.*
- 6 Be very careful in filling in the bubble in the first instance since erasing or changing it will spoil the response and go to the disadvantage of the candidate.
- 7 In order to open the Question Booklet remove the paper band gently.
8. **Write your Roll Number on the answer-sheet as also on the Question Booklet, only in the space provided for the purpose and at no other place in the question Booklet and Answer Sheet.**
9. The use of log tables is permitted, **use of Calculator is not allowed.**
10. **Rough work** should be done in the space provided for this purpose. No rough work shall be done on the OMR Answer Sheet under any circumstances.
11. Penalty for wrong answers (**Negative marking**) will be applied i.e. marks will be deducted for wrong answers. If for each correct answer 1 mark is to be awarded, for a wrong answer $\frac{1}{4}$ marks will be deducted. For example, these marks will be calculated as under:
 P = Number of correct answers.
 Q = Number of wrong answers
 R = Number of unattempted questions
 (An unattempted question means all the bubbles corresponding to that question are left blank).

It will also be checked that **$P + Q + R = \text{Total marks allotted to the Paper.}$**

Final Score = $P - \frac{1}{4} Q$ (calculated to the second place of decimal)

SAMPLE QUESTIONS

Sample Questions for LL.M.

Part – I: Constitutional Law and Current Affairs

1. The doctrine of Basic Structure of the Constitution was propounded by the Supreme Court of India in
 - A) Shankari Prasad v. Union of India, AIR 1951 SC 458
 - B) Golaknath v. State of Punjab, AIR 1967 SC 1643
 - C) Kesavananda v. State of Kerala, AIR 1973 SC 1461
 - D) Minerva Mills v. Union of India, AIR 1980 SC 1789
2. The President of India may make a proclamation under Article 356 as to the breakdown of constitutional machinery in a State.
 - A) When he is personally satisfied as to them circumstances.
 - B) When he is advised by the Prime Minister to do so.
 - C) When he is advised by the Union Council of Ministers.
 - D) When he receives a report from the Chief Election Commission.
3. The President of India, in the matters of appointment of Judges of a High Court :
 - A) Is not obliged to consult any Judge of Supreme Court or High Court.
 - B) Is bound by the advice of the Governor of a State
 - C) Must give primacy to the opinion of the Chief Justice of India.
 - D) Is not bound to consult the Chief Justice of India.
4. Right to education has been included in the constitution by
 - A) 86th Amendment
 - B) 100th Amendment
 - C) 87th Amendment
 - D) 94th Amendment
5. Ordinance can be promulgated by the president of India if,
 - A) Both the Houses of Parliament are in session
 - B) Both the Houses of Parliament are not in session
 - C) Either of the Houses is not in session.
 - D) None of the above.
6. How many amendments have been carried out in constitution of India?
 - A) 109
 - B) 106
 - C) 99
 - D) 94
7. The tenure of Jammu and Kashmir Assembly is
 - A) 5 Years
 - B) 6 Years
 - C) 7 Years
 - D) None of the above
8. The attempt to suicide is no more punishable. Which section of the IPC was declared unconstitutional and hence void by the Supreme Court in April, 1994?
 - A) 302
 - B) 303
 - C) 304
 - D) 309
9. The newly elected President of USA Barack Obama belongs to which political party.
 - A) Republican
 - B) Democratic.
 - C) Communist
 - D) None of the above
10. Since August 1994, the rupee has been made fully convertible in :
 - A) The capital account
 - B) The capital and saving account
 - C) The saving account
 - D) The current account

Part– II: Substantive Law

Commercial Law (Law of Contract and Company Law)

1. A contract entered into without Free Consent is :
 - A) Void
 - B) Voidable
 - C) Valid
 - D) Illegal
2. Property insurance is a contract of :
 - A) Indemnity
 - B) Contingent contract
 - C) Wagering agreement
 - D) Guarantee
3. Creditor, on default by the principal debtor, can file suit against:
 - A) Secured property
 - B) Principal debtor alone
 - C) Surety and principal debtor;
 - D) All the above jointly.
4. A company is a Government Company only if :
 - A) All the shares of the company are held by Central or State Government;
 - B) At least 25% of Shares are held by Central or State Government;
 - C) Majority of Shares are held by Central or State Government or both;
 - D) Majority of Directors are appointed by the Central or State Government
5. Annual general meeting of a company is to be held with a gap between two consecutive meetings of successive years;
 - A) Of not more than twelve month;
 - B) Of not more than twenty four months;
 - C) Of not more than fifteen months;
 - D) Any time but less than twenty four months

Family Law

1. Which of the following is valid marriage under the Hindu Marriage Act. 1955?
 - A) H, a male Hindu aged 35 marries W who is a deserted wife of B, who had filed a suit for divorce and suit is still pending
 - B) H, a male Hindu aged 36 marries a second wife with the consent of his first wife who has not been able to have a child for the last 10 years
 - C) H, a Brahmin Male aged 30, marries a Buddhist girl aged 18
 - D) H, an idiot male Hindu aged 27 marries W, a Hindu female Lunatic
2. Which of the following is valid adoption under the Hindu Adoption & Maintenance Act, 1956?
 - A) H, a male Hindu aged 26 adopts a daughter aged 6
 - B) H, a male Hindu and his wife adopt a son aged 16
 - C) H, a male Hindu aged 40 adopted a son aged 5, after his natural born son migrated to the U.S.A.
 - D) H, a Hindu bachelor aged 25 adopts a son aged 3
3. Which of the following is Hindu under the Hindu Law?
 - A) A is born of Hindu father and Christian mother and brought up as a Christian
 - B) A is born of Hindu father and Buddhist mother
 - C) A is born of Muslim father and Parsi mother
 - D) A is born of Christian father and Muslim mother
4. Which of the following relatives will succeed to the Property of H, a Hindu male under the Hindu Succession Act 1956 after his death?
 - A) Daughter
 - B) Father
 - C) Brother
 - D) Sister
5. Which of the following is SAHI NIKAH (valid marriage) under the Mohammedan Law?
 - A) M, a Mohammedan male aged 30 married W, a Muslim woman under-going Iddat
 - B) M, a Mohammedan male aged 27, married W, a Muslim woman in a desert, without any witness
 - C) M, a Mohammedan male aged 35, married his wife's sister
 - D) M, a Mohammedan male aged 41, married W, a Muslim female aged 21 as second wife without the consent and against the wishes of his first wife

Law of Torts

- The defense of *Volenti non fit injuria* is available in :
A) Rescue cases
B) Help cases
C) Negligence cases
D) Unlawful acts
- The test of reasonable foreseeability was laid down in :
A) Re Polemis case
B) Donoghue v. Stevenson
C) Rylands v. Fletcher
D) Ashby v. White
- There is physical harm to the plaintiff in :
A) Assault
B) Defamation
C) Nervous shock
D) None of these
- Malice/evil motive is relevant in :
A) Negligence
B) Defamation
C) Vicarious Liability
D) Nuisance
- Tort is :
A) A wrong against the Society
B) Statutorily defined in the Limitation Act
C) A codified branch of law
D) A civil wrong based on the agreed obligations

Legal Theory

- Who observed that International Law is the vanishing point of jurisprudence?
A) Austin
B) Salmond
C) Starke
D) Holland
- Identify the Jurist who defined Law as "the form of the guarantee of the conditions of life of society, assured by the states power of constraint"
A) Roscoe Pound
B) Holmes
C) Ihering
D) Salmond
- Realist theory of law emphasizes on:
A) Social function of law
B) Human factors in law
C) Social criterion of validity of law
D) Essentiality of law for social life
- According to Hohfeld, the jural opposite of Power in the context of his analysis of legal right in the wider sense is :
A) Liability
B) Disability
C) Duty
D) Immunity
- Possession is said to be ownership on the defensive by :
A) Savigny
B) Salmond
C) Ihering
D) Gray

Public International Law

- International Law may be defined in broad terms as the body of general principles and specific rules which are binding upon the members of the international community in their mutual relations
A) Oppenheim
B) Lawrence
C) Brierly
D) Fenwick
- The duties and rights of the States are only the duties and rights of men who compose them:
A) Kelsen
B) Westlake
C) Hall
D) Starke
- A State is, and becomes an international person, through recognition only and exclusively
A) Oppenheim
B) Anzilotti
C) Holland
D) Pitt Corbett
- The rebus sic stantibus doctrine is one of the enigmas of International Law+ who said
A) Starke
B) Edward Collin
C) Oppenheim
D) Anzilotti.
- From the theoretical point of view, the provision for applying the General Principles of Law has been regarded as sounding the death-knell of positivism
A) Lauterpacht
B) C.C.Hyde
C) Starke
D) Triepel

Indian Penal Code

1. P, a Pakistani, fires at A, an Indian, standing on the no-man's land. A runs and dies on the Indian territory:
A) P has committed no offence
B) P is liable for murder
C) P is liable for attempt to culpable homicide
D) P is liable for attempt to grievous hurt.
2. With an intention to kill B administers sugar mistaking it for arsenic :
A) P has committed no offence
B) P is liable for attempt to murder
C) P is liable for culpable homicide
D) P is liable for grievous hurt.
3. P intentionally gives a sword cut to A. A subsequently dies of septic meningitis which developed on account of use of wrong remedies and neglect of treatment:
A) P is liable for murder
B) P is liable for culpable homicide
C) P is liable for grievous hurt
D) P is liable for simple hurt
4. P, a stoutly built man comes with a lathi in his hand. P picks up the bag of A who being weak person does not resist :
A) P is liable for theft
B) P is liable for robbery
C) P is liable for extortion
D) None of the above
5. P threatens A with a pistol and puts his hand in A's pocket which is empty :
A) P has committed no offence
B) P is liable for attempt to theft
C) P is liable for attempt to robbery
D) P is liable for attempt to extortion

Transfer of Property Act

1. Which of the following is a non-transferable property under the T.P. Act:
A) Actionable claim
B) Mortgagor's right to redeem
C) Lessee's right under the lease
D) Right of an occupancy tenant
2. The Supreme Court has held, that the rule of *lis pendens* equally applies to involuntary transfers, in the case of
A) Kedar Nath Vs. Sheo Narain AIR 1970 S.C. 1717
B) Narayana Rao Vs. Basavarajappa AIR 1956 S.C. 727
C) Vidhyadhar Krishnarao Mungi Vs. Usman Gani Saheb AIR 1974 S.C. 685
D) Beepathuma Vs. Velasari Shankra-Narayana Kadambolihaya AIR 1965 S.C. 241
3. Where a mortgagor personally binds himself to repay; the mortgage money by a certain date and possession of the property is delivered to the Mortgagee, the mortgage shall be recognized as :
A) Simple mortgage
B) English mortgage
C) Usufructuary mortgage
D) Anomalous mortgage
4. The Transfer of Property Act applies to transfers :
A) By operation of Law
B) By act of parties
C) By the Government
D) By parties who are Muslims
5. The rule that every transaction involving transfer of property is to be treated as single unit is the basis of
A) The rule of apportionment
B) The rule of *lis pendens*
C) The rule of election
D) The rule of contribution

Industrial Disputes Act

1. The Industrial Disputes Act, 1947 aims at :
A) Providing social security benefits to the workmen
B) Regulating conditions of work in industries
C) Investigation and settlement of industrial disputes
D) Regulating the employment of women during certain periods
2. Retrenchment means :
A) Refusal by an employer to continue to employ a workman
B) Termination by the employer of the
3. The power of the Appropriate Government under Section 10 to refer industrial disputes for adjudication is :
A) An administrative power
B) Legislative power
C) Judicial power
D) Quasi-judicial power
4. Lockout is :
A) For trade reasons
B) An act on the part of employer taken to coerce or pressurize the labour
C) Not an intentional act
D) Not concerned with industrial dispute

- service of a workman for any reason whatsoever
- C) Inability on the part of employer to provide employment to the workman
- D) Voluntary retirement of a workman

- Strike means :
5. A) Mere cessation of work
- B) Cessation of work under common understanding
- C) Cessation of work coupled with gherao of management
- D) Slowing down production

Sample Questions for Master of Computer Applications (MCA)

- Which of the following is NOT a language processor?
 - Compiler
 - Loader
 - Interpreter
 - Assembler
- Which of the following is NOT an Internet protocol?
 - LTP
 - SMTP
 - HTTP
 - ATM
- The sequence that is in ascending order in size is
 - bit, word, byte, nibble
 - nibble, byte, bit, word
 - nibble, bit, word, byte
 - bit, nibble, byte, word
- Total number of ways in which four boys and three girls can sit in a row so that boys and girls have alternate seats is
 - 72
 - 144
 - 288
 - 720
- If the word MANMOHANWASHERE corresponds to ZOAABVNBJOFVRFR, then the word that corresponds to LRF is
 - HEY
 - MAN
 - GOT
 - YES
- Two persons Ram and Shyam sort the letters at constant rate. Ram sorts L letters in 60 minutes while Shyam takes 30 minutes to sort L letters. The total time taken by both of them in sorting L letters working together but independently is
 - 10 min
 - 20 min
 - 15 min
 - 45 min
- The remainder obtained on dividing 2^{1680} by 1763 is
 - 1
 - 3
 - 13
 - 31
- The area bounded by the curve, $y = (x+1)^2$, its tangent at (1, 4) and the x – axis is
 - $1/3$
 - $2/3$
 - 1
 - $4/3$
- The median of 25,13,4,6,3,11,15,10 is
 - 4.5
 - 6.0
 - 10.5
 - 5.0

Sample Questions for M.A. Journalism and Mass Communication

1. Write about 150 words each on any two of the following: (16 Marks)

- a) American Presidential elections
- b) Budget 2008-09
- c) Patriotism in Indian Cinema
- d) Beijing Olympics 2008

2. Rewrite the passage in 200 words: (8 Marks)

It was a cold, windy, stormy, night where the wind was blowing very strongly. The driver of the truck was driving very fast on the wet road at a speed of over 150 km per hour. He did not see the branch of the tree lying on the wet road until he was almost upon it. He braked very hard. Because he braked very hard, the tyres skidded and he lost control and the truck crashed into the ditch on the side of the road.

Eye witnesses said that the truck was being driven at very high speed because of which the driver lost control. Fortunately no one was killed. The driver escaped with minor injuries as he managed to jump out of the truck before it turned turtle into the ditch.

Other than the fact of over speeding, blame can also be placed at the hands of the municipal authorities. The trees lining the stretch of the main road running through the city is lined by trees that are over a 100 years old. What compounds the problem is that these trees are not pruned and they are a source of danger not only to vehicles but also the pedestrians. Many representations have been made to the authorities to uproot these old trees that are many decades old and to replace them with young saplings, particularly of a species that has hard wood.

There is also no check post on this part of the road to check over speeding. This can prove dangerous especially on days that the weather is bad as people tend to drive very fast here as the stretch of the road here is straight and wide and people tend to over speed here. Also the streetlights also do not function always causing many accidents.

3. Write about 150 words each on two of the following: (16 Marks)

- A) Dr. Manmohan Singh
- B) Young Turks in Indian Politics
- C) Your role model
- D) Sachin Tendulkar

4. English Comprehension: (4 x 5 Marks)

(I). Use the following words in sentences: (5 marks)

- A) Criterion
- B) Fallacious
- C) Discrepancy
- D) Voluble
- E) Appease

(II). Use the following idioms/phrases in sentences: (5 marks)

- A) Success is somebody else's failure
- B) To be or not to be
- C) A moot point
- D) The pros and cons
- E) Every cloud has a silver lining

(III). If an underlined word or phrase is incorrect, choose that letter; if the sentence is correct, select No error. (5 marks)

1. The region has a climate so severe that plants growing there rarely had been more than twelve inches high. No error.
A B C
D E

2. We admired his many attempts bravely to enter the burning building. No error.
A B C D E

3. We must regard any statement about this controversy, whatever the source, as gossip until they are confirmed. No error.
A B C
D E

4. She is the only one of the applicants who are fully qualified for the position. No error.
A B C D
E

5. That book is liable to become a bestseller because it is well written, full of suspense and very entertaining. No error.
- A B C
D E

- (III). Tick one of the options for filling in the blanks in each sentence: (5 marks)
1. In giving a speech, the speaker's goal is to communicate ideas clearly and _____, so that the audience will be in no _____ about the meaning of the speech.
A) effectively ò haste
B) indirectly ò distress
C) unambiguously ò confusion
 2. The commission of inquiry censured the minister for his _____ expenditure of public funds, which they found to be _____.
A) improper ò vindicated
B) lavish ò unjustifiable
C) arbitrary ò critical
 3. Pain is the body's early warning system: loss of _____ in the extremities leaves a person _____ injuring himself unwittingly.
A) agony ò incapable of
B) feeling ò habituated to
C) sensation ò vulnerable to
 4. Fortunately, she was _____ her accomplishments, properly unwilling to _____ them before her friends.
A) deprecatory about ò flaunt
B) excited by ò parade
C) uncertain of ò concede
 5. Although its publicity has been _____, the film itself is intelligent, well-acted, handsomely produced and altogether _____.
A) tasteless ò respectable
B) perfect ò spectacular
C) sophisticated ò amateur

5. Interpretative passage (5 Marks)
- The most curious fact about the detective story is that it makes its greatest appeal precisely to those classes of people who are most immune to other forms of daydream literature. The typical detective story addict is a fairly successful professional man with intellectual interests and well read in his own field, who would never read gossip movie magazines or comics. It is sometimes said that detective stories are read by respectful, law-abiding citizens in order to gratify, in fantasy, the violent wishes they dare not translate into action, but it is quite false. Detective fiction is a work of art where the author skillfully holds the attention of the reader, never letting him be sure, making him suspect every character by turn, until the last page, where the real culprit is revealed. All classics in detective fiction, *Crime and Punishment*, *The Trial* etc. are examples of this. Of course, there is pulp literature also where the authors just churn out cheap stories based on a standard formula of sex, blood and violence.

- I) The word 'curious' in line 1 means:
A) Inquisitive
B) Unusual
C) Prying
- II) The author asserts that readers of detective fiction are:
A) People bent on satisfying an unconscious thirst for blood
B) Dreamers unable to face the monotony of everyday reality
C) Believers in a story well told
- III) The opening paragraph suggests that the author considers movie magazines and comics to be:
A) Sources of factual data about society
B) Less addictive than detective fiction
C) The typical literary fare of professionals
- IV) The author's attitude to detective fiction can best be described as:
A) Profound veneration
B) Genuine appreciation
C) Aloof indifference
- V) The author emphasizes classic detective fiction as one that is:
A) Free of cheap gimmicks
B) Marked by suspense
C) Moves in a chronological manner

SAMPLE QUESTIONS FOR MASTER OF PUBLIC HEALTH

- Q1) Which is the source of Chlorofluorocarbons?
A. Thermal Power Plants
B. Automobiles
C. Refrigeration and Air . conditioning
D. Fertilizers
- Q2) Among cereals and millets richest source of calcium is:
A. Rice
B. Bajra
C. Maize
D. Ragi
- Q3) Bissinosis is common in:
A. Farmers
B. Textile Industry
C. Gold mine
D. Cement factory
- Q4) The most populous state in India is:
A. Uttar Pradesh
B. Bihar
C. Madhya Pradesh
D. Kerala
- Q5) A doctor suggested to a couple not to have more than one child because of
A. Rh+ male Rh- female
B. Rh- male Rh+ female
C. Rh+ male Rh+ female
D. Rh- male Rh- female
- Q 6) Acquired immunity is found in
A. Invertebrates
B. Vertebrates
C. Some Invertebrates
D. Both vertebrates and invertebrates
- Q 7) The incubation period of rabies ranges from .
A. 1 to 2 days
B. 3 to 4 days
C. 5 to 6 days
D. 10 days to 1 year
- Q 8) At birth immunization required is
A. BCG and OPV-O
B. DPT-1
C. DPT-1 and OPV-1
D. Measles
- Q9) Anthracosis is caused due to
A. Coal Dust
B. Silica
C. Fe
D. Tobacco
- Q 10) Gini Index is associated with
A. Distribution of diseases
B. Distribution of Income
C. Distribution of deaths
D. Distribution of pollutants

SAMPLE QUESTIONS FOR M.A. (English)

- I. The writing tasks given below will help us assess your proficiency in organizing your thoughts and presenting them in a coherent manner. Please complete within 250-300 words, writing at least two paragraphs:

Social networking is the lifeline on the younger generation but some older people feel that it is a waste of time. What is your opinion about social networking? State YOUR view clearly, giving episodes or ideas from your own experience.

OR

Focus in basic education is currently shifting towards a skill-based rather than a knowledge-based model. Do you think this shift will be productive in the long run? Give your opinion on the changes that you see in the Indian system of education.

- II. Attempt a critical appreciation of the poem given below:

FUNERAL BLUES

Stop all the clocks, cut off the telephone,
Prevent the dog from barking with a juicy bone,
Silence the pianos and with muffled drum
Bring out the coffin, let the mourners come.

Let aeroplanes circle moaning overhead
Scribbling on the sky the message. He is Dead,
Put crepe bows round the white necks of the public doves,
Let the traffic policemen wear black cotton gloves.

He was my North, my south, my East and West,
My working week and my Sunday rest,
My noon, my midnight, my talk, my song;
I thought that love would last forever: I was wrong.

The stars are not wanted now; put out every one,
Pack up the moon and dismantle the sun,
Pour away the ocean and sweep up the woods;
For nothing now can ever come to any good.

OR

The World is too much with us

The world is too much with us; late and soon,
Getting and spending, we lay waste our powers:
Little we see in Nature that is ours;
We have given our hearts away, a sordid boon!
This Sea that bares her bosom to the moon;
The winds that will be howling at all hours,
And are up-gathered now like sleeping flowers;
For this, for everything, we are out of tune,
It moves us not. - Great God! I'd rather be
A Pagan suckled in a creed outworn;
So might I, standing on this pleasant lea,
Have glimpses that would make me less forlorn;
Have sight of Proteus rising from the sea;
Or hear old Triton blow his wreathed horn.

- III. Answer any FOUR in 50-100 words each:
- The difference between heroic and mock heroic modes
 - The hallmark of eighteenth century satire
 - Some of the features of comedy of manners
 - What were the reasons for the rise of the novel?
 - Why did modern poets choose to write free verse?

SAMPLE MULTIPLE CHOICE QUESTIONS FOR M.A. (GEOGRAPHY)

1. The temperature of Thiruvananthapuram is lower than that of Mumbai in May and higher than that of Mumbai in January because:
 - A) Thiruvananthapuram has a cold current and Mumbai a warm current
 - B) Thiruvananthapuram has higher rainfall in summer and it is closer to the equator.
 - C) Thiruvananthapuram is on the windward side and Mumbai is on the leeward side.
 - D) Thiruvananthapuram is thickly vegetated while Mumbai is not
2. Which of the following is not a characteristic of a barchan?
 - A) Its horns point in a down wind direction.
 - B) It has a crescent shape
 - C) Its windward slope is concave
 - D) It moves in the direction of the wind.
3. If the number of a Survey of India topographical sheet is 53 E/1, its scale is:
 - A) 1:25 000
 - B) 1:50 000
 - C) 1:250 000
 - D) 1:5000
4. Coral reefs are to be found in:
 - A) Polar latitudes
 - B) Tropical latitudes
 - C) Temperate latitudes
 - D) All of the above
5. The age and sex composition of the population is best represented by
 - A) Choropleth
 - B) Isopleth
 - C) Pie Diagram
 - D) Pyramid Diagram
6. Which of the following is an antecedent river?
 - A) Beas
 - B) Satluj
 - C) Ravi
 - D) Jhelum
7. Representative Fraction is a method used for showing
 - A) Scale on the map
 - B) Direction on the map
 - C) Contours on the map
 - D) Distance on the map
8. Which of the following is not a method used for finding north
 - A) Pole Star method
 - B) Similar Triangles method
 - C) Watch method
 - D) Rod method
9. Following is an example of cold desert
 - A) Sahara
 - B) Kalahari
 - C) Gobi
 - D) Mojave
10. Mercator's Projection was used primarily for drawing
 - A) Distribution Maps
 - B) Political Maps
 - C) Navigational Maps
 - D) Cadastral Maps

SAMPLE MULTIPLE CHOICE QUESTIONS FOR MASTERS IN DISASTER MANAGEMENT

1. Spread of epidemics is associated with
 - A) Floods
 - B) Landslides
 - C) Earthquake
 - D) Volcanic Eruption
2. The switching over from the use of diesel to CNG is important because:
 - A) CNG is cheaper than diesel
 - B) Diesel is polluting fuel and CNG is non-polluting fuel
 - C) CNG is easily available
 - D) CNG is a non renewable resource
3. Which of the following is caused due to water contamination?
 - A) Oral Cancer
 - B) Hypertension
 - C) Gastroenteritis
 - D) Tuberculosis
4. Which of the following is a conventional source of energy
 - A) Solar Energy
 - B) Thermal Energy
 - C) Tidal Energy
 - D) Wind Energy
5. Which of the following is a primary activity?
 - A) Teaching
 - B) Retail trade
 - C) Mining
 - D) Tailoring
6. RIO-10 (The World Summit for Sustainable Development) in 2002 was held at
 - A) Keo Karo (India)
 - B) Johannesburg (South Africa)
 - C) New York (USA)
 - D) Melbourne (Australia)
7. Approximately 71% surface of earth is covered with water bodies, ice caps and glaciers that is why earth is also known as:-
 - A) Blue Planet
 - B) Green Planet
 - C) White Planet
 - D) Yellow Planet
8. Which of the following is eco-friendly way of managing kitchen waste?
 - A) Open dumping
 - B) Land filling
 - C) Burning
 - D) Vermi Composting

9. Indian Cheetah and Dodo bird are:
 - A) Vulnerable species
 - B) Extinct species
 - C) Threatened species
 - D) Rare species
10. Harike wetland is located on confluence of which two rivers?
 - A) Ganga-Yamuna
 - B) Chandra-Bhaga
 - C) Ganga-Brahmaputra
 - D) Beas-Satluj

SAMPLE MULTIPLE CHOICE QUESTIONS FOR MASTERS IN REMOTE SENSING & GIS

1. Consider the following statements:

A The representative fraction of a map = $\frac{\text{distance on the ground}}{\text{distance on the map}}$

B the denominator of the representative fraction is always once

 - A) A only
 - B) B only
 - C) Both A and B
 - D) Neither A or B
2. Map showing the depths of oceans and seas is termed as:
 - A) Ethnographic map
 - B) Orographic map
 - C) Bathymetric map
 - D) Geological map
3. Which one of the following is the largest scale of map?
 - A) 1 : 10 000
 - B) 1 : 50 000
 - C) 1: 100 000
 - D) 1 : 1000 000
4. Kaziranga is famous for:
 - A) Great Indian Bustard
 - B) One horned rhino
 - C) Cheetah
 - D) Ostrich
5. In the topographical sheet settlements are represented by
 - A) Green Color
 - B) White Color
 - C) Red Color
 - D) Black Color
6. Silent Valley is located in
 - A) Kashmir
 - B) Kerala
 - C) Uttaranchal
 - D) Tamil Nadu
7. Which of the following is a perspective projection?
 - A) Cylindrical Equal Area
 - B) Bonne's Projection
 - C) Gnomonic Projection
 - D) Sinusoidal Projection
8. The point vertically below the camera lens in a photograph is called:
 - A) Ground point
 - B) Principal point
 - C) Isocenter
 - D) Ground nadir point
9. Which one of the following is the smallest scale of map?
 - A) 1: 10 000
 - B) 1:50 000
 - C) 1: 100 000
 - D) 1: 1000 000
10. Output Device of a computer is:
 - A) Keyboard
 - B) Printer
 - C) Monitor
 - D) Speaker
11. Pixel refers to
 - A) Picture element
 - B) Picture effect
 - C) Perfect element
 - D) Primary element
12. The term GPS refers to:
 - A) Global Prevention System
 - B) Global Protection System
 - C) Global Positioning System
 - D) None of the above.
13. The term GIS refers to:
 - A) Geographical Informative System
 - B) Global Information System
 - C) Geological Information System
 - D) Geographical Information System

SAMPLE MULTIPLE CHOICE QUESTIONS FOR M.E. (CHEMICAL)

Pick-up the correct option:

1. One mole of Nitrogen at 8 bar and 600K is contained in a piston-cylinder arrangement. It is brought to 1 bar isothermally against a resisting pressure of 1 bar. The work done (in Joules) by the gas is
 - (a) 30554
 - (b) 10373
 - (c) 4988.4
 - (d) 4364.9
2. For water at 300°C, it has a vapour pressure 8592.7 kPa and fugacity 6738.9 kPa. Under these conditions, one mole of water in liquid phase has a volume 25.28 cm³, and that in vapour phase 391.1 cm³. Fugacity of water (in kPa) at 9000 kPa will be
 - (a) 6738.9
 - (b) 6753.5
 - (c) 7058.3
 - (d) 900
3. A dilute aqueous solution is to be concentrated in an evaporator system. High pressure steam is available. Multiple effect evaporator system is employed because.
 - (a) total heat transfer area of all the effects is less than that in a single effect evaporator system
 - (b) total amount of vapour produced per kg of feed steam in a multieffect system is much higher than in a single effect
 - (c) boiling point elevation in a single effect system is much higher than that in any effect in a multieffect system.
 - (d) heat transfer coefficient in a single effect is much lower than that in any effect in a multieffect system
4. Minimum reflux ratio in a distillation column results in
 - (a) Optimum number of trays
 - (b) Minimum reboiler size
 - (c) Maximum condenser size
 - (d) Minimum number of trays
5. An elementary liquid phase decomposition reaction $A \xrightarrow{k} 2B$ is to be carried out in a CSTR. The design equation is
 - (a) $k\tau = \frac{X_A}{(1 - X_A)}$
 - (b) $k\tau = X_A \frac{(1 - X_A)}{1 - X_A}$
 - (c) $k\tau = \frac{X_A}{(1 - X_A)}$
 - (d) $k\tau C_{AO} = \frac{X_A / (1 + X_A)^2}{(1 - X_A)^2}$
6. Match the following dimensionless numbers with the appropriate ratio of forces.

Dimensionless Number	Ratio of forces
P Froude Number	1. Shear force/internal force
Q Reynolds Number	2. Convective heat transfer/conductive heat transfer
R Friction Factor	3. Gravitational force/viscous force
S Nusselt Number	4. Inertial force/viscous force
	5. Inertial force/ gravitational force

 - (a) P-1, Q-2, R-5, S-3
 - (b) P-5, Q-4, R-3, S-2
 - (c) P-5, Q-4, R-1, S-2
 - (d) P-3, Q-4, R-5, S-1

7. A process stream of dilute aqueous solution flowing at the rate of 10 Kg s^{-1} is to be heated. Steam condensate at 95°C is available for heating purpose, also at a rate of 10 kgs^{-1} . A 1-1 shell and tube heat exchange is available. The best arrangement is
 - (a) counterflow with process stream on shell side
 - (b) counterflow with process stream on tube side
 - (c) parallel flow with process stream on shell side
 - (d) parallel flow with process stream on tube side
8. The Reynolds Number of the liquid was increased 100 fold for a laminar falling film used for gas-liquid contacting. Assuming penetration theory is applicable, the fold-increase in the mass transfer coefficient (k_c) for the same system is:
 - (a) 100
 - (b) 10
 - (c) 5
 - (d) 1
9. A closed-loop system is stable when the gain margin is:
 - (a) >1
 - (b) <1
 - (c) 1
 - (d) Zero
10. The aerosols important in air pollution range from:
 - (a) 0.01 to $100 \mu\text{m}$
 - (b) $100 \mu\text{m}$ to $100 \mu\text{m}$
 - (c) $0.001 \mu\text{m}$ to $0.01 \mu\text{m}$
 - (d) $<0.001 \mu\text{m}$
11. The order of convergence in Newton-Raphson method is:
 - (a) 2
 - (b) 3
 - (c) 0
 - (d) 1
12. Runge-Kutta method is used to solve:
 - (a) linear algebraic equations
 - (b) linear simultaneous equations
 - (c) ordinary differential equations of first order and first degree with given initial condition
 - (d) partial differential equations

SAMPLE QUESTIONS FOR M.E. (FOOD TECHNOLOGY)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. The limiting value of Sherwood number for mass transfer from a spherical object is equal to <ol style="list-style-type: none"> (A) 2 (B) 3 (C) 4 (D) 0.5 2. The primary protein in milk is <ol style="list-style-type: none"> (A) casein (B) tryptophan (C) lysine (D) glutenin 3. Percentage of fat in butter is <ol style="list-style-type: none"> (A) 50 (B) 60 (C) 70 (D) 80 4. The power consumed by a drum dryer depends upon <ol style="list-style-type: none"> (A) Drum speed (B) Steam Pressure | <ol style="list-style-type: none"> (C) Pressure exerted by the blade on the drums (D) Length and diameter of the drum 5. Freeze drying time is directly proportional to the _____ of the material being dried. <ol style="list-style-type: none"> (A) thickness (B) square of the thickness (C) cube of thickness (D) fourth power of thickness 6. With increase in concentration of solute in a solution, boiling point <ol style="list-style-type: none"> (A) decreases (B) increases (C) remains constant (D) none of these 7. The major forces acting in cyclone separator are <ol style="list-style-type: none"> (A) gravity and centrifugal |
|--|--|

- (B) gravity and centripetal
(C) centrifugal and centripetal
(D) None of these
8. Ultra filtration is used for production of
(A) Butter
(B) Ghee
(C) Cheese
(D) Ice-cream
9. Vacuum packaging is normally used for
- (A) milk powder
(B) paneer
(C) yoghurt
(D) None of these
10. The water activity of free water should be
(A) 1
(B) less than one
(C) more than one
(D) 0

Pick-up the correct option:

13. One mole of Nitrogen at 8 bar and 600K is contained in a piston-cylinder arrangement. It is brought to 1 bar isothermally against a resisting pressure of 1 bar. The work done (in Joules) by the gas is
(e) 30554
(f) 10373
(g) 4988.4
(h) 4364.9
14. For water at 300°C, it has a vapour pressure 8592.7 kPa and fugacity 6738.9 kPa. Under these conditions, one mole of water in liquid phase has a volume 25.28 cm³, and that in vapour phase 391.1 cm³. Fugacity of water (in kPa) at 9000 kPa will be
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(g) boiling point elevation in a single effect system is much higher than that in any effect in a multieffect system.
(h) heat transfer coefficient in a single effect is much lower than that in any effect in a multieffect system
16. Minimum reflux ratio in a distillation column results in
(e) Optimum number of trays
(f) Minimum reboiler size
(g) Maximum condenser size
(h) Minimum number of trays
17. An elementary liquid phase decomposition reaction $A \xrightarrow{k} 2B$ is to be carried out in a CSTR. The design equation is
(e) $k\tau = \frac{X_A}{(1 - X_A)}$
(f) $k\tau = X_A \frac{(1 - X_A)}{1 - X_A}$
(g) $k\tau = \frac{X_A}{(1 - X_A)}$
(h) $k\tau C_{AO} = \frac{X_A / (1 + X_A)^2}{(1 - X_A)^2}$
18. Match the following dimensionless numbers with the appropriate ratio of forces.
- | | Dimensionless Number | Ratio of forces |
|---|----------------------|--|
| P | Froude Number | 1. Shear force/internal force |
| Q | Reynolds Number | 2. Convective heat transfer/conductive heat transfer |

R Friction Factor
S Nusselt Number

3. Gravitational force/viscous force
4. Inertial force/viscous force
5. Inertial force/ gravitational force

- (e) P-1, Q-2, R-5, S-3
- (f) P-5, Q-4, R-3, S-2
- (g) P-5, Q-4, R-1, S-2
- (h) P-3, Q-4, R-5, S-1

19. A process stream of dilute aqueous solution flowing at the rate of 10 Kg s^{-1} is to be heated. Steam condensate at 95°C is available for heating purpose, also at a rate of 10 kgs^{-1} . A 1-1 shell and tube heat exchange is available. The best arrangement is
- (e) counterflow with process stream on shell side
 - (f) counterflow with process stream on tube side
 - (g) parallel flow with process stream on shell side
 - (h) parallel flow with process stream on tube side
20. The Reynolds Number of the liquid was increased 100 fold for a laminar falling film used for gas-liquid contacting. Assuming penetration theory is applicable, the fold-increase in the mass transfer coefficient (k_c) for the same system is:
- (e) 100
 - (f) 10
 - (g) 5
 - (h) 1
21. A closed-loop system is stable when the gain margin is:
- (a) >1
 - (b) <1
 - (c) 1
 - (d) Zero
22. The aerosols important in air pollution range from:
- (a) 0.01 to $100 \mu\text{m}$
 - (b) $100 \mu\text{m}$ to $100 \mu\text{m}$
 - (c) $0.001 \mu\text{m}$ to $0.01 \mu\text{m}$
 - (d) $<0.001 \mu\text{m}$
23. The order of convergence in Newton-Raphson method is:
- (a) 2
 - (b) 3
 - (c) 0
 - (d) 1
24. Runge-Kutta method is used to solve:
- (a) linear algebraic equations
 - (b) linear simultaneous equations
 - (c) ordinary differential equations of first order and first degree with given initial condition
 - (d) partial differential equations

SAMPLE QUESTIONS FOR M.TECH. (POLYMER)

Pick-up the correct option:

1. Polymer formed in cationic Polymerization has
 - a) narrow molecular weight distributions
 - b) medium molecular weight distributions
 - c) broad molecular weight distributions
 - d) general isotactic structure
2. Thermokol is the trade name of
 - a) high impact polystyrene
 - b) general purpose polystyrene
 - c) acrylonitrile-butadiene-styrene
 - d) expanded polystyrene
3. The order of convergence in Newton-Raphson method is:
 - a) 2
 - b) 3
 - c) 0
 - d) 1
4. Runge-Kutta method is used to solve:
 - a) linear algebraic equations
 - b) linear simultaneous equations
 - c) ordinary differential equations of first order and first degree with given initial condition
 - d) partial differential equations
5. For an isotherm process, pressure, P and Bulk modulus, K is related as:
 - a) $K = P$
 - b) $K = P$
 - c) $K = P/$
 - d) $K = p^2$
6. Which one of the following fluids is essentially a non-Newtonian fluid under normal working conditions?
 - a) blood
 - b) thin lubricating oil
 - c) water
 - d) air
7. The pressure drop per unit length of a pipe under laminar flow condition is:
 - a) $\frac{32\mu V_{av}}{d^2}$
- b) $\frac{128\mu Q}{\pi d^4}$
- c) either (a) or (b)
- d) none of these
8. The LMTD correction factor F_T :
 - a) increases with decrease in number of shell passes
 - b) increases with increase in number of shell passes
 - c) remains constant with the increase in number of shell passes
 - d) any one of the above, depending upon the type of exchanger.
9. In case of a packed tower, HETP varies with:
 - a) type and size of packing
 - b) flow rate of each fluid
 - c) concentration of each fluid
 - d) all of above
10. For a binary mixture at constant temperature, with the increase of total pressure, the relative volatility:
 - a) decreases
 - b) increases
 - c) remains constant
 - d) none of these
11. An irreversible first order reaction is carried out in a PFTR and CSTR of same volume. The liquid flow rates are same in each reactor. The relative conversion will be:
 - a) less in pftr than in cstr
 - b) more in cstr than in pftr
 - c) less in cstr than in pftr
 - d) same in each reactor
12. Grizzlies are used for screening solid particles of:
 - a) large size
 - b) small size
 - c) very small size
 - d) any one of the above

SAMPLE QUESTIONS FOR M.SC. (INDUSTRIAL CHEMISTRY)

PART-A : MATHEMATICS

- Q.1. If x be real, $\frac{x^2 + 342 - 71}{x^2 + 2x - 7}$ can have no value between
- (3,7)
 - (4,8)
 - (5,9)
 - (10,15)
- Q.2. The set of equation $x + y - 2z = 0$, $2x - 3y + z = 0$, $x - 5y + yz = k$ is consistent for
- $K = 0$
 - $K = 1$
 - $K = 2$
 - $K = 5$
- Q.3. If $U = \frac{x^4 + y^4}{x + y}$, show that $x \frac{\partial U}{\partial x} + y \frac{\partial U}{\partial y}$ is equal to
- U
 - $2U$
 - $3U$
 - $5U$

PART-B: PHYSICS

- Q.4. Out of \vec{F}_m , \vec{V} and \vec{B} in the relation $\vec{F}_m = q(\vec{V} \times \vec{B})$ which of the following pairs can have any angle between them.
- \vec{V} and \vec{B}
 - \vec{F} and \vec{V}
 - \vec{F}_m and \vec{B}
 - None of the above
- Q.5. A body under the action of inverse square force will follow an elliptical path, if eccentricity
- $e=0$
 - $e=1$
 - $e>1$
 - $e<1$ (Positive)
- Q.6. If $\vec{B} = \text{curl } \vec{A}$, then
- $\vec{\nabla} \cdot \vec{B} = 0$
 - $\vec{\nabla} \cdot \vec{B} = 1$
 - $\vec{\nabla} \cdot \vec{B} = A$
 - $\vec{\nabla} \cdot \vec{B} = -1$

PART-C : CHEMISTRY

Q.7. The IUPAC name for $\text{CH}_3\text{CH}_2\text{C}(\text{O})\text{OCH}_3$ is



- (a) methyl propanoate
 - (b) Propanedioic acid
 - (c) 2-propanol
 - (d) 3-oxo-1-methyl butane
- Q.8. The number of NMR signals for the compound $\text{CH}_3\text{OCH}_2\text{CH}_3$ is
- (a) One signal (singlet)
 - (b) Two signals (one singlet, one multiplet)
 - (c) Three signals (singlets)
 - (d) Three signals (singlet, quartet, triplet)
- Q.9. When Propane is treated with HBr in the presence of a peroxide
- (a) Bromopropane is formed
 - (b) n-propyl bromide
 - (c) Allyl bromide is formed
 - (d) None of these

PART-D : INDUSTRIAL CHEMISTRY

- Q.10. The Fourier number (N_{Fo}) is defined as
- (a) tL^2/α
 - (b) hL/k
 - (c) $\alpha t/L^2$
 - (d) hk/L
- Q.11. Baffles are provided in the heat exchanger to increase
- (a) fouling factor
 - (b) heat transfer area
 - (c) heat transfer coefficient
 - (d) heat transfer rate
- Q.12. Relative volatility, α , for a binary system
- (a) decrease with increase in pressure
 - (b) increase with increase in pressure
 - (c) increase with increase in temperature at constant pressure.
 - (d) has no significance in distillation operation

SAMPLE QUESTIONS FOR

ME Electrical Engg. (Instrumentation & Control) Regular programme

1. Which term applies to the maintaining of a given signal level until the next sampling?
 1. Holding
 2. Aliasing
 3. Shannon frequency sampling
 4. Stair-stepping
2. What does a Hall Effect sensor sense?
 - A) Temperature
 - B) Moisture
 - C) Magnetic fields
 - D) Pressure
3. Two copper-constantan thermocouples are connected such that the two constantan wires are joined together. The two copper wires are connected to the input of a low noise chopper stabilized differential amplifier having a gain of 1000. One of
5. Addressing mode of the instruction- ORL A, @ R0 is:
 - A) Direct
 - A) Indirect
 - C) Register
 - D) Immediate
6. Which type of programming is typically used for digital signal processors?
 - A) Assembly language
 - B) Machine language
 - C) C
 - D) None of the above
7. A phase lag compensation coil
 - A) Improves relative stability
 - B) Increases bandwidth
 - C) Increases overshoot
 - D) None of the above

- the thermocouple junctions is immersed in a flask containing ice and water in equal proportion. The other thermocouple is at a temperature T . If the output of the amplifier is 2.050V, the temperature T is
- 205°C
 - 102.5°C
 - 51.25°C
 - 50°C
4. A second order feedback system is found to be oscillating with a high frequency. The oscillations
- Can be reduced by increasing the proportional action.
 - Can be reduced by increasing the integral action.
 - Can be reduced by increasing the derivative action.
 - Cannot be reduced.
8. Which one of the following is Programmable Interrupt Controller?
- 8257
 - 8254
 - 8255
 - 8259
9. RTDs are typically connected with other fixed resistors
- In a pi configuration
 - In a bridge configuration
 - And variable resistors
 - And capacitors in a filter-type circuit
10. For a first order instrument a 5% settling time is equal to
- Three times the time constant.
 - Two times the time constant.
 - The time constant.
 - Time required for the output signal to reaches 5% of the final value.

Sample Questions for

M.E. (Electronics and Communication Engineering) Regular Programme

- Which rectifier requires four diodes?
 - half-wave voltage doubler
 - full-wave voltage doubler
 - full-wave bridge circuit
 - voltage quadrupler
- If the input is a rectangular pulse, the output of an integrator is a
 - Sine wave
 - Square wave
 - Ramp
 - Rectangular pulse
- The energy gap in a semiconductor
 - Increases with temperature
 - Does not change with temperature
 - Decreases with temperature
 - Is zero
- The LASER diode sources require
 - Spontaneous emission
 - Absorption
 - Stimulated emission
 - None of the above
- 2's complement representation of a 16-bit number (one sign bit and 15 magnitude bits) is FFFF. Its magnitude in decimal representation is
 - 0
 - 1
 - 32, 767
 - 65, 565
- The Boolean function $Y=AB + CD$ is to be realized using only 2 input NAND gates. The minimum number of gates required is
 - 2
 - 3
 - 4
 - 5
- Which device is considered a current controlled device:
 - Diode
 - Field effect transistor
 - Transistor
 - Resistor
- In an amplifier, the emitter junction is
 - Forward Biased
 - Reverse Biased
 - Grounded
 - Shorted
- Unijunction Transistor has three terminals,
 - Cathode, Anode, Gate
 - Grid, Plate, Cathode
 - Base 1, Base 2, Emitter
 - Gate, Base 1, Base 2
- GSM stands for
 - Global System for Mobile Communication
 - Global System for Multiplexing
 - Group System for Mobile Communication
 - None of these

Sample Questions for

M.E. (Computer Science & Engineering) Regular Programme

1. Which of the following is the name of the data structure in a compiler that is responsible for managing information about variables and their attributes?
A) Abstract Syntax tree
B) Symbol Table
C) Variable value stack
D) Parse tree
2. Seven (distinct) car accidents occurred in a week. What is the probability that they all occurred on the same day?
A) $1/7^7$
B) $1/7^6$
C) $1/2^7$
D) $7/2^7$
3. Which of the following statements is false
A) As unambiguous grammar has same leftmost and rightmost derivation
B) An LL (1) parser is top down parser
C) LALR is more powerful than SLR
D) An ambiguous grammar can never be LR (k) for any k
4. What will be the output of the following program?

```
void main()
{int var 1 = 10, var2 = 20, var3;
Var3 = var1++ + ++var2;
Printf("%d%d%d+", var1, var2, var3);}
```


A) 10 20 30
B) 11 21 31
C) 10 21 30
D) 11 21 30
5. Which of the following data structures will allow mergesort to work in $O(n \log n)$ time?
I. A singly linked list
II. A doubly linked list
III. An array
A) III only
B) I and II only
C) II and III only
D) I, II and III
6. In the internet Protocol (IP) suite of protocols, which of the following best describes the purpose of the Address Resolution Protocol?
A) To translate Web addresses to host names
B) To determine the IP address of a given host name
C) To determine the hardware address of a given host name
D) To determine the hardware address of a given IP address
7. The binary relation $R = \{ (1,1), (2,1), (2,2), (2,3), (2,4), (3,1), (3,2), (3,3), (3,4) \}$ on the set $A = \{1,2,3,4\}$ is:
A) reflexive, symmetric and transitive
B) neither reflexive, nor irreflexive but transitive
C) irreflexive, symmetric and transitive
D) irreflexive and antisymmetric
8. Consider the following statements:
(i) First-in first-out types of computations are efficiently supported by STACKS
(ii) Implementing LISTS on linked lists is more efficient than implementing LISTS on an array for almost all the basic LIST operations
(iii) Implementing QUEUES on a circular array is more efficient than implementing QUEUES on a linear array with two indices
(iv) Last . in . first . out type of computations are efficiently supported by QUEUES
A) (ii) and (iii) are true
B) (i) and (ii) are true
C) (iii) and (iv) are true
D) (ii) and (iv) are true
9. A binary search tree is generated by inserting in order of following integers
50,15,62, 5, 20, 58, 91, 3, 8, 37, 60, 24

The number of nodes in the left subtree and right subtree of the root respectively is

- A) (4, 7)
- B) (7, 4)
- C) (8, 3)
- D) (3, 8)

10. A directed graph with n vertices and e edges are represented by Adjacency matrix. What is the time required to determine the in-degree of a vertex?

- A) $O(e)$
- B) $O(n)$
- C) $O(n^2)$
- D) $O(e+n)$

Sample Questions for

ME Civil Engineering (Construction Technology & Management) Regular Programme

- Q.1. Mass moment of inertia of a uniform thin rod of mass M and length (l) about its mid-point and perpendicular to its length is
- (a) $\frac{2}{3} Ml^2$ (b) $\frac{1}{3} Ml^2$ (c) $\frac{3}{4} Ml^2$ (d) $\frac{4}{3} Ml^2$
- Q.2. The point of contraflexure is a point where
- (a) Shear force changes sign (b) Bending moment changes sign
(c) Shear force is maximum (d) Bending moment is maximum
- Q.3. In order to avoid tendency of separation at throat in a venturimeter, the ratio of the diameter at throat to the diameter of pipe should be
- (a) $\frac{1}{16}$ to $\frac{8}{8}$ (b) $\frac{1}{8}$ to $\frac{1}{4}$ (c) $\frac{1}{4}$ to $\frac{1}{3}$ (d) $\frac{1}{3}$ to $\frac{1}{2}$
- Q.4. The main cause of silting in channel is
- (a) Non-regime section (b) Inadequate slope
(c) Defective head regulator (d) All of these
- Q.5. Weight of a vehicle affects
- (a) Passing sight distance (b) Extra widening
(c) Pavement thickness (d) Width of lanes
- Q.6. The difference between maximum void ratio and minimum void ratio of a sand sample is 0.30. If the relative density of this sample is 66.6% at a void ratio of 0.40 then the void ratio of this sample at its loosest state will be
- (a) 0.40 (b) 0.60 (c) 0.70 (d) 0.75
- Q.7. The diagonal tension in concrete can be resisted by providing
- (a) Diagonal tension reinforcement (b) Shear reinforcement
(c) Inclined tension reinforcement (d) All these
- Q.8. Rivet value is equal to
- (a) Strength of a rivet in shearing
(b) Strength of a rivet in bearing
(c) Minimum of the value obtained in (a) and (b)
(d) Maximum of the value obtained in (a) and (b)
- Q.9. Rise and fall method is used in
- (a) Profile leveling (b) Differential leveling
(c) Check leveling (d) Non of these
- Q. 10. The alkaline salt present in the bricks, absorbs moisture from the air which on drying
- (a) Leaves pores and makes the bricks porous
(b) Leaves high powder deposit on the brick
(c) Makes the brick brittle and weak
(d) All of these

Sample Questions for

ME Mechanical Engineering (Manufacturing Technology) Regular Programme

- Q.1. An inertial frame of reference has
(a) Fixed origin but directions of axes can change with time
(b) Fixed origin as well as fixed directions of its axes
(c) Fixed directions of axes but origin can change with time
(d) Any of the above
- Q.2. Dimensional formula for Young's modulus of elasticity is
(a) $ML^{-1}T^{-2}$
(b) MLT^{-2}
(c) $M^{-1}L^{-1}T^{-1}$
(d) $ML^{-2}T^{-2}$
- Q.3. Which of the following processes would be best suited for stress relieving, improving machineability and ductility in casting and deep drawn components
(a) Austempering
(b) Tempering
(c) Normalising
(d) Annealing
- Q.4. The pressure intensity at a point in a fluid is same in all directions, only when
(a) The fluid is frictionless
(b) The fluid is frictionless and incompressible
(c) The fluid has zero viscosity and is at rest
- Q.5. In orthogonal cutting, cutting face is inclined to the direction of cut at
(a) 90 degree
(b) Less than 90 degree
(c) Between 30 and 45 degrees
(d) Greater than 90 degree
- Q.6. In statistical quality control $\pm 3\sigma$ means the percentage of items within acceptable limits will be:
(a) 68.26
(b) 95.46
(c) 99.73
(d) 50
- Q.7. In the specification of fits
(a) Allowance is equal to twice the tolerance
(b) Allowance is equal to half of tolerance
(c) Allowance is independent of tolerance
(d) Allowance is equal to the difference between maximum material limit mating parts.

Sample Questions for Master of Business Economics (MBE)

- | | |
|---|--|
| 1. Accounting is the language of .
A. Business
B. Books of Accounts
C. Accountant
D. None of these | 6. An agreement enforceable by law is called .
A) Voidable Contract
B) Void Agreement
C) Legal Agreement
D) Valid Contract |
| 2. Which of the following is not included under accounting concepts?
A) Money Measurement Concept
B) Business Entity Concept
C) Continuity Concept
D) None of these | 7. The Sale of Goods Act came into force from .
A) July 1, 1932
B) July 1, 1930
C) July 1, 1935
D) July 1, 1940 |
| 3. Which expenses is of Capital Nature?
A) Depreciation
B) Wages | 8. The value of the variable which occurs most frequently in a distribution is called .
A) Mode B) Mean |

- C) Salary
D) Stationary
4. Dividend can be declared from .
A) Revenue Profit
B) Capital Profit
C) Secret Reserve
D) All of these
5. Privatization is the result of .
A) Economic Compulsion
B) Social Compulsion
C) Global Compulsion
D) Market Compulsion
- C Median D) All of these
9. The arithmetic mean of a series is the figure obtained by dividing the sum of values all items by
A) 2 B) 3
C) 3 D) Their Number
10. Which of the following is Business Averages?
A) Moving average
B) Progressive average
C) Composite Average
D) All of these

Master of Entrepreneurship and Family Business (MEFB)

Part A: Verbal ability/Reasoning

- Disease: Health:: Freedom : ?
A) Slavery
B) Pleasure
C) Plight
D) Beauty
- If you are going to west in the afternoon, the sun will be visible at your left.
A) Never
B) Always
C) Sometimes
D) Often
- Fill in the blank with the most suitable alternative. He shouted ô ô ô ô . at the subordinate.
A) Loud
B) Loudly
C) Loudely
D) Loudingly

Part B: General Knowledge

- In which organ of the human body would you find a cluster of cells which produce insulin?
A) Bile
B) Liver
C) Pancreas
D) Brain
- Which area in India is the only breeding ground of the flamingo?
A) Rann of Kutch
B) North East
C) Himalayas
D) Bay of Bengal
- Which was the first Capital of Pakistan?
A) Karachi
B) Lahore
C) Islamabad
D) Peshawar
- Which Olympic did Milkha Singh break the world record in the 400 metres event.
A) Rome
B) Athens
C) Beijing
D) None of the above
- Kuchipudi is a dance form of
A) Tamil Nadu
B) Orissa
C) Kerala
D) None of the above

Part C: Data Interpretation

According to the survey of 2000 educated unemployed persons in which 1200 were men and 800 were women, the following data were collected.

Qualification	Unemployed Men	Unemployed Women
Doctors	12.5%	15%
Engineers	20.0%	7.5%
Trained Teachers	15.0%	22.5%
Post-Graduates	22.5%	25.0%
Graduates	30.0%	30.0%

- On the basis of above Table, what is the difference between the number of unemployed men and women doctors?
A) 20
B) 30
C) 40
D) None of the above
- The value of the variable which occurs most frequently in a distribution is called
A) Mode
B) Mean
C) Median
D) All of these
- The arithmetic mean of a series is the

2. What is the total number of unemployed Graduates?
- 425
 - 475
 - 550
 - 600

Part D: Commerce/ Economics

1. The sale of goods Act came into force from .
- July 1, 1932
 - July 1, 1930
 - July 1, 1935
 - July 1, 1940

figure obtained by dividing the sum of values all items by

- 2
 - 3
 - 5
 - Their Number
4. Which of the following is Business Averages?
- Moving average
 - Progressive average
 - Composite Average
 - All of these

Sample Questions for M.Com. (Honours)

- Which of the following presents key aspects of the process of accounting in the correct chronological order?
 - Communicating, recording and identifying
 - Recording, identifying and communicating
 - Recording, totaling and identifying
 - Identifying, recording and communicating
- Which of the following is not a function of controller?
 - Financial reporting
 - Managerial reporting
 - Money management
 - Cost management
- Ending finished goods inventory is:
 - Beginning finished goods inventory + cost of goods completed . cost of goods sold
 - Cost of goods completed . cost of goods sold
 - Beginning finished goods inventory + cost of goods completed
 - Beginning finished goods inventory - cost of goods completed + cost of goods sold
- Which of the following is also known as an inventoriable cost?
 - Period cost
 - Fixed cost
 - Product cost
 - Conversion cost
- A cost management tool that brings in its focus the activities performed to produce a product is called
 - target costing
 - life cycle costing
 - ABC
 - benchmarking
- The first Factories Act was enacted in
 - 1881
 - 1895
 - 1897
 - 1885
- If the date of incorporation of a company is 1/01/2005, the first AGM must be held before
 - figure obtained by dividing the sum of values all items by
 - 2
 - 3
 - 5
 - Their Number
- When an oligopolist individually chooses its level of production to maximize its profits, it charges a price that is
 - more than the price charges by either monopoly or a competitive market
 - less than the price charges by either monopoly or a competitive market
 - more than the price charges by a monopoly and less than the price charges by a competitive market
 - less than the price charges by a monopoly and more than the price charges by a competitive market
- Suppose that the government increases its spending by 10 per cent and also increases taxes by 10 per cent. We would expect this policy to
 - Essentially have no effect on the level of national income
 - Have a contractionary effect on national income
 - Decrease the marginal propensity to save out of each extra pound of income
 - Have an expansionary effect on national income.
- The Government of India has decided to cover all districts of the country in National Rural Employment Guarantee Programme (NREGP)
 - up to January 1, 2008
 - up to March 31, 2008
 - with effect from April 1, 2008
 - with effect from April 1, 2009
- Reserve Bank of India calculates four components of money supply, M1, M2, M3, M4. Which one of the following statement is not correct?
 - M1 = currency with public + demand deposits with banks
 - M2 = M1 + post office savings deposit
 - M3 = M1 + M2
 - M4 = M3 + total post office deposits
- What is meant by the term functional management?
 - A system of business organization

- A) 30/06/2006
B) 31/03/2006
C) 31/12/2005
D) 31/03/2005
8. The right to information under the RTI Act, 2005 includes the right to
A) Inspect works, documents, records
B) Take notes, extracts or certified copies of documents or records
C) Obtain information in form of printouts, diskettes, floppies, tapes video cassettes or in any other electronic mode or through printouts
D) All of the above
9. Long term capital asset is an asset (other than financial securities) which is held by the assessee for more than
A) 36 months
B) 12 months
C) 24 months
D) 30 months
10. The definition of Goods under the Central Sales Tax Act, 1956 does not include
A) Newspapers
B) Standing crops
C) Computer software
D) Animals
11. A rational person does not act unless
A) the action is ethical
B) the action produces marginal costs that exceed marginal benefits
C) the action produces marginal benefits that exceed marginal costs
D) the action makes money for the person
- that is based on an individual having a wide range of skills needed to administer a business
- B) A type of management that is based more on personality
C) A system that groups together various jobs and is organized by departments, sections, or functions
D) A system that supports a flat form of command chain
17. Maslow, in his triangle of human needs, showed that
A) Having challenging new tasks is a basic human need
B) Money always motivates workers
C) Safety and security is a low order human need
D) Workers will not give of their best unless they have good social events provided by the firm
18. The purpose of the Malcolm Baldrige National Quality Award is to
A) Stimulate efforts to improve quality
B) Recognize quality achievements of companies
C) Publicize successful quality programs
D) All of the above
19. The process of collecting information about the external marketing environment is
A) Environmental management
B) Environmental scanning
C) Marketing management
D) Marketing scanning
20. The correct components of the 7-S framework are
A) Share values, synergy, systems, strategy, style, staff and structure
B) Standards, strategy, style, staff skills, systems and security
C) Structure, strategy, shared values, style, staff, skills and systems
D) Strategy, synergy, shared value, standardization, skills staff and structure

Sample Questions for M.Com (Business Innovations)

- Q1) India first took part in the Olympic games in the year
A) 1920
B) 1928
C) 1972
D) 1974
- Q2) Where is the headquarters of the Oil and Natural Gas Corporation
A) Mumbai
B) Dehradun
C) Vadodara
D) Digboi
- Q3) The working languages of the UNESCO is/ are
A) English only
- Q7. 48:122::168:? .
A) 292
B) 290
C) 225
D) 215
- Q8) AKU:?:CMW:DNX
A) BGL
B) BLQ
C) BGQ
D) BLV
- Q9) Flow: River::Stagnant: ?
A. Pool
B. Rain
C. Stream
D. Canal
- Q 10) A rectangular floor is fully covered

- B) French only
- C) English and French
- D) English, French and Russian

Q4) After textiles, India's second important industry is:

- A) Sugar
- B) Jute
- C) Cement
- D) Iron and Steel

Q5) Vedanta group has been denied permission to start its activities in Niyamgiri Hills of Orissa. What activity was it pursuing?

- A) Steel Production
- B) Bauxite mining
- C) Gas exploration
- D) Timber cutting

Q6) Botany: Plants::Entomology:?

- A) Birds
- B) Plants
- C) Insects
- D) Snakes

with square tiles of identical size. The tiles on the edges are white and tiles in the interior are red. The number of white tiles is the same as the number of red tiles. A possible value of the number of tiles along the edge of the floor is

- A. 10
- B. 12
- C. 14
- D. 16

Sample Questions for MBACIT

1 C. V. Raman won the Noble Prize for

- 3. Bioscience
- 4. Chemistry
- 5. Economics
- 6. Physics

2 A.P.J. Abdul Kalam's autobiography is titled

- A) Ignited minds
- B) The Argumentative Indian
- C) The Alchemist
- D) Wings of Fire

3 SEZ Stands for

- A) Special economic zone
- B) Suez Canal
- C) Select enterprise zone
- D) Specific elite zone

4 A wheel makes 1000 revolutions in covering a distance of 88 Km. The diameter of the wheel is:

- A) 24 meter
- B) 40 meter
- C) 28 meter
- D) 14 meter

5 The difference between the ages of two persons is 10 years. 15 years ago, if the elder one was twice as old as the younger one, their present ages are

- A) 35, 25
- B) 45, 35
- C) 33, 23
- D) 30, 20

6 The sale of Goods Act came into force from .

7. The value of the variable which occurs most frequently in a distribution is called .

- A) Mode
- B) Mean
- C) Median
- D) All of these

8. The arithmetic mean of a series is the figure obtained by dividing the sum of values all items by

- E) 2
- F) 3
- G) 5
- H) Their Number

9. Which of the following is Business Averages?

- A) Moving average
- B) Progressive average
- C) Composite Average
- D) All of these

10. Which type of software is focused on supporting communication, collaboration and coordination?

- A) Groupware
- B) CRM software
- C) E-business software
- D) SCM software

11. When discussing email security, what is a Trojan Horse?

- A) A code hidden in another useful program, which has a destructive function of some sort
- B) The barrier or firewall through which all incoming email must pass.
- C) Small computer program snippets that are designed to do some harm on their host

- A) July 1, 1932
- B) July 1, 1930
- C) July 1, 1935
- D) July 1, 1940

- D) A destructive program that can spread itself automatically from one computer to the next within an email

Sample Questions for M.B.A. for Executives (MBAfEX)

Component 1: General Knowledge

1. In which organ of the human body would you find a cluster of cells which produce insulin?
 - A) Bile
 - B) Liver
 - C) Pancreas
 - D) Brain
2. Which area in India is the only breeding ground of the flamingo?
 - A) Rann of Kutch
 - B) North East
 - C) Himalayas
 - D) Bay of Bengal
3. Which was the first Capital of Pakistan?
 - A) Karachi
 - B) Lahore
 - C) Islamabad
 - D) Peshawar
4. Which Olympic did Mikha Singh break the world record in the 400 meters event?
 - A) Rome
 - B) Athens
 - C) Beijing
 - D) None of the above
5. Kuchipudi is a dance form of
 - A) Tamil Nadu
 - B) Orissa
 - C) Kerala
 - D) None of the above

Component II: Economic and Business Environment Awareness

1. A mixed economy is necessarily a _____ economy.
 - A) Controlled
 - B) Planned
 - C) Organised
 - D) None of the above
2. Which of the following internal factors influence the strategy and other decisions of the business?
 - A) Value System
 - B) Mission and objective
 - C) Management structure and nature
 - D) None of the above
3. Environment is synonymous with _____.
 - A) Task
 - B) Relations
 - C) People
 - D) Situational variables
4. Which is the full form of NTC?
 - A) National Thermal Corporation
 - B) National Textile Corporation
 - C) Non-Textile Corporation
 - D) None of the above
6. In which sector Indian Economy is growing at faster rate in 21st century (after 2000) _____

- A) Service
- B) Agriculture
- C) Manufacturing
- D) Public

Component III: Data Interpretation and Problem Solving

According to the survey of 2000 educated unemployed persons in which 1200 were men and 800 were women, the following data were collected.

Qualification	Unemployed Men	Unemployed Women
Doctors	12.5%	15%
Engineers	20.0%	7.5%
Trained Teachers	15.0%	22.5%
Post-Graduates	22.5%	25.0%
Graduates	30.0%	30.0%

- On the basis of above Table, what is the difference between the number of unemployed men and women doctors?
 - A) 20
 - B) 30
 - C) 40
 - D) None of the above
- What is the total number of unemployed Graduates?
 - A) 425
 - B) 475
 - C) 550
 - D) 600
- What is the total number of Engineers?
 - A) 300
 - B) 350
 - C) 360
 - D) 400
- In which category, unemployed men are more in percentage than unemployed women
 - A) Doctors
 - B) Engineers
 - C) Post Graduates
 - D) Graduates

Component IV: Numerical Ability

- How many pillars are needed to construct a bridge of 300 meters long, if pillars are at a distance of $12\frac{1}{2}$ meters each?
 - A) 22
 - B) 24
 - C) 25
 - D) None of the above
- If $5 \times 8 = 28$, $3 \times 7 = 12$, $8 \times 6 = 35$, then find the value of $13 \times 13 = ?$
 - A) 169
 - B) 130
 - C) 140
 - D) 144
- The ratio of boys and girls in a school is 3:2. 20% of boys and 25% of girls are scholarships holders. The percentage of students who are scholarship holders are:
 - A) 45
 - B) 53
 - C) 60
 - D) 22
- In a class M is 9th from the top, S is 8th from the bottom and R is exactly in between them. If there are three children between M and R, find out the total students
 - A) 24

- B) 25
 - C) 23
 - D) 27
5. 3, 5, 9, 17, 13, _____
- A) 44
 - B) 65
 - C) 64
 - D) 49

Component V: Verbal Ability and Reasoning

1. Disease : Health :: Freedom : ?
 - A) Slavery
 - B) Pleasure
 - C) Plight
 - D) Beauty
2. If you are going to west in the afternoon, the sun will be visible at your left.
 - A) Never
 - B) Always
 - C) Sometimes
 - D) Often
3. Fill in the blank with the most suitable alternative. He shouted _____ at the subordinate.
 - A) Loud
 - B) Loudily
 - C) Loudely
 - D) Loudingly
4. J, F, M, A, M, ?
 - A) M
 - B) J
 - C) D
 - D) S
5. In a military code CAUTION is coded as VACITNO. How will you uncode MISUNDERSTAND?
 - A) SIMUNEDSRTAND
 - B) SIMNUEDSRATDN
 - C) SMIUNDERSTAND
 - D) None of the above

Component VI: English Comprehension

The most important reason for this state of affairs, perhaps, is that India was the only country in the world to truly recognize the achievements of the Soviet-Union-rather than merely focus on the de-bilitating faults that Communism brought to its people. The people of India realized that the achievement of one hundred per cent literacy in a country much, much larger than its own and with similarly complicated ethnic and religious groupings, the rapid industrialization of a nation that was a primarily agrarian society when the Bolshevik revolution took place in 1917; the attendant revolutionary steps in science and technology, the accessibility of health care (primeval according to Western standards, perhaps, but not according to India ones) to the general population, and despite prohibition of the government of the time the vast outpourings in literature, music, art, etc., are momentous and remarkable feats in any country.

In contrast, all that the West focused on were the massive human rights violations by the Soviet State on its people, the deliberate uprooting, and mass migrations of ethnic peoples from one part of the country to another in the name of industrialization, the end of religion in short, all the tools of information were employed to condemn the ideology of Communism, so much at variance with capitalist thinking.

The difference with the Indian perception, I think here is, that while the Indians reacted as negatively to what the Soviet governments did to its people in the name of good governance (witness the imprisonment of Boris Pasternak and the formation of an intentional committee to put pressure for his release with Jawaharlal Nehru at its head), they took the pain not to condemn the people of that broad country in black and white terms; they understood that mingled in the shades of gray were grains of uniqueness. (The Russians have never failed that characteristic in themselves; they have twice experimented with completely different ideologies, Communism and Capitalism both in the space of century).

- a. Which of the following statements according to the passage is correct?
- (a) India took heed to the weak faults of Russian policies and system.
 - (b) India seriously commended the achievement of Russian, i.e. cent per cent literacy and rapid industrialization.
 - (c) The process of industrialization had already started when Russian revolution took place in 1917.
 - (d) The literature, art and music received a setback during the communist regime in Russia.
- b. The West did not focus on:
- (a) Rapid growth of nuclear weapons in Russia
 - (b) Massive human rights violation by the Soviet state on its people.
 - (c) Deliberate uprooting and mass migration of ethnic people in the name of industrialization.
 - (d) Both (b) and (c)
- c. The Indian perception of the USSR was always
- (a) Negative
 - (b) Neutral
 - (c) Counter . reactionary
 - (d) Applauding
- d. The passage is
- (a) Descriptive
 - (b) Paradoxical
 - (c) Analytical
 - (d) Thought provoking

6.

Sample Questions for M.P. Ed.

- India played hockey for the first time on Olympic Games in:
 - 1924, Paris (France)
 - 1928, Amsterdam
 - 1932, Los Angles (USA)
 - 1938, Berlin (Germany)
- A state of complete physical mental and social wellbeing and not merely the absence of disease or infirmity+. This statement which defines health is given by:
 - UNESCO
 - UNICEF
 - WHO
 - Red Cross
- Three of the following are alike in a certain way and so they form a group. Which is the one does not belong to the group?
 - Basketball
 - Volleyball
 - Hockey
 - Table Tennis
- The Sacrum consists of:
 - 3 Vertebraes
 - 4 Vertebraes
 - 5 Vertebraes
 - 7 Vertebraes
- The chief sources of vitamin A is:
 - Banana
 - Egg
 - Carrot
 - Guava
- What is the stick used in snooker called:
 - A Cue
 - Heave
 - Paddle
 - Togo
- %Shivanthi Gold Cup+ is associated with the game of:
 - Hockey
 - Football
 - Volleyball
 - Badminton
- What is the normal life span of RBCs?
 - 60 days
 - 90 days
 - 120 days
 - 150 days
- Chronological age is calculated with the help of
 - Mental qualities
 - X-rays
 - Calendar years
 - Organs and secretions
- YMCA College of Physical Education (Madras) was established in:
 - 1956
 - 1920
 - 1931
 - 1932

Sample Questions for B.P. Ed.

- The Santosh Trophy tournament first began in:
 - 1940
 - 1941
 - 1942
 - 1945
- Who is the first teacher of a child?
 - Teacher
 - His Parents
 - His environment
 - His own conscious mind
- The first Modern Olympic games were held in the year:
 - 1892
 - 1896
 - 1900
 - 1904
- Find the odd personality:
 - Baichung Bhutia
 - Kapil Dev
 - Pete Sampras
 - Jarnail singh
- Which of the following tournaments is not a part of Grand Slam Tennis?
 - Wimbledon
 - US Open
 - Australian Open
 - French Open
- Which one of the following is different from the rest of the three?
 - Football
 - Basketball
 - Cricket
 - Tennis
- The name of Tiger Woodsq is associated with:
 - Boxing
 - B) Tennis
 - Football
 - Golf
- Thomas Cupq is associated with:
 - Badminton (women)
 - Badminton (men)
 - Table Tennis (women)
 - Table Tennis (men)
- Most import ant component of level of living is?
 - Health
 - Occupation
 - Education
 - Housing
- Vinay is taller than Manu, but not as tall as Anil. Anil is taller than Manu, but not as tall as Vinay. Who is the tallest?
 - Manu
 - Vinay
 - Anil
 - Cannot be determined

- A) Australian Open
- B) Wimbledon
- C) U.S. Open
- D) German Open

as Yogesh, Karim is taller than Dillip but shorter than Manu, Who is the tallest among them?

- A) Vinay
- B) Yogesh
- C) Karim
- D) Manu

Sample Questions for M.Sc. (Hons. School) Biochemistry

1. In mammals nor-epinephrine is synthesized from:
 - A) Pyruvate
 - B) Arginine
 - C) Catechol
 - D) Tyrosine
2. Hyperglycemic agent secreted by the pancreas is:
 - A) Insulin
 - B) Lipase
 - C) Glucagon
 - D) FSH
3. Feeding of raw egg may result in the deficiency of:
 - A) Vitamin A
 - B) Choline
 - C) Biotin
 - D) Riboflavin
4. What role RNA plays in the replication of DNA:
 - A) It acts as template
 - B) It acts as primer
 - C) It acts as cofactor
 - D) It is essential activator of DNA polymerase
5. Which of the following is not involved in antigen . antibody binding:
 - A) Hydrogen bonds
 - B) Ionic Bonds
 - C) Hydrophobic Interactions
 - D) Disulphide Bonds
6. The movement of ions through ion channel can be measured with the help of:
 - A) Extra cellular electrode
 - B) Intra cellular electrode
 - C) Patch . clamp technique
 - D) Liposome fusion technique
7. The synthesis of most neuronal proteins occurs in the:
 - A) Cell body
 - B) Axon
 - C) Synapses
 - D) Dendrites
8. Which of the following amino acid does not form peptide bond:
 - A) Cysteine
 - B) Proline
 - C) Lysine
 - D) Glycine
9. Lysozyme is an enzyme which:
 - A) Hydrolyses bacterial cell wall
 - B) Is made up of RNA
 - C) Contains phospholipids
 - D) Breaks lipoproteins
10. Formation of uric acid from purines is catalysed by:
 - A) Urease
 - B) Uricase
 - C) Xanthine oxidase
 - D) Adenosine deaminase

Sample Questions for M.Sc. (Hons. School) Biophysics

- If $\vec{A} + \vec{B} = 0$
 - Vector \vec{A} and \vec{B} are perpendicular to each other.
 - Vector \vec{A} and \vec{B} are necessarily parallel.
 - Vector \vec{A} and \vec{B} must be antiparallel.
 - Vector \vec{A} and \vec{B} may be parallel or antiparallel.
- The minimum charge on a body can be:
 - one coulomb
 - one stat coulomb
 - 1.6×10^{-19} coulomb
 - 3.2×10^{-19} coulomb
- The potential due to an electric dipole varies
 - inversely as the distance
 - directly as the distance
 - inversely as the square of distance
 - directly as the square of distance
- Which of these techniques does not give information about the dimensions of DNA molecule?
 - Viscosity measurement
 - light scattering
 - flow-birefringence
 - Atomic Absorption spectroscopy
- Fluorescence of a protein can be due to
 - tryptophan
 - tyrosine
 - phenylalanine
 - all the above
- The aromatic amino acids are important because:
 - they are ionized by light of wavelength 280nm.
 - they are actually imino acids that cannot rotate through the angle ϕ .
 - they give proteins their absorbance at 280 nm
 - they are source of disulfide bonds within the exported proteins
- The Henderson-Hasselbalch equation states that:
 - $p^k = p^H + \log R$
 - $p^H = p^k + \log R$
 - $p^H = p^k \cdot \log R$
 - $R = p^k - p^H$
- The proteins that run the fastest in SDS-PAGE are
 - Large
 - Small
 - Negatively charged
 - Positively charged
- The auditions $a^k b^k c^k = 90^\circ$ k 90- describe the $\vec{a} \vec{b} \vec{c}$ Unit cell
 - tetragonal
 - orthorhombic
 - monoclinic
 - trigonal
- The electromagnetic radiation with longest wavelength. is:
 - Visible Light
 - Radiowaves
- Mass spectrometry is an analytical technique for the identification of molecules by way of measuring their:
 - mass only
 - charge only
 - mass to charge ratio
 - charge to mass ratio
- Micro array analysis is used for
 - quantization of gene expression
 - to check the quality of gene expression
 - for measuring the copy number
 - to identity new genes
- Component of atom involved in study of structure with X-ray crystallography
 - Nucleus
 - Electron
 - proton
 - Neutrons
- The radius of an atom is approximately
 - 10^{-10} m
 - 10^{-12} m
 - 10^{-13} m
 - 10^{-16} m
- Rays similar to x-rays but of smaller wavelength that are given off by radioactive Substances are
 - alpha rays
 - beta rays
 - gamma rays
 - cosmic rays
- Antiparticle of electron is
 - proton
 - Antiproton
 - Positron
 - Neutron
- Atomic force microscope was invented in which year:
 - 1972
 - 1986
 - 2001
 - 1980
- Nucleic acid absorption (A_{260}) changes in different states. It is maximum when it is:
 - Double stranded
 - Single stranded
 - All nucleotides are separated
 - Fragmented
- Which out of these is not a connective tissue:
 - Cartilage
 - bone
 - muscle
 - blood
- Which of these is not a characteristic of the Cardiac muscle:
 - nonstriated
 - Presence of intercalated disc
 - Involuntary
 - Presence of action and myosin filaments.
- Fertilization occurs in which region of female reproductive part:
 - Infundibulum
 - ampulla

- C) Microwaves
- D) IR

- C) Isthmus
- D) Uterus

11. Of the following which has got the highest frequency?
- A) ultraviolet rays
 - B) gamma rays
 - C) radio waves
 - D) infrared waves
23. Brunner glands are present in:
- A) Colon
 - B) jejunum
 - C) duodenum
 - D) ileum

Sample Questions for M.Sc. (Hons. School) in Computer Science

1. Who is original developer of Linux, the free UNIX clone on the PC?
 - A) Bill Gates
 - B) Linus Torvalds
 - C) Dennis Ritchie
 - D) Richard Stallman
2. In the context of Open Source technologies, what is the meaning of OSI and FSF acronyms/abbreviations?
 - A) Open System Interconnection and Flight Safety Foundation
 - B) Open System Interchange and Flight Safety Foundation
 - C) Open Source Initiative and Free Software Foundation
 - D) Open Source Instrument and Financial Stability Forum
3. The binary equivalent of the decimal number 0.4375 is
 - A) 0.0111
 - B) 0.1011
 - C) 0.1100
 - D) 0.1010
4. Which of the following logic families is well suited for high speed operation?
 - A) TTL
 - B) ECL
 - C) MOS
 - D) CMOS
5. Computer Network Topology is the physical layout of a LAN. The network topology with the highest reliability is
 - A) Bus topology
 - B) Star topology
 - C) Ring topology
 - D) Mesh topology
6. The extent to which the software can continue to operate correctly despite the introduction of invalid input is called
 - A) Reliability
 - B) Robustness
 - C) Fault-tolerance
 - D) Portability
7. In Java, the constants that cannot be changed are declared using the keyword
 - A) Final
 - B) Static
 - C) Abstract
 - D) Immutable
8. A machine took 200 seconds to sort 200 names, using bubble sort. In 800 seconds it can approximately sort
 - A) 400 names
 - B) 800 names
 - C) 750 names
 - D) 600 names
9. Which of the following memories must be refreshed many times per second?
 - A) Dynamic RAM
 - B) EPROM
 - C) Static RAM
 - D) ROM
10. In 1964, Douglas Engelbart demonstrated the world's first:
 - A) Mouse
 - B) Tape Drive
 - C) Vacuum Tube
 - D) Solid State Memory

Sample Questions for M.Sc. (Hons. School) Mathematics

- Let G be a group of order 147. For any $a \in G$, $a \neq e$, the number of solutions of $x^2 = a$ is
 - 49
 - one
 - three
 - zero
- In the ring $Z[i]$, where Z is the ring of integers, the element $1 - i$
 - is both irreducible as well as prime
 - is neither irreducible nor prime
 - is irreducible but not prime
 - is prime but not irreducible
- The equation of the tangent to the curve $f(x, y) = 0$ at any point (a, b) is given by
 - $(x - a) \frac{\partial f}{\partial y}(a, b) + (y - b) \frac{\partial f}{\partial x}(a, b) = 0$
 - $(x - a) \frac{\partial f}{\partial y}(a, b) - (y - b) \frac{\partial f}{\partial x}(a, b) = 0$
 - $(y - b) \frac{\partial f}{\partial y}(a, b) + (x - a) \frac{\partial f}{\partial x}(a, b) = 0$
 - $(x - a) \frac{\partial f}{\partial x}(a, b) - (y - b) \frac{\partial f}{\partial y}(a, b) = 0$
- Two spheres

$$x^2 + y^2 + z^2 + 2u_1x + 2v_1y + 2w_1z + d_1 = 0$$

$$x^2 + y^2 + z^2 + 2u_2x + 2v_2y + 2w_2z + d_2 = 0$$
 cut each other orthogonally if
 - $2u_1u_2 + 2v_1v_2 + 2w_1w_2 = d_1 + d_2$
 - $u_1u_2 + v_1v_2 + w_1w_2 = 0$
 - $\frac{u_1}{u_2} = \frac{v_1}{v_2} = \frac{w_1}{w_2} = \frac{d_1}{d_2}$
 - $2(u_1 - u_2) + 2(v_1 - v_2) + 2(w_1 - w_2) = (d_1 - d_2)$
- The series $\sum \frac{1}{n(\log n)^p}$ is
 - convergent if $p > 0$
 - convergent if $p > 1$
 - divergent if $p > 1$
 - convergent if $0 < p < 1$
- The integrating factor of the differential $\frac{\partial y}{\partial x} + 2xy = 4x^3$ is
 - e^{y^2}
 - e^{x^2}
 - e^x
 - e^y
- If $\phi(x_1, y_1, z_1) = 3x^2y - y^3z^2$, then $\nabla \phi$ at the point $(1, -2, 1)$ is
 - $-12\hat{i} - 9\hat{j} - 16\hat{k}$
 - $12\hat{i} + 9\hat{j} - 16\hat{k}$
 - $-12\hat{i} + 9\hat{j} + 16\hat{k}$
 - $-12\hat{i} + 9\hat{j} - 16\hat{k}$
- If one root of the equation $x^3 - 13x^2 + 15x + 189 = 0$ exceeds the other by 2, then all the roots are
 - 7, 9 and 3
 - 7, -9 and -3
 - 7, 9 and .3
 - 7, -9 and 3
- Two forces 13 kg.wt. and $3\sqrt{3}$ kg.wt. act on a particle at an angle θ and equal to a resultant force of 14 kg.wt., then the angle between the forces is
 - 45°
 - 30°
 - 60°
 - 90°
- Let W_1 and W_2 be subspaces of dimensions 5 and 4 respectively of a vector space V of dimension 6. Then $\dim(W_1 \cap W_2)$ is
 - Zero
 - one
 - at most two
 - at least three

Sample Questions for M.Sc. 2-Year Course Bioinformatics/ System Biology and Bioinformatics

- Which are the repositories for raw sequence data
A) Gen Bank
B) EMBL
C) DDBJ
D) GGPP
- Which of the following annotation is not provided by SWISS-PROT
A) Protein function
B) Domain structure
C) Post translation modification
D) Crystal formations
- Which is the most important computer language used in Bioinformatics
A) Pascal
B) Perl
C) Java
D) C++
- Which type of analysis cannot be performed on *raw DNA sequence* using Bioinformatics tools
A) Identifying coding regions
B) Identification of introns and exons
C) Gene product prediction
D) Identifying *cis* and *trans* regions
- OMIM is engaged in study of
A) Human molecular Biology
B) Plant molecular biology
C) Bacterial molecular biology
D) Yeast Molecular biology
- Which of the following sequence is correct:
A) DNA, RNA, Protein
B) DNA, Protein, RNA
C) RNA, DNA, Protein
D) Protein, DNA, RNA
- Which is not the method of protein/DNA sequence alignment
A) Matrix
B) Brute force
C) Dynamic programming
D) Heuristic methods
- The method not used in NSA programming is
A) Sum of pairs methods
B) Spare alignment
C) Two step method
D) Fitch/Margoliosh method
- Distance matrix method are used for
A) Carbohydrate structure prediction
B) Proteins structure prediction
C) Phylogenetic analysis
D) Primer design
- FASTA-BLAST, WU-BLAST are programmes used for determining
A) Sequence similarity of Protein only
B) Sequence similarity of DNA only
C) Sequence similarity of Carbohydrate only
D) Sequence similarity of Protein and DNA

Sample Questions for M.Sc. (Environment)

- A thin copper wire of length one metre increases in length by 4% when heated by 10°C. What will be the per cent increase in area when a square copper sheet of side one metre is heated by 10°C?
A) 4%
B) 8%
C) 16%
D) 24%
- If the unit of length and force are increased by 4 times, the unit of energy gets increased by how many times?
A) 4 times
B) 8 times
C) 16 times
D) does not change
- The scientific principle involved in radio and television is:
A) Superconductivity
B) Semiconductivity
C) Propagation of e.m. waves
D) Electromagnetic induction
- A passenger in a moving train tosses a coin. If it falls behind him, the train must be moving with
A) An acceleration
B) A deceleration
- Which of the following is a deadly nerve gas developed during the second world war?
A) Nitric oxide
B) Phosgene
C) Sarine
D) Dioxin
- The natural rubber obtained from trees is made of:
A) Isoprene units
B) Vinyl chloride
C) Acetylene
D) Neoprene
- Which of the following is differentially permeable?
A) Cell wall
B) Tonoplast
C) Nuclear membrane
D) Cytoplasm
- Which of the following prevents leaf shedding in plant?
A) Auxins
B) Gibberellins
C) Cytokinins
D) Absciscic acid
- Sugar in chloroplast is synthesized in:

- C) Uniform speed
D) It can never happen
5. Zero error of an instrument introduces:
A) Systematic error
B) Random error
C) Per cent error
D) Means no error
6. The Science of surveying and mapping the earth's surface is known as:
A) Cartography
B) Geodesy
C) Topography
D) Scienodsy
7. The gravitational force with which a body is attracted towards the earth is
A) Maximum at the equator and minimum at the poles
B) Minimum at the equator and maximum at the poles
C) The same at the equator and the poles
D) Depends on the altitude at the given point
8. Which of the following is used as an antiseptic?
A) Iodine
B) Bromine
C) Chlorine
D) Fluorine
9. Washing soaps produces a scum with hard water and not much of foam, because the hard water contains:
A) Many suspended particles
B) Many dissolved inorganic salts
C) Chalk and sulphur
D) Dissolved organic matter
- A) Quantasomes
B) Stroma
C) Thylakoids
D) Matrix
15. The structure of protoplasm is:
A) Granular
B) Fibrillar
C) Reticular
D) Colloidal Matrix
16. Which of the following could be cancer of the lymph nodes and spleen?
A) Carcinoma
B) Sarcoma
C) Leukemia
D) Lymphoma
17. The major component of Bacterial cell wall is
A) Xylan
B) Chitin
C) Peptidoglycan
D) Cellulose
18. How many bones does the Cranium of man have?
A) 8
B) 12
C) 16
D) 20
19. When is the world Population day celebrated?
A) August 3
B) April 16
C) October 18
D) July 11
20. In a Nuclear Reactor the heavy water is used to :
A) cool the neutrons
B) slow down the neutrons
C) absorb the neutrons
D) control the number of neutrons

Sample Questions for M.Sc. (Human Genomics)

1. Which one of the following is an essential component of DNA?
A) Protein
B) Carbohydrate
C) Lipids
D) Vitamins
2. Three types of RNA involved in comprising the structural and functional core for protein synthesis, serving as a template for translation, and transporting amino acid, respectively, are:
A) mRNA, tRNA, rRNA
B) rRNA, tRNA, mRNA
C) tRNA, mRNA, rRNA
D) rRNA, mRNA, tRNA
3. A synthetic mRNA of repeating sequence 5'-CACACACACACACAC... is used for a cell-free protein synthesizing system like the one used by Nuremberg. If we assume that protein synthesis can begin without the need for an initiator codon, what product or products would you expect to occur after protein synthesis.
A) One protein consisting of a single
5. Signaling between cells usually results in the activation of protein
A) lipase
B) kinases
C) proteases
D) nuclease
6. Highly repetitive DNA has
A) a very short repeating sequence and no coding function
B) a moderate repeating sequence and a coding for house keeping gene
C) a simple repeat sequence and no coding function
D) None of the above
7. From which grandparent or grandparents did you inherit your mitochondria? Is it your:
A) mother's parents
B) paternal grandfather
C) grand mothers
D) maternal grandmother
8. What are the possible blood types of the offspring of a cross between

- amino acid
- B) Three proteins , each consisting of a different , single amino acid
- C) One protein, with an alternating sequence of two different amino acids
- D) Two proteins, each with an alternating sequence of two different amino acids.
4. A replicon is:
- A) an enzyme complex that replicates DNA
- B) the amount of time required to duplicate a genome
- C) larger in complex eukaryotes and smaller in bacteria
- D) the DNA sequences that specify and are replicated by a single replication initiation event
- individuals that are type AB and type O? (Hint: blood type O is recessive)
- A) AB or O
- B) A, B, or O
- C) A or B
- D) A, B, AB, or O
9. A woman with an X-linked dominant disorder mates with a phenotypically normal male. On average, what proportion of this couple's daughters will be affected with the disorder?
- A) 0.5
- B) 1.0
- C) 0.75
- D) 0.25
10. A messenger acid is 336 nucleotides long, including the initiator and termination codons. The number of amino acids in the protein translated from this mRNA is:
- A) 999
- B) 630
- C) 330
- D) 111

Sample Questions for M.Sc. in Nuclear Medicine

1. We can produce colors with white light through:
A) Interference
B) Polarization
C) Diffraction
D) Dispersion
2. Methods of Fourier Transformation are applied in
A) Nuclear Magnetic Resonance
B) X-ray crystallography
C) Medical Imaging
D) All of the above
3. Which one of the following is correctly matched?
A) Chloroplast . storage of enzymes
B) Lysosome . powerhouse of cell
C) Nucleolus . site of ribosomal synthesis
D) Glyoxysome . structural support of cell
4. Which amino acid can stabilize protein structure by forming covalent cross links between polypeptide chains?
A) Ser
B) Gly
C) Glu
D) Cys
5. In CT imaging the phenomenon used is
A) Radiation absorption
B) Radiation damage
C) Free radical formation
D) Radiation fluorescence
6. Macrophage . like cells in the connective tissue are
A) Osteoclasts
B) Mesangial cells
C) Histiocytes
D) Microglial cells
7. Zinc finger proteins and helix-turn-helix proteins are:
A) Types of DNA-binding proteins
B) Involved in the control of translation
C) Components of ribosomes
D) Part of the hemoglobin in blood cells
8. Transcription of DNA into mRNA is catalyzed by
A) DNA polymerase
B) RNA synthetase
C) RNA polymerase
D) Rnase
9. Which nitrogenous bases is NOT found in DNA?
A) Thymine
B) Uracil
C) Adenine
D) guanine
10. How would the complementary strand of DNA appear if the original strand of DNA contained the bases T-A-G-C in the order?
A) U-A-C-G
B) G-C-A-T
C) T-A-C-G
D) A-T-C-G

Sample Questions for M.Sc. (2-Year Course) Microbial Biotechnology

1. Who amongst the following is considered the father of Microbiology?
 - a) Louis Pasteur
 - b) Robert Koch
 - c) Anton van Leeuwenhoek
 - d) John Tyndall
2. Agar is a complex polysaccharide obtained from
 - a) Brown algae
 - b) Red algae
 - c) Cyanobacteria
 - d) Green algae
3. If a patient is genetically unable to make J chains, which of the following immunoglobulins will be affected?
 - a) IgM and IgA
 - b) IgG and IgA
 - c) IgM and IgE
 - d) IgA and IgE
4. Which of the following is the indicator organism for pasteurization?
 - a) *Coxiellaburnetii*
 - b) *Mycobacterium tuberculosis*
 - c) *Bacillus stearothermophilus*
 - d) *Mycobacterium bovis*
5. Which of the following disease cannot be treated using antibiotics?
 - a) Typhoid
 - b) Gonorrhoea
 - c) Cholera
 - d) Staphylococcal food poisoning
6. Lineweaver-Burk plot (or double reciprocal plot) is a graphical representation of the
 - a) Lineweaver-Burk equation of enzyme kinetics
 - b) Michaelis-Menten equation
 - c) reciprocal of the Michaelis-Menten equation
 - d) Both a) and c)
7. In the Michaelis-Menten equation of enzyme kinetics $v = d[P]/dt = V_{max}[S]/K_m + [S]$

The Michaelis constant K_m is the substrate concentration at which the reaction rate is half of

 - a) $[S]$
 - b) V_{max}
 - c) $V_{max}[S]$
 - d) V
8. Method(s) employed in horizontal gene transfer
 - a) Transformation
 - b) Transduction
 - c) Conjugation
 - d) All of the above
9. Vitamin B12 is manufactured by
 - a) Bacteria
 - b) Protists
 - c) Fungi
 - d) All of the above
10. Z-DNA has following number of residue pairs per turn
 - a) 10
 - b) 12
 - c) 14
 - d) 16

Sample Questions for M.Sc. in Medical Physics

1. A 220 V - 100 W bulb is connected to a 110 V source. The power consumed by the bulb will be :
 A) 200 W
 B) 100 W
 C) 50 W
 D) 25 W
2. A nucleus at rest splits into two parts having radii in the ratio 2:1. Their velocities are in the ratio :
 A) 8:1
 B) 6:1
 C) 4:1
 D) 2:1
3. One curie unit of radioactivity is equal to :
 A) 1 decay/s
 B) 3.7×10^{10} Bq
 C) 3×10^8 decays/s
 D) 6.023×10^{23} BqA
4. According to the shell model, the spin-parity of the ground state of $^{18}_8\text{O}$ nucleus is :
 A) 1^+
 B) 0^+
 C) 2^+
 D) 2.
5. The energy difference between the spin-up and spin-down states of a neutron in a magnetic field of $B = 5.000$ T, is :
 A) 1 nuclear magneton
 B) 2 nuclear magneton
 C) 19.13 nuclear magneton
 D) 13.965 nuclear magneton
6. The correct order of electromagnetic spectrum with decreasing wavelength is :
 A) Radiowaves, Microwaves, Infrared rays, Ultraviolet rays, X-rays
 B) X-rays, Ultraviolet rays, Infrared rays, Microwaves, Radiowaves
 C) Radiowaves, Infrared rays, Ultraviolet rays, Microwaves, X-rays
 D) Radiowaves, Infrared rays, Microwaves, Ultraviolet rays, X-rays
7. Which of the following belong to the class of trans-Uranium elements?
 A) Krypton
 B) Uranium
 C) Berkelium
 D) Xenon
8. Resolving power of a telescope is given by :
 A) $1.22 \lambda / D$
 B) $D / 1.22 \lambda$
 C) $0.61 \lambda / \sin \theta$
 D) $0.61 \lambda / \sin \theta$
9. The concept of nuclear atom was proposed by :
 A) Bohr
 B) Thomson
 C) Einstein
 D) Rutherford
10. The single rainbow called primary rainbow is seen in the sky in the form of an arc making mean angle of :
 A) 3°
 B) 52°
 C) 2°
 D) 42°

Sample Questions for M.Sc. in Biotechnology

1. Correct sequence of stages in cell cycle is
 - A) G1, S, G2, M
 - B) S, G2, M, G1
 - C) G1, G2, M, S
 - D) G1, G2, S, M
2. Which of the following does not contain both DNA and RNA?
 - A) Yeast
 - B) Bacteria
 - C) Mycoplasma
 - D) Virus
3. Which of the following is not an antibacterial antibiotic
 - A) Tetracyclin
 - B) Ampicillin
 - C) Nystatin
 - D) Nalidixic acid
4. The development of egg without fertilization is called
 - A) Blastogenesis
 - B) Parthenogenesis
 - C) Cogeneration
 - D) Gametogenesis
 - E)
5. TATA box and Pribnow box are components of
 - A) Operators
 - B) Promoters
 - C) Enhancers
 - D) Activators
6. Peptide chain elongation involves all the following except
 - A) peptidyl transferase
 - B) GTP
 - C) Tu, Ts and G factors
 - D) Formyl tRNA
7. The smallest unit of DNA capable of coding for the synthesis of a polypeptide is the
 - A) Operon
 - B) cistron
 - C) promoter
 - D) replicon
8. Exonuclease is an enzyme, which cleaves DNA from
 - A) 3' end
 - B) 5' end
 - C) both 3' and 5' end
 - D) internal bonds in DNA
9. Which of the following is not part of the *lac* operon of *E. coli*?
 - A) genes for inducible enzymes of lactose metabolism
 - B) genes for the repressor, a regulatory protein
 - C) gene for RNA polymerase
 - D) a promoter, the RNA polymerase binding site
10. Which of the following primers would allow copying of the single-stranded DNA sequence 5' ATGCCTAGGTC?
 - A) 5' ATGCC,
 - B) 5' TACGG
 - C) 5' CTGGA
 - D) 5' GACCT

Sample Questions for M.Sc. (Hons. School) Botany

- In C_4 plants the first CO_2 acceptor is :
 - Ribulose . 1,5-bisphosphate
 - Phosphoenol pyruvate
 - Pyruvate
 - Ribulose-5-phosphate
- In majority of angiosperms, the female gametophyte at the time of fertilization is :
 - 8-celled
 - 7-celled
 - 6-celled
 - 4-celled
- Agar-agar is extracted from which of the following genera
 - Gracilaria*
 - Dictyota*
 - Ectocarpus*
 - Laminaria*
- Black rust of wheat is caused by :
 - Ustilago tritici*
 - Puccinia graminis tritici*
 - Protomyces macrosporus*
 - Albugo candida*
- Oomycota is a phylum in kingdom:
 - Fungi
 - Chromista
 - Protozoa
 - Mycota
- Cystidium is a
 - Sterile element occurring in the hymenium of certain Basidiomycetes
 - Reproductive organ of a green alga
 - Fertile part of lichen thallus
 - Asexual spore
- Most bryophytes are autotrophic but a few are more or less saprophytic. Which of the following is totally devoid of chlorophyll and depends upon a mycorrhizal association for its growth and development?
 - Cyptothallus mirabilis*
 - Funaria hygromitrica*
 - Concephalum conium*
 - Pellia epiphylla*
- Somaclonal variations are:
 - Variations produced during tissue culture
 - Variations produced during sexual reproduction
 - Variations caused by mutagenic chemicals
 - Variations caused by Gamma rays
- Trisomic condition is expressed as
 - $2n-1$
 - $2n-2$
 - $2n+1$
 - $2n+2$
- The functional unit in ecology is the:
 - Organism
 - Biosphere
 - Ecosystem
 - Population

Sample Questions for M.Sc. (Hons. School) 2-Year Course Chemistry

- Anti-Markonikoff cis-hydration of an alkene can be achieved by using
 - Catalytic hydrogenation
 - Li / liq. NH_3 reduction
 - Alkaline $KMnO_4$ solution
 - Hydroboration-oxidation
- Beckmann rearrangement converts an oxime into
 - an amine
 - carbamate
 - a substituted hydrazine
 - an amide
- The configuration of the following stereoisomer

$$\begin{array}{c}
 CH_3 \\
 | \\
 H - C - Cl \\
 | \\
 Cl - C - H \\
 | \\
 CH_2CH_3
 \end{array}$$

 - 2R, 3R
 - 2S, 3R
 - 2R, 3S
 - 2S, 3S
- Which of the following is expected to have least paramagnetic character?
 - $1D_2$
 - $3P_2$
 - $1S_0$
 - $3P_0$
- 1g ice absorbs 335 J of heat to melt at $0^\circ C$. The entropy change will be
 - $1.2 JK^{-1}mol^{-1}$
 - $335 JK^{-1}mol^{-1}$
 - $22.1 JK^{-1}mol^{-1}$
 - $0.8 JK^{-1}mol^{-1}$
- Two moles of HI were heated in a sealed tube at $440^\circ C$ till the equilibrium was reached. HI was found to be 22 % dissociated. The equilibrium constant for dissociation is

B) 0.282	B) 0.0796
C) 0.0199	D) 1.99
- During biological nitrogen fixation, nitrifying bacteria convert
 - NO_3 to NH_4
 - N_2 to NH_4
 - NH_4 to NO_3
 - NO_3 to N_2
- Which of the following state is stablest for p^2 configuration?
 - $1D_2$
 - $3P_2$
 - $1S_0$
 - $3P_0$
- Which of the following has lowest CO stretching

- A) $[\text{Co}(\text{NH}_3)_6]^{3+}$
 B) $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$
 C) $[\text{Cr}(\text{CN})_6]^{3-}$
 D) $[\text{CoF}_6]^{3-}$
5. The freezing point of 0.1M solution of glucose is -1.86°C . If an equal volume of 0.3 M glucose is added, the freezing point of the mixture will be
 A) -7.44°C
 B) -5.58°C
 C) -3.27°C
 D) -2.79°C
- frequency?
 A) $\text{Ni}(\text{CO})_4$
 B) $\text{Cr}(\text{CO})_6$
 C) $[\text{Fe}(\text{CO})_4]^{2-}$
 D) $[\text{Mn}(\text{CO})_6]^+$

Sample Questions for M.Sc. (Hons. School) Physics/ Physics & Electronics

- Two electrons move in opposite directions at $0.70c$ as measured in the laboratory. The speed of one electron as measured from the other is:-
 A) $0.35c$
 B) $0.70c$
 C) $0.94c$
 D) $1.00c$
- Which one of the following transformations is second order phase transition?
 A) Ferromagnetic state to the paramagnetic state
 B) Melting of ice
 C) Evaporation of materials
 D) Solidification of materials.
- For which one of the following signal we require an amplifier with minimum bandwidth:
 A) Sine wave
 B) Square wave
 C) Triangular wave
 D) Saw tooth wave
- Two of Maxwell's equations contain an integral over a closed surface. For them the infinitesimal vector area $d\mathbf{A}$ is always:
 A) Tangent to the surface
 B) Tangent to the field line
 C) Perpendicular to the surface and pointing inward.
 D) Perpendicular to the surface and pointing outward.
- For the domestic ac supply of 220V, the breakdown voltage of a diode should be:
 A) 130V
 B) 163V
 C) 220V
 D) 330V
- When the gate voltage becomes more negative in n-channel JFET, the channel between depletion layers:
 A) Shrinks
 B) Expands
 C) Conducts
 D) Stops conducting
- Space quantization means that:
 A) Space is quantized
 B) L and U are in the same direction.
 C) L_z can have discrete values.
 D) An electron has magnetic dipole moment.
- The electron density of states for a metal depends primarily on:
 A) The temperature
 B) The energy associated with the state
 C) The size of the sample.
 D) The mass of the sample.
- Some alpha emitters have longer half-lives than others because:
 A) Their alpha particles have greater mass.
 B) Their alpha particles have less mass
 C) Their potential barriers to decay are higher and wider
 D) Their decays include the emission of photons.
- In an alpha decay the disintegration energy appears mainly as
 A) Photon energies
 B) The kinetic energies of the alpha and the daughter nucleus
 C) The excitation energy of the daughter nucleus
 D) heat

Sample Questions for M.Sc. (Hons. School/ 2-Year Course) Zoology

- The organelle which is common in the Prokaryotes and Eukaryotes is
 - Nuclear wall
 - Golgi body
 - Ribosome
 - Mitochondria
- In the Human genome project which country was not involved
 - France
 - India
 - USA
 - UK
- The best animal for the study of Developmental Biology experiments is
 - Fish
 - Pigeon
 - Turtle
 - Caenorhabditis*
- Only one of the following is to be considered as an Anamniote
 - Amphibia
 - Reptiles
 - Aves
 - Mammals
- In the neck of any mammal the number of vertebrae found are always
 - 5
 - 6
 - 7
 - 4
- Detection of antibody in ELISA involves
 - Antigen + 1st antibody + substrate
 - Antigen + 1st antibody tagged with HRP
 - Antigen + 1st antibody + 2nd antibody tagged with HRP
 - Antigen + 1st antibody + 2nd antibody tagged with HRP + substrate
- Raptorial feet are present in
 - Fowls, Pheasants, Quails
 - Sparrows, Robins, Crows
 - Hérons, Snipes, Jacanas
 - Vultures, Eagles, Owls
- _____ fin is the most primitive of caudal fins
 - Iso cercal
 - Homo cercal
 - Proto cercal
 - Gephyro cercal
- The classification of Reptiles is based on
 - Limbs
 - Teeth
 - Feeding habits
 - Temporal vacuities
- Limbs and girdles are missing in
 - Anurans
 - Caecilians
 - Apoda
 - Chelonian
- Paramecium caudatum* has
 - Single Nucleus
 - Two similar nuclei
 - Two dissimilar nuclei
 - Many nuclei

Sample Questions for M.Sc. (Hons. School) Geology

- A Sandstone containing of at least 25% Feldspar is :
 - Orthoquartzite
 - Arkose
 - Graywacke
 - Sublithic Wacke
- An intergrowth texture in which plagioclase contains inclusion of potash feldspar is known as :
 - Perthite
 - Antiperthite
 - Graphic
 - Seriate
- Which of the following rock is not of metamorphic origin:
 - Slate
 - Phyllite
 - Schist
 - Shale
- Mica Plate gives the retardation of:
 - 1 Lameda
 - ½ Lameda
 - ¼ Lameda
 - Variable retardation
- Which of the following mineral is Aluminosilicate:
 - Quartz
 - Garnet
 - Biotite
 - Sillimanite, Robins, Crows

Important Dates and Information for Entrance Test PU-CET (P.G.) - 2015

Date of Advertisement regarding test & other information relevant thereto	01-04-2015 (Wednesday)
Date of Availability of PU . CET (P.G.) Prospectus and Application Form on the website of Panjab University	01-04-2015 (Wednesday)
Last date for submission of information on the website to generate the Bank Challan	12-05-2015 (Tuesday)
Last date for deposit of fee in any branch of State Bank of India using website generated challan	15-05-2015 (Friday) upto 4:00 p.m.
Last date for uploading of photograph, signature with rest of the information on the website	18-05-2015 (Monday)
No correction will be entertained / made regarding photograph, signature and any other information after 21-05-2015, 5:00 p.m.	21-05-2015 (Thursday) upto 5:00 p.m.
<u>Final date by which Roll No. will be available online</u> Admit Card required to be downloaded from the website by the candidate using their own Login and Password (provided while generating Bank Challan). <u>There will be no physical communication for this purpose.</u>	29-05-2015 (Friday)
Dates of holding Entrance Test	13-06-2015 to 14-06-2015 (Saturday to Sunday)
Tentative date during which the result may be declared by the University	04-07-2015 to 10-07-2015 (Saturday to Friday)
PU-CET (P.G.) Course Fee General Category SC/ST Category Additional Form (for both General and SC/ST Category)	Rs. 1760/- Rs. 880/- Rs. 770/-
50% concession for Panjab University regular employees under B & C Class (Senate dated 14.7.2007 vide para No. xxxiii)	

DATE SHEET PU-CET (P.G.) 2015

Date and Day of Test	Course	Time of Examination
13-06-2015 (Saturday)	M.Sc. (Chemistry) (Hons. School/ 2 Yr. Course)	8.30 a.m. to 10.00 a.m.
	M.Com. (HS)	8.30 a.m. to 10.00 a.m.
	M.Sc. (Hons. School) Geology	8.30 a.m. to 10.00 a.m.
	M.Sc. (2 Yr. Course) Microbial Biotechnology	8.30 a.m. to 10.00 a.m.
	M.E. (Electronics & Communication Engg.)	8.30 a.m. to 10.00 a.m.
	M.A. Journalism and Mass Communication	8.30 a.m. to 10.00 a.m.
	M.Sc. (Hons. School) Physics / Physics & Electronics	11.00 a.m. to 12.30 p.m.
	M.Sc. (Hons. School / 2 Yr Course) Botany	11.00 a.m. to 12.30 p.m.
	MBACIT	11.00 a.m. to 12.30 p.m.
	M.E. Mechanical Engg. (Manufacturing Technology)	11.00 a.m. to 12.30 p.m.
	Masters in Public Health	11.00 a.m. to 12.30 p.m.
	M.C.A.	1.30 p.m. to 3.00 p.m.
	M.Sc. (Hons. School / 2 Yr Course) Zoology	1.30 p.m. to 3.00 p.m.
	M.E. Electrical Engg. (Instrumentation & Control)	1.30 p.m. to 3.00 p.m.
	B.P.Ed.	1.30 p.m. to 3.00 p.m.
	M.B.E.	1.30 p.m. to 3.00 p.m.
	M.Sc. (System Biology and Bioinformatics) / M.Sc. (Bioinformatics) (2 Yr. Course)	1.30 p.m. to 3.00 p.m.
	M.Sc. (2 Yr. Course) Medical Physics	4.00 p.m. to 5.30 p.m.
	M.A. in Geography	4.00 p.m. to 5.30 p.m.
	M.E. (Food Technology)	4.00 p.m. to 5.30 p.m.
14-06-2015 (Sunday)	M.Sc. (Hons. School) Mathematics	8.30 a.m. to 10.00 a.m.
	M.A. (English)	8.30 a.m. to 10.00 a.m.
	M.Sc. (Hons. School / 2 Yr Course) Biotechnology	8.30 a.m. to 10.00 a.m.
	M.E.F.B.	8.30 a.m. to 10.00 a.m.
	M.E. (Chemical with specialization in Environmental Engg.)	8.30 a.m. to 10.00 a.m.
	M.Sc. (Industrial Chemistry)	11.00 a.m. to 12.30 p.m.
	M.Sc. (Hons. School) Computer Science	11.00 a.m. to 12.30 p.m.
	M.Sc. (2 Yr. Course) Nuclear Medicine	11.00 a.m. to 12.30 p.m.
	M.Tech. (Polymer)	11.00 a.m. to 12.30 p.m.
	M.E. (Computer Science & Engg.)	11.00 a.m. to 12.30 p.m.
	M.E. Civil Engg. (Construction Tech. & Mgt.)	11.00 a.m. to 12.30 p.m.
	M.E. (Chemical)	11.00 a.m. to 12.30 p.m.
	M.P.Ed.	11.00 a.m. to 12.30 p.m.
	Masters in Disaster Management	1.30 p.m. to 3.00 p.m.
	MBA (Executive)	1.30 p.m. to 3.00 p.m.
	M.Sc. (2 Yr. Course) Human Genomics	1.30 p.m. to 3.00 p.m.
	M.Com. (Business Innovation)	1.30 p.m. to 3.00 p.m.
	LL.M.	1.30 p.m. to 3.00 p.m.
	M.Sc. (Hons. School) Biochemistry	1.30 p.m. to 3.00 p.m.

	M.Tech. (Nanoscience & Nanotechnology)	4.00 p.m. to 5. 30 p.m.
	M.Sc. (2 Yr. Course) Environment Science	4.00 p.m. to 5. 30 p.m.
	M.A. in Remote Sensing & GIS	4.00 p.m. to 5. 30 p.m.
	M.Sc. (Hons. School) Biophysics	4.00 p.m. to 5. 30 p.m.

- NOTE:** 1. Candidates desirous to appear in more than one of the above papers, must ensure that there is no clash of timings in those papers.
3. The above dates of tests are tentative. Final dates of tests with time and venue of test will be indicated on the Admit Card.

THE PROCEDURE AND STEPS FOR FILLING ONLINE APPLICATION-CUM-ADMISSION FORM

STEPS TO FOLLOW:

- Register Online.
- Note down your Login Id and Password.
- Download SBI Slip and pay fee in any SBI branch.
- Login and upload scanned photograph, signature, fill other important information and Save and Confirm.

Registration Form:

Do not prefix the title such as Shri / Smt. / Mr. / Mrs. / Dr. etc. along with names.

Top of Form

Name#:

Father's Name#:

Mother's Name#:

Date of Birth:

E-mail:

Category

Categories other than General			
<input type="checkbox"/>	Scheduled Caste	<input type="checkbox"/>	Scheduled Tribe
<input type="checkbox"/>	Blind	<input type="checkbox"/>	PIO
<input type="checkbox"/>	Foreign	<input type="checkbox"/>	NRI
<input type="checkbox"/>	Backward Class		
(Only for the purpose of entrance test)			

Course's

Course in which Appearing (Check atleast one box. if you wish to appear in more than one course check the corresponding boxes)	
<input type="checkbox"/> L.L.M. <input type="checkbox"/> M.C.A. <input type="checkbox"/> M.A.Journalism & Mass Communication <input type="checkbox"/> Master in Public Health <input type="checkbox"/> M.A.(English) <input type="checkbox"/> M.A. (Geography) <input type="checkbox"/> Masters in Disaster Management <input type="checkbox"/> Masters in Remote Sensing & GIS <input type="checkbox"/> M.Tech(Nano Science & Nanotechnology) <input type="checkbox"/> M.E.(Chemical) <input type="checkbox"/> M.E.F.B.	<input type="checkbox"/> M.E. (Food Technology) <input type="checkbox"/> M.E. (Chemical with specialization in Environmental Engg.) <input type="checkbox"/> M.Tech. (Polymer) <input type="checkbox"/> M.Sc. (Industrial Chemistry) <input type="checkbox"/> M.E. Electrical Engg. (Instrumentation & Control) <input type="checkbox"/> M.E.(Electronics & Communication Engg.) <input type="checkbox"/> M.E.(Computer Sc. & Engg.) <input type="checkbox"/> M.E. Civil Engg. (Construction Tech. & Mgt.) <input type="checkbox"/> M.E. Mechanical Engg. (Manufacturing Tech.) <input type="checkbox"/> M.B.E.

<input type="checkbox"/> M.Com. (HOns.) <input type="checkbox"/> M.Com. (Business Innovation) <input type="checkbox"/> MBACIT <input type="checkbox"/> Master of Business Administration for Executives (MBAfEX) <input type="checkbox"/> M.P.Ed. <input type="checkbox"/> B.P.Ed.	M.Sc (Hons.School) <input type="checkbox"/> Biochemistry <input type="checkbox"/> Biophysics <input type="checkbox"/> Computer Science <input type="checkbox"/> Mathematics <input type="checkbox"/> Physics & Electronics <input type="checkbox"/> Geology
M.Sc (2 Year Course) <input type="checkbox"/> Bioinformatics <input type="checkbox"/> Environment Science <input type="checkbox"/> Human Genomics <input type="checkbox"/> Nuclear Medicine <input type="checkbox"/> System Biology and Bioinformatics <input type="checkbox"/> Microbial Biotechnology	M.Sc (2 Year Course) <input type="checkbox"/> Medical Physics M.Sc (Hons.School/2 Year Course) <input type="checkbox"/> Biotechnology <input type="checkbox"/> Botany <input type="checkbox"/> Chemistry <input type="checkbox"/> Physics <input type="checkbox"/> Zoology

Note: Candidate desirous to appear in more than one of the above papers, must ensure that there is no clash of timing in those papers.

Candidate Information:
Application No.

Course(s) Opted:

Category(s):

Medium of test
(only for LLB)

Basic Information
Candidate Name:

Father's Name:

Mother's Name:

Gender : ☐ Male ☐ Female ☐ Transgender

Date of Birth:

Place of Birth

Nationality

Correspondence Address

Permanent Address

Phone No./Mobile No

E-mail ID

Upload Photograph

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