



**FOREST RESEARCH INSTITUTE    DEEMED TO  
BE UNIVERSITY DEHRADUN**

**(Under Section 3 of the UGC Act 1956)  
(vide Notification No.F.9-25/89-U.3 dated 6-12-1991)**

**INFORMATION BULLETIN FOR ADMISSION TEST TO  
MASTER OF SCIENCE COURSES  
2023**

**P.O.I.P.E., Kaulagarh Road, Dehradun (Uttarakhand) – 248 195**

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## AN OVERVIEW

### THE INSTITUTE

Forest Research Institute (F.R.I.), Dehra Dun made a humble beginning as Forest School established in 1878. Initially named as Imperial Forest Research Institute, F.R.I., came into being in 1906. Later renamed as Forest Research Institute and Colleges, with a number of centres located at different places all over the country administering research as well as training of Forest Officers and Forest Rangers. After reorganization of Forestry Research in the country and creation of Indian Council of Forestry Research and Education (ICFRE) in 1988, the training and research centres were given an independent status of institutes. Forest Research Institute, now one of the institutes under ICFRE, was conferred the status of Deemed University in December 1991 on the recommendations of the U.G.C., Ministry of Human Resource Development, Government of India.

### OBJECTIVES OF THE FRI DEEMED TO BE UNIVERSITY

- To impart education in different branches of forestry and environment.
- To provide for research, advancement and dissemination of knowledge in the field of forestry and environment.
- To create consciousness about forest and environment among people through forestry extension programme.
- To carry out such other activities as may be necessary and desirable to further the safeguarding of environment and protection of forests and wildlife.

### RESEARCH DIVISIONS AND DISCIPLINES IN THE INSTITUTE

- ♦ **BOTANY** (*Systematic Botany, Wood Anatomy,*
- ♦ **CHEMISTRY & BIO-PROSPETING** (*Chemical Extracts from Trees, Forest based Oilseeds, Medicals and Aromatic Plants, Resins and Gums*)
- ♦ **EXTENSION** (*Social Forestry and Extension, Agroforestry*)
- ♦ **FOREST ECOLOGY & CLIMATE CHANGE** (*Forest Productivity, Biodiversity, Environment and Pollution Wasteland, Reclamation, Soil Geology and Mineralogy, Climate Change & Forest Influence*)
- ♦ **FOREST PROTECTION** (*Forest Diseases Forestry Bio-fertilizers Control Measure and Taxonomy*)
- ♦ **FOREST PRODUCTS** (*Timber Mechanics, Wood Seasoning, Wood Preservation, Composite Wood, Wood Working and Finishing, Timber Engineering Cellulose & Paper Technology*)
- ♦ **GENETICS AND TREE IMPROMENT** (*Genetics Improvement Plant Physiology, Tissue Culture, Breeding and Forest Biotechnology*)
- ♦ **SILVICULTURE & FOREST MANAGEMENT** (*Experimental Silviculture, Forest Mensuration, Forest Economics Logging & Seed Technology, ,*)
- ♦ **FOREST INFORMETICS** (*Forest Bio-Informatics & Forest Geo-Informatics*)

## THE APPLICATION FORM

The Forest Research Institute Deemed to be University **Online Remote Proctored admission test, 2023** will be held on **Sunday, 21<sup>st</sup> May, 2023** for the following courses:-

Sl.No.	Courses	Duration (Years)	No. of seats
1.	M.Sc. Forestry	2	43
2.	M.Sc. Wood Science & Technology	2	43
3.	M.Sc. Environment Management	2	43
4.	M.Sc. Cellulose & Paper Technology	2	26

The application form can be downloaded from the University website [www.fridu.edu.in](http://www.fridu.edu.in) the candidates have to submit duly filled Application form along with fee of Rs.1500/- in the form of Demand Draft from any Nationalized Bank in the favour of **Registrar, FRI Deemed to be University, Dehradun**

**The last date of receipt of completed application form: 17<sup>th</sup> April, 2023.**

*(Forms received after the last date will not be accepted in any circumstances)*

**It is advised to send the application form by Registered Post, Speed Post/Courier. Postal delay will not be accepted as a plea to entertain applications after the last date.**

**Admit card/login details** will be provided to the applicant by the 1<sup>st</sup> week of May, 2023 by the outsourcing agency.

***Under no circumstances the admission test fee, once paid, will be Refunded or held in reserve for any future admission test.***

## ELIGIBILITY REQUIREMENTS

The eligibility requirements for admission to these courses are as follows:

Sl. No.	Course Code No.	Courses of Studies	Eligibility requirement
1	01 (A)	M.Sc. Forestry	B.Sc. degree with at least one of the subjects namely Botany, Chemistry, Geology, Mathematics, Physics, Zoology or a B.Sc. degree in Agriculture or Forestry.
2	01 (B)	M.Sc. Wood Science & Technology	B.Sc. degree with Physics, Mathematics and Chemistry (PCM) or B.Sc. degree in Forestry.
3	01 (C)	M.Sc. Environment Management	B.Sc. degree in any branch of Basic or Applied Sciences or Bachelor's degree in Forestry or Agriculture or BE/B.Tech in Environment Science.
4	01 (D)	M.Sc. Cellulose & Paper Technology	B.Sc. degree with minimum 50% marks in aggregate in Science with Chemistry as one of the subjects. BE/B.Tech. (Chemical or Mechanical Engineering with minimum 50% aggregate).

### Age Limit for In-service Candidate:

The maximum age limit in respect of in-service candidate to M.Sc. Environment Management course shall be 50 years. The age shall be reckoned as on 31<sup>st</sup> July of the year of admission and no further relaxation will be given in any case.

## CHOICE BASED CREDIT SYSTEM

The FRI Deemed to be University has implemented the Choice Based Credit System for M.Sc. courses of FRI Deemed to be University from the session 2016-2017.

## RESERVATION OF SEATS

### A) **SCHEDULED CASTES AND SCHEDULED TRIBES:**

Fifteen percent (15%) of the total available seats shall be reserved for scheduled castes and seven and half percent (7.5%) for scheduled tribe's candidates subject to their being otherwise suitable. These reservations shall be interchangeable e.g. if sufficient number of candidates are not available to fill up the seats reserved for scheduled tribe candidates, these can be filled up from suitable scheduled castes candidates within the course concerned.

### B) **OTHER BACKWARD CLASSE (OBC):**

The reservation to OBC is being provided as per the policy of the Govt. of India as defined by National Commission for Backward Classes (NCBC).

### C) **PHYSICALLY HANDICAPPED:**

3% reservation to the persons with **Disabilities under the persons with Disabilities (Equal opportunities, Protection of Rights and Full Participation) Act, 1995 Chapter No. 39**, for the candidates with locomotors disabilities one leg, one arms (without mobility restriction) and persons with partial deafness as per Govt. of India rules in **M.Sc. Forestry & M.Sc. Environment Management Courses**. The Candidates will have to produce Disability certificate issued by competent authority at the time of Counseling for admission.

### D) **IN-SERVICE CANDIDATES:**

Five seats shall be reserved in M.Sc. Environment Management course for in-service candidates working in Government Departments/Autonomous bodies under the Central/State/Union Territory/ICFRE. However, if in-service candidates are not available then the seats reserved for them will be filled up by general candidate(s).

### E) **FOREIGN NATIONALS:**

Reservation to the extent of 15% of the prescribed seats on supernumerary basis for Foreign Nationals shall be made for admission to each M.Sc. course available in the Institute. The foreign nationals are **exempted from appearing in admission test** provided they have passed the equivalent qualifying examination from a University outside India and fulfill the following conditions:

- (a) That they must have minimum eligibility requirements;
- (b) that the applications of scholarship holding Foreign Nationals (Under various schemes) are routed through Indian Council for Cultural Relations /Ministry of Human Resource & Development (Dept. of Education), Govt. of India, New Delhi;
- (c) that the applications of self-financing Foreign nationals should be routed through concerned Indian Diplomatic Mission abroad or Diplomatic Mission of the country of the applicant in India and should be reached in the office of the FRI Deemed to be University by the 12<sup>th</sup> June, 2023. Fee to be charged from the foreign nationals is given below.

- (d) that they have valid residential permit in India granted for studies/Student Visa for the prescribed duration of the concerned course;
- (e) that the antecedents of the candidate have been verified by the forwarding Agencies/Ministry and found in order;
- (f) that the degree/certificates of the candidates have been approved by the Association of Indian Universities (AIU) as equivalent to the corresponding degrees/certificates of the AIU;
- (g) that they have adequate knowledge of English as per requirements of the course.

### **Fee**

- |    |  |   |  |
|----|--|---|--|
| 1. | Semester fee   | - | 750 US\$ per semester<br>(1 <sup>st</sup> installment is payable at the time of admission) |
| 2. | Caution money  | - | 50 US\$ (Refundable)   |
| 3. | Hostel fee   | - | 40 US\$ per month  |
| 4. | Sports, Magazines fees   | - | 30 US\$ p.a.   |
| 5. | Library/Teaching aid fee   | - | 50 US\$ per semester   |
| 6. | Degree fee   | - | 10 US\$  |
| 7. | The mess charges will be around 23 US\$ p.m., if they join mess run by the students. |   |  |

## **COMMITTEES**

The FRI Deemed to be University has constituted the following committees for safe, secure and stress free environment in the University to the students of the FRI Deemed to be University.

1. Anti-Sexual Harassment Committee
2. Committee to look after the complaints of caste discrimination of SC/ST students
3. Student Counselling Centre
4. Student's Welfare & Disciplinary Committee

## **GUIDELINES**

- ❖ In case a candidate has appeared for the degree examination required for admission but the result of the same has not been announced till the time of submission of application, the application form may still be completed in all other respects and may be submitted to the Registrar, Forest Research Institute Deemed to be University on or before the last date. The degree/result (mark sheet) should however be furnished as soon as it becomes available, which must reach the office of the Registrar, FRI Deemed to be University on or before the date fixed for admission failing which he/she shall not be admitted treating his/her application for admission as incomplete.

- ❖ In case a candidate comes from a university/institute that follows the course credit system, the application shall be considered even though the final viva/voce is yet to be completed provided a full transcript is enclosed showing the grade point average obtained along with a course completion certificate from the Registrar of the University/Institute/Head of the College, Dean/Associate Dean of the campus of multi-campus, Universities/Institutes to the effect that the candidate has completed all the prescribed work. The certificate issued in this regard by the Head of the Department/Division shall not be entertained. However, at the time of admission a certificate shall have to be produced from the Registrar/Head of the College, Dean/Associate Dean of the campus of multi-campus Universities stating clearly that the candidate has passed the last degree examination, failing which the candidate shall not be admitted treating his/her application for admission as incomplete.
- ❖ The candidate must in his/her own interest fill up the application form most ***carefully and ensure that all the columns are filled up correctly. Incomplete application shall be rejected out right.***
- ❖ A candidate may apply in more than one course in test but he/she is required ***to fill up the separate admission form and separate fee for each course e.g. In case candidate applies for two courses the fee payable shall be Rs.3000/- for application forms. Similarly, for three courses the fee payable shall be Rs.4500/- respectively.***
- ❖ The applicant is required to mention his/her category in clear terms. The category to which the applicant belongs once mentioned on the form shall be final and no subsequent change shall be allowed. If boxes requiring indication of category on the application form are left blank, the candidate shall be treated as general category and he/she cannot claim the benefit of any other category.
- ❖ Candidates are allowed to appear for the Admission Tests provisionally subject to the verification of equivalence of degrees/certificates and validity of certificates/marks-sheets of qualifying examination and also whether involved in the adoption of unfair means in any of the examinations of the University admission tests held earlier at the time of admission in the respective courses. Degree/Certificate recognized by AIU shall be deemed as equivalent degrees.
- ❖ Candidates who were admitted as regular students to any course of studies in this Institute through Admission Test in earlier year(s) shall not be allowed to re-appear in the admission test for admission in same course.
- ❖ Please fill up all the columns correctly.
- ❖ Please read the Information Bulletin thoroughly before filling up the form.
- ❖ In your own interest please do not give any false information which may make you liable for disqualification.

*Production of original certificates and mark sheet at the time of admission is an essential requirement which is not relaxed in any case under any circumstances. If any information submitted*

by the candidate is found to be false at any stage during his/her study at FRI Deemed to be University, his/her admission shall be cancelled.

- ❖ The minimum qualifying marks for allowing candidate to appear in the written test are 50 percent in aggregate at B.Sc. level/M.Sc. level prescribed for admission to the different courses in respect of general category and OBC candidates including physically handicapped, in-service candidates and foreign nationals and 45 percent in aggregate in respect of SC/ST candidates.
- ❖ Candidates selected for written test based on the academic and other requirements will be sent the admit card through e-mail/surface mail. In case of admission to the M.Sc. courses the aggregate marks of all the three science subjects will only be computed for ascertaining the **50%** qualifying marks in respect of General/OBC candidate and **45%** in respect of SC/ST candidates. The marks of other than Science subjects and aggregate marks of honours subject shall not be considered in any case for ascertaining the qualifying marks for appearing in the admission test.

### **ANNOUNCEMENT OF RESULTS & ADMISSION**

- ❖ A merit list of candidates including a waiting list will be formed for each course on the basis of aggregate marks secured in the written test. Candidates will be selected in order of merit in all the categories. The list of selected will be declared on the website [www.fridu.edu.in](http://www.fridu.edu.in). **Date of first counseling is 10<sup>th</sup> July, 2023 and date of second counseling is 13<sup>th</sup> July, 2023. The candidates will be suitably advised before they come for counseling.**
- ❖ The selected candidates will have to pay the prescribed fees and join the course by the due date notified. The fee has to be paid at the time of counseling otherwise the seat will be offered to the next candidate.
- ❖ If a selected candidate does not join by the prescribed date or if no extension has been asked for and **granted** by the University the admission shall stand cancelled automatically and the seat shall be offered to the candidate in the merit/waiting list.

#### **Documents in original to be produced by the candidate at the time of counselling:**

1. Transfer Certificate
2. Migration Certificate, if passed from University (to be submitted not later than 90 days of admission)
3. High School Certificate/equivalent Certificate and Mark sheet.
4. Intermediate Certificate/equivalent Certificate and Mark sheet.
5. B.Sc. degree/PDC and Mark sheet of all the three years or transcript
6. M.Sc. degree and Mark sheet if any.
7. OBC certificate from District Magistrate or authorities empowered to issue certificate or verification issued not earlier than six months. Please ensure that you are eligible to get reservation under OBC category only as per the Central Educational Institutions (Reservation

in Admissions) Act, 2008 and other relevant guidelines issued by Govt. of India time to time.(National Commission for Backward Classes)

9. SC/ST certificate on the basis of which reservation is claimed.

10. Physically Handicapped certificate from Civil Surgeon/C.M.O.

❖ *The candidates called for admission have to produce original certificates, mark sheet etc. before the payment of fees. However in cases where the original mark sheet indicates clearly that the candidate have passed the qualifying examination prescribed for admission he/she be admitted on the condition that he/she shall produce the original degree/ provisional degree within one month failing which his/her admission is liable to be cancelled. There can be no appeal to any authority if the candidate fails to produce the original documents at the time of admission.*

❖ In case equal marks in written test, the following criteria shall be adopted for taking admission in the course concerned:-

- i) Preference will be given to the candidate who has higher percentage of aggregate marks in the qualifying examination.
- ii) In case the candidates have equal percentage of aggregate marks in qualifying examination then the candidate higher % in graduation will be given preference.

## **PLACEMENTS**

FRI Deemed to be University provides assistance in placement of deserving students. Various industries/ organizations visit the campus for campus interviews. On an average 50% of the students get placements through the campus interviews. However, in case of M.Sc. Wood Science & Technology the placement is 100% in general.

## **SCHOLARSHIP**

FRI Deemed to be University provides merit scholarship to the topper students in each course. The scholarship may be upto 50% of Tuition Fee per semester and is awarded separately for each semester depending on the result of the previous semester. For the purpose of award of scholarship in the first semester the result of the entrance test is considered and the topper in general category and SC/ST category are awarded the scholarship in each course. However general category candidate must score minimum 50% marks and SC/ST must score 30% marks for obtaining the scholarship.

## GENERAL

- a) Candidate who satisfies the above eligibility requirements may apply for admission test on the prescribed application form for any of the courses mentioning the name of the course with its Code No.
- b) The category to which the applicant belongs once mentioned on the form is final and no subsequent change shall be allowed. Boxes requiring indication of category, if left, blank will be treated as indicating General Category.
- c) Application forms of candidates, who have submitted forged/fake certificates or adopted fraudulent means, shall be rejected without any reference to the candidate. Further, such candidates are liable to be prosecuted and shall be debarred from appearing in any subsequent Admission Test conducted by FRI Deemed to be University.
- d) Candidates are allowed to appear in the Admission Tests provisionally subject to the final decision of equivalence of degrees/certificates of qualifying examination at the time of admission in the respective courses.
- e) Mere appearance in the admission test will not entitle a candidate to be considered for admission to the course unless he/she fulfills the eligibility conditions. Applicants must fully satisfy themselves about their eligibility as prescribed above, before filling in the application form.
- f) The **Online Remote Proctored Admission Test will be held on 21<sup>st</sup> May, 2023.** Time and other information and conditions for test will be indicated in the admit card or with login credentials.
- g) In all matters relating to the Admission Test, the decision of Registrar, FRI Deemed to be University shall be final and binding.
- h) No scrutiny or revaluation of the answer book of the Admission Test shall be allowed on any grounds.
- i) The candidate who wants to apply for more than one course may do so but he/she is required to fill up **separate form and separate fee @ Rs. 1500/- for each course.** Test for all the courses will be the same.

## **CANCELLATION OF ADMISSION**

### **REASONS FOR REJECTION OF APPLICATION FORMS**

- a) Non-submission of identical recent photographs at all appropriate places. (**Xeroxed copy/copies of photographs shall not be accepted.**)
- b) Lack of signature of the candidate at any of the appropriate place.
- c) Submission of application form by a candidate after erasing the entries made earlier by another candidate.

FRI Deemed to be University has the right to cancel, at any stage, the admission of a candidate who is admitted to a course to which he/she is not entitled, being unqualified or ineligible in accordance with the rules and regulations in force.

### **INSTRUCTIONS FOR THE OLIVE REMOTE PROCTORED ENTRANCE TEST**

- a) There will be an objective type written test of three hours with questions grouped under the following four sections:
  - I.** Basic Sciences including Social Science (**100 questions**)
  - II.** Arithmetic and Quantitative abilities, Computational ability, Quantitative reasoning, Interpretation of Tables, Graphs, etc. (**40 questions**)
  - III.** General Knowledge and Current Affairs (**30 questions**)
  - IV.** English Language, Comprehension, Vocabulary, Grammar, Idioms, etc. (**30 questions**)
- b) Each question will be followed by four alternative answers. The candidate is required to select the one which he/she feels is correct answer. The detail instructions given accordingly. The candidate is advised to go through the instructions.
- c) **There will be negative marking for wrong answer to the extent of one-fourth ( $\frac{1}{4}$ ) of the marks allotted to the questions.**
- d) **In case of any dispute it will be subject to jurisdiction of Dehra Dun court only.**

## DESCRIPTION OF COURSES OFFERED

### M.Sc. Forestry

**Programme Objective:** Master in Forestry programme aims to provide opportunity to the students wishing to pursue professional careers in the management and policy of forest resources and to make themselves aware about the problems related to forest across the span of urban to rural environments. The syllabus draws from coursework in the natural and social sciences and focuses on the complex relationships among the science, management and policy of forest resources. The structure of the curriculum is designed to synthesis of knowledge in multiple disciplinary exposures in the biological and social sciences. The goal is to prepare students to manage forest resources for various public and private values within a complex social, political and ecological environment. These professional opportunities can be private or public sector forest management, corporate or consulting, government conservation of forest resources or education. Students are also expected to improve their capacities as leaders and managers through summer internships, professional skills courses and other opportunities.

**Programme structure:** The Programme consists of courses and other requirements worth a total of 90 credits. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. Each semester consists of 18 to 20 weeks of academic work equivalent to 90 actual teaching days. The programme structure and respective credits are given below as:

Programme Structure	Credit
Core courses	: 54
Foundation courses	: 5
Elective courses	: 5
Synopsis	: 1
Master's thesis	: 17
Master thesis seminar	: 2
Term paper I	: 2
Term paper II	: 2
Study tour	: 2
Total	: 90

## Allotment of credits to different courses

### FIRST SEMESTER

Course Code	Course	Credit	
		Theory	Practical
Foundation Course			
FMS 101	Elements of Mathematics and Statistics	1	1
FCR 102	Computer Application, Remote Sensing and GIS	1	1
FOF 103	Overview of Forestry	1	-
Core course			
FBS 111	Elements of Biological Science	1	1
FFF 112	Fundamentals of Forest Ecology	2	1
FSC 113	Silviculture – I	2	1
FGS 114	Basic Geology and Soil science	2	1
FMB 115	Forest Mensuration and Biometry	2	1
FHV 116	Forest Health and Vitality	2	1
FTP 117	Term Paper I	2	-
Total credits in first semester: $14^a+8^b+2^c=24$			

### SECOND SEMESTER

Course Code	Course	Credit	
		Theory	Practical
Core course			
FPL 211	Forest Policy and Law	2	-
FLM 212	Landscape Approach to Management	2	1
FRU 213	Forest Resource Utilization – I (NTFP)	2	1
FFE 214	Forest Economics	2	1

<b>FFP 215</b>	Forest and People	2	-
<b>FRM 216</b>	Natural Resource Management	2	-
<b>FSC 217</b>	Silviculture–II	2	1
<b>FSN 218</b>	Seed and Nursery Technology	1	1
<b>FTP 219</b>	Term Paper II	2	-
<b>Total credits in first semester: <math>15^a + 5^b + 2^c = 22</math></b>			

### **THIRD SEMESTER**

Course Code	Course	Credit	
		Theory	Practical
Core course			
FRM 311	Resource Survey and Forest Management	2	1
FWD 312	Wildlife and Eco Development	2	1
FRU 313	Forest Resource Utilization – II (Wood)	2	1
FGT 314	Forest Genetics and Tree Improvement	2	1
FFC 315	Forest Certification	2	-
FCC 316	Forest, Society and Climate Change	2	1
FST 317	Study Tour	2	-
Elective		5	
Total credits in first semester: $12^a+5^b+2^d+5^e=24$			

### **FOURTH SEMESTER**

Code	Particulars	Credit
<b>FSY 441</b>	<b>Synopsis</b>	<b>1</b>
<b>FMT 442</b>	<b>Master's thesis</b>	<b>17</b>
<b>FTS 443</b>	<b>Master thesis seminar</b>	<b>2</b>
<b>Total</b>		<b>20</b>

### **LIST OF ELECTIVE COURSE**

<b>Course Code</b>	<b>Elective Course</b>	<b>Credit</b>	
		<b>Theory</b>	<b>Practical</b>
<b>FGB 321</b>	Forest Genetics and Biotechnology	3	2
<b>FRG 322</b>	Remote Sensing and Geographic Information System	2	3
<b>FWH 323</b>	Wildlife and Habitat Management	3	2
<b>FSM 324</b>	Sustainable Forest Management	3	2
<b>FAF 325</b>	Agro forestry	4	1
<b>FFP 326</b>	Forest Pathology	2	3
<b>FFE 327</b>	Forest Entomology	2	3
<b>EIA 328</b>	Environmental Impact Assessment	4	1
<b>FPT 329</b>	Plantation Technology	4	1
<b>PTN 330</b>	Plant Taxonomy	2	3

*a: Theory, b: Practical, c: Term paper, d: Study tour, e: Elective paper.*

*One lecture credit comprises of one hour teaching of the course in a week, while one practical credit comprises of two hours of practical/assignment work in a week*

### **Descriptions of Course Code**

**The courses of M. Sc. programme are divided into four series:**

- ❖ 100-series courses pertain to first semester
- ❖ 200-series courses pertain to second semester
- ❖ 300-series courses pertain to third semester
- ❖ 400-series courses pertain to fourth semester
- ❖ Credit for Synopsis, Master's thesis and Master thesis seminar is designated by code no. 441, 442 and 443 respectively

**Course code is formulated as:**

- First alphabet shows programme
- Second and third alphabet shows course name
- First digit shows semester number
- Second digit shows course type (0= foundation, 1= core, 2= elective)
- Last digit shows course number

## M.Sc. Wood Science & Technology

**Programme Objective:** The Master in Wood Science and Technology programme aims to provide opportunity to the students wishing to pursue professional careers in science and technology of wood as natural resource and to make themselves aware about the problems related to wood as basic material to manufacture various useful products. The structure of the curriculum is designed to synthesize multi-disciplinary knowledge in the biological and physical science of wood and its industrial application. The syllabus comprises of basics of wood anatomy, chemistry, physics, mechanics as well as processing knowledge and techniques to manufacture solid and composite wood products. The programme is designed to improve the qualitative, quantitative and futuristic aspects of students. Students are also expected to improve their capacities as leaders and managers through study tour, industrial attachment and excursions and other opportunities. Human Resource Management and Marketing and Enterprise Development are also the part of syllabus to build their entrepreneurial skills and aptitude.

**Programme structure:** The programme consists of courses and other requirements worth a total of 90 credits. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. Each semester will consist of 18 to 20 weeks of academic work equivalent to 90 actual teaching days. The programme structure and respective credits are given below as:

Programme Structure	Credits
Core course	: 59
Foundation courses	: 7
Elective courses	: 5
Master's thesis	: 12
Master thesis seminar	: 2
Study tour	: 2
Industrial Attachment	: 3
Total	: 90

**Allotment of credits to different courses****FIRST SEMESTER**

Course Code	Course	Credit	
		Theory	Practical
Foundation Course			
WOC 101	Orientation Course (Wood Science, Basic Forestry, Basic Botany)	2	.-
WCA 102	Computer Application	-	1
Core Course			
WWC 111	Wood Chemistry	2	1
WWP 112	Wood Physics - I	2	1
WWP 113	Wood Physics - II	2	
WSM 114	Sawmilling and Saw Doctoring	2	1
WWA 115	Wood Anatomy- I	2	1
WWA 116	Wood Anatomy -II	2	
WEM 117	Timber Entomology and Microbiology	3	1
Total credits in first semester     17 <sup>a</sup> +6 <sup>b</sup> =23			

**SECOND SEMESTER**

Course Code	Course	Credit	
		Theory	Practical
Foundation Course			
WSM 201	Statistics and Research Methodology	1	1
Core Course			
WTM 211	Timber Mechanics -I	2	1
WTM 212	Timber Mechanics -II	2	
WWP 213	Wood Preservation -I	2	1

<b>WAD 214</b>	Composite Wood I - Adhesives	2	1
<b>WPW 215</b>	Composite Wood II - Plywood	2	
<b>WWS 216</b>	Wood Seasoning - I	2	1
<b>WWW217</b>	Wood Working	2	1
<b>Total Credits</b>		<b>15</b>	<b>6</b>
<b>Total credits in second semester <math>15^a + 6^b = 21</math></b>			

### **THIRD SEMESTER**

Course Code	Course	Credit	
		Theory	Practical
Core Course			
WWS 311	Wood Seasoning -II	2	1
WWP 312	Wood Preservation II	2	1
WWF 313	Wood Finishing	2	1
WRW 314	Composite Wood III-Reconstituted Wood	2	1
WLW 315	Composite Wood IV- Laminated Wood	2	
WTE 316	Timber Engineering	2	1
WPD 317	Products Design and Fabrication	2	1
WST 318	Study Tour	2	
WIA 319	Industrial attachment and Report	3	
Total credits in third semester = $14^a + 6^b + 2^c + 3^d = 25$			

### **FOURTH SEMESTER**

Course Code	Course	Credit	
		Theory	Practical
Foundation Course			
WHR 401	Human Resource Management	1	-

<b>WME 402</b>	Marketing and Enterprise Development	1	-
<b>Elective Courses</b>		<b>5</b>	
<b>WFC 421</b>	Forest Certification and Nano-technology	5	-
<b>WFJ 422</b>	Finger Joints for Efficient Wood Utilization	3	2
<b>WVS 423</b>	Vaccum Seasoning Technology	3	2
<b>WMT 441</b>	<b>Master 's thesis</b>	12	
<b>WMS 442</b>	<b>Master thesis seminar</b>	2	
<b>Total credits in fourth semester</b>		<b><math>2^a + 5^b + 12^f + 2^g = 21</math></b>	

*a- Theory, b- Practical, c- Study tour, d- Industrial attachment, e- Elective paper, f- master thesis report, g-seminar . One lecture credit comprises of one hour teaching of the course in a week, while one practical credit comprises of two hours of practical/assignment work in a week*

### **Descriptions of Course Code**

The courses of M. Sc. programme are divided into four series:

- ❖ 100-series courses pertain to first semester
- ❖ 200-series courses pertain to second semester
- ❖ 300-series courses pertain to third semester
- ❖ 400-series courses pertain to fourth semester
- ❖ Credit for Master's thesis and Master thesis seminar is designated by code no. 441 by 442 respectively.

Course code is formulated as:

- First alphabet shows programme
- Second and third alphabet shows course name
- First digit shows semester number
- Second digit shows course type (0= foundation, 1= core, 2= elective)
- Last digit shows course number

## M.Sc. Environment Management

**Programme objectives:** The programme aims to provide opportunities to the students to make themselves aware about the problems related to environmental concerns and its management. The programme is designed to provide a holistic and integrated approach of learning comprising of classroom lectures, classroom assignments, practical sessions, interactive seminars, field visits, industrial visits, term papers, divisional attachments and master's thesis writing. The course builds and facilitates understanding of the dynamics of environment especially in the context of ecology, forestry, and climate change. Different types of processes, models, plans and techniques related to environmental processes are described and discussed through class room interaction as well as exposures visits to different ecosystems and institutional/industrial arrangements. The students are expected to get enough exposure for practical solutions to various ecological and environmental problems in the context of today's world.

**Programme structure:** The programme consists of courses and other requirements worth a total of 89 credits. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. Each semester will consist of 18 to 20 weeks of academic work equivalent to 90 actual teaching days. The programme structure and respective credits are given below as:

Programme Structure		Credits
Core courses	:	53
Foundation courses	:	5
Elective courses	:	5
Synopsis	:	1
Master's thesis	:	17
Master thesis seminar	:	2
Term paper I	:	2
Term paper II	:	2
Study tour	:	2
Total	:	89

## Allotment of credits to different courses

### FIRST SEMESTER

Course Code	Course	Credit	
		Theory	Practical
Foundation Course			
ERG 101	Remote Sensing and Geographical Information System	1	1
Core Course			
EFE 111	Fundamentals of Ecology	3	1
EEA 112	Ecosystem Analysis	3	1
EPB 113	Environment Physics and Biogeochemistry	3	1
ECE 114	Conservation Ecology	3	1
EIA 115	Environment Impact Assessment	3	1
ERE 116	Restoration Ecology	3	1
ETP 117	Term Paper I	2	-
Total credits in first semester		19 <sup>a</sup> + 7 <sup>b</sup> + 2 <sup>c</sup> = 28	

### SECOND SEMESTER

Course Code	Course	Credit	
		Theory	Practical
Foundation Course			
ESC 201	Environment      Statistics      and      Computer Application	2	1
Core Course			
EFM 211	Forestry for Sustainable Management	3	1
EEM 212	Environment Microbiology	3	1
EGF 213	Global Climate Change and Forest	3	1
EDM 214	Disaster Management	3	1

<b>FFE 214</b>	Forest Economics	2	1
<b>ETM 215</b>	Term Paper II	2	-
<b>Total credits in second semester</b>		<b>16<sup>a</sup> + 6<sup>b</sup> + 2<sup>c</sup> = 24</b>	

### **THIRD SEMESTER**

Course Code	Course	Credit	
		Theory	Practical
Core Course			
EPS 311	Environment Policy, Law and Sociology	3	1
EPM 312	Environment Pollution Management	3	1
EFC 313	Forest Certification	2	-
EST 314	Study Tour	2	-
Elective course 5 Credits			
ENM 321	Natural Resource Conservation and Management	4	1
EBM 322	Bio Diversity Monitoring and Management	4	1
EBC 323	Bio Statistics and Computer Application	4	1
ESM 324	Solid Waste Management	4	1
EPC 325	Forest, Society and Climate Change	4	1
ERG 326	Remote sensing and Geographic Information System- Advance and Application in Environment Management	4	1
EIA 328	Environment Impact Assessment	4	1
PTN 330	Plant Taxonomy	2	3
Total credits in first semester		8 <sup>a</sup> +2 <sup>b</sup> +5 <sup>c</sup> +2 <sup>d</sup> =17	

## **FOURTH – SEMESTER**

<b>Code</b>	<b>Particulars</b>	<b>Credit</b>
<b>ESY 441</b>	Synopsis	1
<b>EMT 442</b>	Master's thesis	17
<b>ETS 443</b>	Master thesis seminar	2
<b>Total</b>		<b>20</b>

*a- Theory, b- Practical, c- Term paper, d-Study tour, e- Elective paper. One lecture credit comprises of one hour teaching of the course in a week, while one practical credit comprises of two hours of practical/assignment work in a week*

### **Descriptions of Course Code**

The courses of M. Sc. programme are divided into four series:

- ❖ 100-series courses pertain to first semester
- ❖ 200-series courses pertain to second semester
- ❖ 300-series courses pertain to third semester
- ❖ 400-series courses pertain to fourth semester
- ❖ Credit for Synopsis, Master's thesis and Master thesis seminar is designated by code no. 441, 442 and 443 respectively

Course code is formulated as:

- First alphabet shows programme
- Second and third alphabet shows course name
- First digit shows semester number
- Second digit shows course type (0= foundation, 1= core, 2= elective)
- Last digit shows course number

## **M.Sc. Cellulose & Paper Technology**

**Programme objectives:** The academic programme emphasizes on skills in multidisciplinary and advance education in cellulose and paper sciences. Programme includes courses in modern areas of applied paper science, industrial processing and paper technology. During the university's educational programme at Masters level, the students receive adequate exposure of theoretical and practical aspects of cellulose and paper technology and gain competence in a distinctive set of skills to lead in paper industry. The course is also ideal for engineers and scientists currently working in

the industry who wish to retrain and refresh in a new field. The current demand for pulp and paper experts indicates that this programme will be in high demand in the near future.

**Programme structure:** The programme consists of courses and other requirements worth a total of 91 credits. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. Each semester will consist of 18-20 weeks of academic work equivalent to 90 teaching days. The programme structure and respective credits are given below as:

<b>Programme Structure</b>	<b>Credits</b>
Core courses	: 77
Foundation courses	: 3
Project work	: 8
In Plant training	: 3
Total	: 91

#### **Allotment of credits to different courses**

##### **FIRST SEMESTER**

<b>S. No.</b>	<b>Course Code</b>	<b>Course</b>	<b>Credit</b>
<b>Foundation course</b>			
1.	PP-111	Basic Forestry	3
<b>Core Course</b>			
2.	PP-112	Paper Industry and Fibrous Raw Materials	4
3.	PP-113	Pulping	4
4.	PP-114	Elements of Mechanical and Electrical Engineering	4
5.	PP-115	Washing of pulp	3
6.	PP-116	Practical	5
<b>Total credits in first semester : 23</b>			

##### **SECOND SEMESTER**

<b>S. No</b>	<b>Course code</b>	<b>Course</b>	<b>Credit</b>
<b>Core Course</b>			
1.	PP-121	Refining, Beating and Chemical Additives	4
2.	PP-122	Paper Machines-I	4
3.	PP-123	Paper Machines-II	3
4.	PP-124	Papermaking Chemistry	3
5.	PP-125	Screening and Cleaning	3
6.	PP-126	Practical	5
<b>Total Credits in second semester: 22</b>			

### THIRD SEMESTER

S. No	Course code	Course	Credit
<b>Core course</b>			
1.	PP-211	Chemical Recovery	4
2.	PP-212	Bleaching Technology	4
3.	PP-213	Material and Energy Balance	4
4.	PP-214	Specialty Paper	3
5.	PP-215	Secondary Fibre Technology	4
6.	PP-216	Practical	5
<b>Total Credits in third semester: 24</b>			

### FOURTH SEMESTER

S. No	Course code	Course	Credit
<b>Core course</b>			
1.	PP-221	Paper Properties	3
2.	PP-222	Environmental Pollution Control	3
3.	PP-223	Project Work	8
4.	PP-224	In Plant Training	3
5.	PP-225	Practical	5
<b>Total Credits in fourth semester: 22</b>			

## FEES AND DEPOSITS

The fee is to be paid by a student to the Registrar, FRI Deemed to be University, Dehradun through Bank Draft payable at Dehradun only.

### M.Sc. Courses:

#### i) **General Seats:**

Tuition fee Rs. 1,08,000/- payable in four equal installments of Rs.27,000/- each.

#### ii) **Foreign National Seats:**

Tuition fee 3000 US \$ payable in four equal installments of 750 US \$ each.

First installment fee will be paid at the time of admission and rest fee at the beginning of each semester.

Fee once paid will not be refunded under any circumstances.

Besides course fee they have to pay students club, sports and magazine, Library, Degree, Electricity/water, Hostel fees etc. as per schedule fixed by the Institute. The students who will be allotted hostel have to pay hostel fees as per schedule.

#### a) **Caution Money:**

Rs. 3,000/- is payable at the time of admission. The caution money will be refunded on completion of the course after making deductions, if any.

The breakup of fee chargeable from M.Sc. Forestry, Environment Management and Wood Science & Technology students is as follows:-

**First Semester (In Rs.)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount</b>
1.	Admission Fee	<b>5000/-</b>
2.	Tuition Fee	<b>27000/-</b>
3.	Misc. Fee (Extra Curricular/Sports/Cultural Fee	<b>3000/-</b>
4.	Degree Fee	<b>500/-</b>
5.	Hostel Charges per semester (Double occupancy)	<b>4800/-</b>
6.	Electricity, Water & other maintenance per semester	<b>2000/-</b>
7.	Library/Teaching aid per semester	<b>1500/-</b>
8.	Caution Money (Refundable)	<b>3000/-</b>
9.	Semester Exam. Fee	<b>1500/-</b>
10.	Study Tour/Field Excursion Fee	<b>1500/-</b>
	<b>Total</b>	<b>49,800/-</b>

**Second Semester (In Rs.)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount</b>
1.	Tuition Fee	<b>27000/-</b>
2.	Hostel Charges per semester (Double occupancy)	<b>4800/-</b>
3.	Electricity, Water & other maintenance per semester	<b>2000/-</b>
4.	Library/Teaching aid per semester	<b>1500/-</b>
5.	Semester Exam. Fee	<b>1500/-</b>
6.	Study Tour/Field Excursion Fee	<b>1500/-</b>
	<b>Total</b>	<b>38,300/-</b>

**Third Semester (In Rs.)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount</b>
1.	Tuition Fee	<b>27000/-</b>
2.	Hostel Charges per semester (Double occupancy)	<b>4800/-</b>
3.	Electricity, Water & other maintenance per semester	<b>2000/-</b>
4.	Library/Teaching aid per semester	<b>1500/-</b>
5.	Semester Exam. Fee	<b>1500/-</b>
6.	Study Tour/Field Excursion Fee	<b>8000/-</b>
7.	Misc. fee (Extra curricular/ Sports/Culture Fee	<b>3000/-</b>
	<b>Total</b>	<b>47,800/-</b>

**Fourth Semester (In Rs.)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Amount</b>
1.	Tuition Fee	<b>27000/-</b>
2.	Hostel Charges per semester (Double occupancy)	<b>4800/-</b>
3.	Electricity, Water & other maintenance per semester	<b>2000/-</b>
4.	Library/Teaching aid per semester	<b>1500/-</b>
5.	Semester Exam. Fee	<b>2000/-</b>
	<b>Total</b>	<b>37,300/-</b>

**Fee payable at the time of admission (with double occupancy) Rs. 49,800/-**

The breakup of fee chargeable from M.Sc. Cellulose & Paper Technology\_ students is as follows:-

**First Semester (In Rs.)**

Sl. No.	Particulars	Amount
1.	Admission Fee	5000/-
2.	Tuition Fee	27000/-
3.	Misc. Fee/Sports/Cultural Fee (One time at the time of admission)	3000/-
4.	Degree Fee	500/-
5.	Hostel Charges per semester (Double occupancy)	4800/-
6.	Electricity, Water & other maintenance per semester	2000/-
7.	Library/Teaching aid per semester	1500/-
8.	Caution Money (Refundable)	3000/-
9.	Semester Exam. Fee	1500/-
10.	Study Tour/Field Excursion Fee	1500/-
	<b>Total</b>	<b>49,800/-</b>

**Second Semester (In Rs.)**

Sl. No.	Particulars	Amount
1.	Tuition Fee	27000/-
2.	Hostel Charges per semester (Double occupancy)	4800/-
3.	Electricity, Water & other maintenance per semester	2000/-
4.	Library/Teaching aid per semester	1500/-
5.	Semester Exam. Fee	1500/-
6.	Study Tour/Field Excursion Fee	1500/-
	<b>Total</b>	<b>38,300/-</b>

**Third Semester (In Rs.)**

Sl. No.	Particulars	Amount
1.	Tuition Fee	27000/-
2.	Hostel Charges per semester (Double occupancy)	4800/-
3.	Electricity, Water & other maintenance per semester	2000/-
4.	Library/Teaching aid per semester	1500/-
5.	Semester Exam. Fee	1500/-
6.	Study Tour/Field Excursion Fee	1500/-
	<b>Total</b>	<b>38,300/-</b>

**Fourth Semester (In Rs.)**

Sl. No.	Particulars	Amount
1.	Tuition Fee	27000/-
2.	Hostel Charges per semester (Double occupancy)	4800/-
3.	Electricity, Water & other maintenance per semester	2000/-
4.	Library/Teaching aid per semester	1500/-
5.	Semester Exam. Fee	2000/-
	<b>Total</b>	<b>37,300/-</b>

**Fee payable at the time of admission (with double occupancy) Rs. 49,800/-**

## **HOSTEL RULES**

Subject the general control of the Academic Council, the following Ordinances and Regulations shall regulate the maintenance of discipline among the students residing in the Hostels. The hostel facility is normally provided all the students subject to availability.

### **INSTITUTE HOSTELS**

#### **1. Residence**

- 1.1 Students may be admitted to the Institute Hostel, according to the criteria laid down (vide Appendix – I) for the purpose and in accordance with the accommodation available for residence.
- 1.2 The Institute hostels should be totally vacated for a period of one month preferably in June, every year to enable the administration to attend to the maintenance and other associated matters of the hostels. However, if the presence of certain research students is considered essential then they may be accommodated in one hostel.
- 1.3 Students failing to secure a seat in a hostel are required to make their own arrangement and intimate to the registry address of their residences.

For the purpose of the above Regulation the term “Guardian” shall mean the legal guardian of the student, if one has been appointed or as an alternative a near relative if any, of responsible age provided that the guardian so declared shall sign a declaration of his relationship if any, with the student and shall execute a bond indicating that he shall be responsible for the good behavior of the student.

#### **2. Disciplinary Control**

- 2.1 Every student living in a hostel (city campus) will be subject to the disciplinary control of the Registrar/Warden / Dean or any officer appointed by the Director, as the case may be. The Director shall constitute a Disciplinary Committee which will deal with all matter arising out of indiscipline and misconduct in the hostels.
- 2.2 An officer appointed by the Director shall with the cooperation of warden deal with all cases of indiscipline of students.
- 2.3 So long as the student is on the role of the Institute he/she shall be subject to the disciplinary control of the Institute authorities.

#### **3. Rules of Residence**

- 3.1 Students residing in the hostel, shall not absent themselves except under condition prescribed under regulation and shall follow the rules laid down under these regulations.
- 3.2
  - (a) A boy boarder is required to return by 8:00 p.m unless he has taken permission of the concerned warden.
  - (b) A girl boarder is required to return by 7:30 p.m (from September to February) and 8.00 p.m (from March to August) unless she has taken permission from the concerned warden.

- 3.3 No boarder shall leave the hostel or remain outside Dehra Dun when the Institute is open and course under which he has taken admission is running except with the written permission of the warden. Permission shall be given by the warden only when the student concerned has obtained leave from Course Coordinator.
- 3.4 Unless the permission of the warden has been received no boarder shall leave hostel except in an emergency. In the later case he shall inform the warden at the earliest and seek his permission.
- 3.5 Students going out on authorized tours excursion, etc, shall inform the warden in writing, stating that they have been permitted by the Course Coordinator/Dean /Director to go on such tours excursion, etc. for a specific period. The permission must be taken before they leave the hostel.

#### **4. Extra – Curricular Activities**

- 4.1 Apart from the official organizations approved by the Institute, students residing in the hostel with the permission of the Director organize Societies and Association for healthy promotion of their academic cultural, athletic and social welfare activities.
- 4.2 The Societies and Associations for promoting the academic cultural and other activities of the inmates of the hostel shall be subject to the guidance and control of the warden. On the recommendations of the warden the names of such Associations or Societies along-with their constitutions shall be forwarded to the Registrar as soon as possible for getting recognition by the Academic Council / Board of Management as the case may be.
- 4.3 For any functions in the hostel in respect of the Associations / Societies use of loudspeaker shall not be permitted.
- 4.4 Students shall not hold any meeting or organize any activity in the hostel without the written permission of the warden.
- 4.5 In all function and meeting organized in the Institute student shall maintain due decorum. Such student as are found to create disturbance or to disobey any instruction given to them shall be liable to disciplinary action as per Appendix-2

#### **5 Accommodation of Guests**

No boarder residing in hostel shall accommodate a guest in his/her room.

#### **6 Boarder in Women's Hostel**

- 6.1 Women students residing in the Women's hostel are required to return as per time given at 3.2 clause unless specially permitted by the warden.
- 6.2 Women Students residing in the Women's hostel shall be allowed to meet the visitors in the visitors room only from 5:00 p.m. to 6:30. p.m.
- 6.3 No Women student residing in the Women's hostel shall accommodate guests in her room.

## **7. Power of Enquiry from Students**

Every Officer/Scientist and other members of the staff have the power of demanding from the students their identity card and such other information as may be desired by him/her. Students failing to provide the correct information shall be liable to disciplinary action as per Appendix-2.

## **8. Penalty for Violation**

For any contravention of the Ordinances/Rules relating to discipline misconduct or moral turpitude the guilty students shall be liable to such punishment as is provided for in the rules. Punishment for any omissions or commissions or for breach of discipline or any misconduct shall be awarded in accordance with the rules mentioned in Appendix-2.

- 1.1 In case of serious misconduct, the name of the students shall be entered in the conduct book maintained with the warden. If the name of the student has been entered thrice in the conduct book for misconduct the student shall be liable to expulsion from the hostel under the order of the Director.
- 1.2 Students found guilty of misconduct in the Institute are liable to be denied hostel facility.
- 1.3 For act of indiscipline and or misconduct student may be fined monetary by the warden/disciplinary committee

## **9 Articles Permitted/Prohibited in the room**

- 9.1 Every room shall be provided at least the following articles

1	Takhat/Cot	(one)
2	Mattress	(one)
3	Table	(one)
4	Chair	(one)

- 9.2 Use of the heater, induction or any other electrical appliances by a boarder is not permitted.
- 9.3 Students desirous of keeping costly items may do at their own risk.
- 9.4 **Students shall not be permitted to keep even licensed firearms, knives contraband material, etc, in the hostel room under any circumstances whatsoever. A breach of this regulation will lead to the expulsion of the student from the hostel without any enquiry.**
- 9.5 Students shall not be permitted to use any hallucinogenic drug or alcoholic drinks. Even possession of these prohibited articles will render them to severe disciplinary action vide Appendix-2

## **10 Invitation to guests for inaugural and other functions**

- 10.1 Students of the Institute may invite any person from outside the Institute for inaugural and other functions of the Societies, Associations, and Students function etc. after obtaining prior permission of the warden.

## **11 Breach of general rules of the Institute**

- 11.1 Students of the Institution shall abide by the general rules of traffic, health, sanitation, messing extra curricular activities and security of property which may be announced by the Institute from time to time. Any breach on their part will render them liable to such disciplinary action as may be taken by the Institute vide Appendix-2. Wearing of helmet is compulsory in the campus.

## **12 Violation of general Laws of the land**

- 12.1 All cases of indiscipline amounting to violation of the law of the land, shall be reported to the Registrar / Director who may after preliminary enquiry handover the student concerned to the police for instituting case in a Court of Law.

## **13 Saving Clause**

- 13.1 Any question of discipline not covered by these rules and other rules framed by the Academic Council shall be dealt with by the Director.

## **Appendix – I**

### **CATEGORY OF BOARDERS / RESIDENTS IN A INSTITUTE HOSTEL AND PERIOD OF THEIR STAY**

#### **1. Ph.D. Research Scholars**

- 1.1 Residence facility - 4 years with effect from the date of registration or till submission of thesis, whichever is earlier.

It may be extended for one year in two installments of 6 months each on recommendation of the Supervisor / Head of the Division. However no extension will be given after the submission of thesis.

#### **2. Other bonafide Students**

- 2.1 Only such students who have joined a regular Post – graduate Degree & other courses in the Institute shall be eligible for hostel accommodation. The period of allotment though renewable every year, shall not exceed the period of the course to which a student has been admitted.

- 2.2 Students, who have been expelled rusticated or are under suspension for various act (s) of indiscipline during the course of their studentship, shall not be considered for allotment of seats in the hostel.

- 2.3 Unauthorized occupants will be expelled from the hostel by the warden. It is equally the responsibility of the hosteller to see that no guest stays in his room. If they persist in disobeying the orders then they are likely to be subjected to severe disciplinary action including rusticated for a specified period or even expulsion from the Institute.

- 2.4 Defaulters in payment of fees will be liable for cancellation of their allotment in the hostel (vide appendix-2)

- 2.5 It shall be necessary for the boarders of the hostel to fulfill the requirement of attendance in the classes as laid down in the regulations. Boarders are liable to loose their hostel seats if they do not fulfill the attendance requirement as stated above (vide appendix -2)
- 2.6 Not withstanding the period of stay mentioned above at various level, no students of the Institute should be allowed to stay in the hostels of the Institute for a total period exceeding 7 (seven) years. Ordinarily it implies 2 years of post graduate course and maximum of 5 years of Ph.D. Programme but will depend on the duration of the courses run in the Institute.
- 2.7 No students of the Institute shall have the right to stay in the same room in the next academic session. In the beginning of each academic session fresh allotment of accommodation will be made on production of No Dues Certificate.

### ATTENDANCE RULES

1. A student has to attend 75% of the lectures delivered and 75% of the practical held separately for each course in each semester.
2. The duration of Industrial attachment/dissertation/thesis works/study tour have to be accounted separately for 75% attendance.
3. The attendance of a student shall be counted from the date of his/her admission, while in the case of promoted student, attendance shall be counted from the date on which respective classes begin.

### STUDENTS WELFARE ACTIVITIES

- The Institute provides basic medical facilities to its students.
- Hostel accommodation is available in the Institute. However, the admission to the Institute does not entitle a student to hostel accommodation automatically.
- The facilities for indoor games and common room/Gym are provided to the hostlers.
- Institute library facilities are available to the students.
- For hostel accommodation the students have to apply separately after taking admission in the FRI Deemed to be University.

### UNIFORM

#### Boys

Maroon Blazer with FRI logo on the chest pocket of the Blazer **(In Winters)**  
 White shirt (Full sleeves)  
 Tie ; Brick Red with Diagonal pair of white strips and FRI Logo  
 Trouser : Black  
 Shoes: Black Leather shoes

#### Girls

Maroon Blazer with FRI logo on the chest pocket of the Blazer **(In Winters)**  
 Saree : Cream colour with Red Border of about two inches .  
 Blouse: Red colour with half sleeves  
 Shoes: cream colour bellies

## **ACCIDENTS DURING STUDY PERIOD**

The FRI Deemed to be University does not accept any liability in case of any injury caused due to any accident during the duration of the course.

## **DISCIPLINARY ACTION**

Non conformity or infringements of the rules and regulations in force shall render a student liable to disciplinary action which may extend to expulsion of the student from the course and forfeiture of the deposits and fee already paid by him/her.

### **IMPORTANT DATES**

<b>Opening date of downloading the application form from</b>	<b>06<sup>th</sup> February, 2023</b>
<b>Last date of submission of complete application form</b>	<b>17<sup>th</sup> April, 2023</b>
<b>Date of Online Remote Proctored Admission test</b>	<b>21<sup>st</sup> May, 2023</b>
<b>Date of 1<sup>st</sup> counseling</b>	<b>10<sup>th</sup> July, 2023</b>
<b>Date of 2<sup>nd</sup> counseling</b>	<b>13<sup>th</sup> July, 2023</b>
<b>Date of starting new session</b>	<b>17<sup>th</sup> July, 2023</b>

❖ In case there is any change in the date of examination for some unforeseen reasons, the University will issue related notice in the website [www.fridu.edu.in](http://www.fridu.edu.in) .

## **SAMPLE QUESTION PAPER**

The set of questions given below will familiarize the candidates with the type of Questions in the FRI Deemed to be University Admission Test. These questions are only indicative of the nature of the test and it is possible that the type of questions not illustrated here may appear in the test.

### **ANSWER ALL THE QUESTIONS**

1. What is the weight of body at the centre of earth?
  - a. Infinite
  - b. Constant
  - c. Zero
  - d. None of the above
2. The work done by moon when it revolves around the earth:
  - a. Zero
  - b. Infinite
  - c. Constant
  - d. None of the above
3. The surface considered for Gauss's law is called:
  - a. Closed surface
  - b. Spherical surface
  - c. Gaussian surface
  - d. Plane surface
4. The force per unit charge is known as:
  - a. Electric flux
  - b. Electric field
  - c. Electric potential
  - d. Electric current
5. Beta rays emitted by a radioactive material are:
  - a. Neutral particles.
  - b. Charged particles emitted by nucleus.
  - c. Electromagnetic radiations.
  - d. Electrons orbiting around the nucleus.
6. The binding energy per nucleon is almost constant for many nuclei. It shows that nuclear forces are:
  - a. Charge independent
  - b. Saturated in nature
  - c. Short range in nature
  - d. Attractive in nature
7. When a ray of light from air enters a denser medium, it:
  - a. Bends away from the normal
  - b. Bends towards the normal
  - c. Goes undeviated
  - d. Is reflected back

8. The highest refractive index is of:
  - a. Glass
  - b. Water
  - c. Diamond
  - d. Ruby
9. For an ideal-step-down transformer, the quantity which is constant for both the coils is:
  - a. Current in the coils
  - b. Voltage across the coils
  - c. Resistance of coils
  - d. Power in the coils
10. In a pure capacitive circuit if the frequency of ac source is doubled, then its capacitive reactance will be:
  - a. Remains same
  - b. Doubled
  - c. Halved
  - d. Zero
11. In an alternating current circuit consisting of elements in series, the current increases on increasing the frequency of supply. Which of the following elements are likely to constitute the circuit?
  - a. Only resistor
  - b. Resistor and inductor
  - c. Resistor and capacitor
  - d. Only inductor
12. In which of the following circuits the maximum power dissipation is observed
  - a. Pure capacitive circuit
  - b. Pure inductive circuit
  - c. Pure resistive circuit
  - d. None of these
13. Formation of large molecule by joining small molecules is :
  - a. Fusion
  - b. Polymerization
  - c. Crystallization
  - d. Subtraction
14. One horse power is equal to:
  - a. 1000 W
  - b. 500 W
  - c. 764 W
  - d. 746 W
15. IUPAC name of  $\text{CH}_2=\text{CH}-\text{CH}_2-\text{CH}_2-\text{C}\equiv\text{C}$ 
  - a. Hex-5-en-1-yne
  - b. Hex=1-en-5-yne
  - c. Hex-6-en-1-yne
  - d. Hex-1-en-6-yne

16. Aspirin is obtained by the reaction of acetyl chloride with
  - a. Benzene
  - b. Phenol
  - c. Benzaldehyde
  - d. Salicylic acid
17. In a reaction proceeded by  $\text{SN}^1$  mechanism the stereo chemical nature of product is
  - a. Racemic mixture
  - b. Retention of configuration
  - c. Inversion of configuration
  - d. None of these
18. The sugar present in DNA and RNA, respectively, are
  - a. 2-deoxyribose and ribose
  - b. Ribose and 2-deoxyribose
  - c. 2- deoxyribose in both
  - d. Ribose in both
19. In Etard reaction, toluene gives
  - a. Benzoic acid
  - b. Chloro toluene
  - c. Benzaldehyde
  - d. Benzyl alcohol
20. At a certain temperature only 50% HI is dissociated at equilibrium in the following reaction
 
$$2\text{HI}(\text{g}) \rightleftharpoons \text{H}_2 + \text{I}_2(\text{g})$$
 the equilibrium constant for the reaction is
  - a. 0.25
  - b. 1.0
  - c. 3.0
  - d. 0.5
21. Which of the following is a fossil fuel for power stations?
  - a. Hydrogen
  - b. Uranium
  - c. Wood
  - d. Oil
22. As we proceed from L to R in a period
  - a. Basicity of oxides and hydroxides decreases
  - b. Basicity of oxides and hydroxides increases
  - c. Acidity of oxides and hydroxides decreases
  - d. Acidity of oxides and hydroxides increases

23. When ammonia is heated with HCl, H-N-H bond angle
- Decreases
  - Increases
  - Remains same
  - Depend upon temperature
24. The electrode potential and the EMF of a cell depend upon
- Nature of the electrode
  - Temperature
  - Concentration of the ion in the solution
  - All of the above.
25. Salt of which of the following is used in volumetric analysis?
- Cerium
  - Thorium
  - Praseodymium
  - None of the above
26. Hydrogen bomb is based on the principle of
- Nuclear fission
  - Nuclear fusion
  - Natural radioactivity
  - Artificial radioactivity
27. Which of the following is a common solvent used in UV-VIS spectroscopy?
- MeOH
  - EtOH
  - Hexane
  - EtOAc
28. Vanadium pentaoxide is
- Ferromagnetic
  - Antiferromagnetic
  - Dimagnetic
  - None of the above
29. Turbo is found in:
- Brachiopods
  - Trilobites
  - Crinoids
  - Gastropoda
30. Carbonation is caused by :
- Physical Weathering
  - Chemical Weathering
  - Biological Weathering
  - None of the Three

31. Chemical composition of mineral Siderite is:
- Calcium Carbonate
  - Potassium Carbonate
  - Iron Carbonate
  - Sodium Carbonate
32. Average specific gravity of mineral Augite is:
- 1.5
  - 2.5
  - 3.5
  - 4.5
33. Name the mountain of Peninsular India:
- Pir Panjal
  - Aravali mountains
  - Zaskar range
  - Karakoram
34. Common type of mineral Beryl belongs to which System:
- Tetragonal System
  - Hexagonal System
  - Triclinic System
  - Orthorhombic System
35. Rocks with 45 –55% of silica are:
- Acid rocks
  - Intermediate rocks
  - Ultra Basic rocks
  - Basic rocks
36. Composition of Arkose is
- Sand grains, quartz and feldspar
  - Sand and feldspar grains
  - Silt or clay particles
  - Gravel with rounded pebbles
37. Submarine earthquakes which causes a considerable change in the level of ocean floor is known as:
- Sea caves
  - Spouting horn
  - Chasms
  - Tsunamis
38. A large Syncline with numerous minor folds is known as:
- Geosyncline
  - Synclinorium
  - Anticlinorium
  - All the Three

39. The Strike Slip Fault is also known as :
- Rotary Fault
  - Hinge Fault
  - Block Fault
  - Wrench Fault
40. Admantine is the typical luster of:
- Quartz
  - Galena
  - Diamond
  - Topaz
41. A diploid parent plant body produces \_\_\_\_\_ gametes and a haploid parent plant body produces \_\_\_\_\_ gametes.
- diploid, haploid
  - haploid, diploid
  - diploid, diploid
  - haploid, haploid
42. The male gametes of rice plant have 12 chromosomes in their nucleus. The chromosome number in the female gamete, zygote and the cells of the seedling will be, respectively
- 12,24,12
  - 24,12,12
  - 12, 24, 24
  - 24, 12, 24.
43. Which of the following steps in transcription is catalysed by RNA polymerase?
- Initiation
  - Elongation
  - Termination
  - All of the above
44. Fossils are generally found in
- igneous rocks
  - sedimentary rocks
  - metamorphic rocks
  - any type of rock.
45. Antivenom against snake poison contains
- Antigens
  - antigen-antibody complexes
  - antibodies
  - enzymes

46. Which of the following is the bacterial disease in humans?
- Dysentery
  - Malaria
  - Plague
  - Both (a) & (c)
47. Svalbard Global seed vault for conservation of world's crop diversity is situated in
- Finland
  - Sweden
  - Norway
  - Iceland
48. 8.33 percent of India's GDP (Gross Domestic Product) comes from
- Industry
  - Agriculture
  - Export
  - small-scale cottage industries
49. What was the world's first ever mammal to be successfully cloned from an adult cell?
- Sheep
  - Monkey
  - Cow
  - Calf
50. Genetically engineered bacteria have been used in commercial production of
- Thyroxine
  - Testosterone
  - Human insulin
  - Melatonin
51. The pyramid of energy is always upright for any ecosystem. This situation indicates the fact that:
- producers have the lowest energy conversion efficiency
  - carnivores have a better energy conversion efficiency
  - energy, conversion efficiency is the same in all trophic level
  - herbivores have a better energy conversion efficiency than carnivores.
52. Maximum productivity is found in
- Grassland
  - Desert
  - Ocean
  - Tropical rain forest

53. Bacterial role in carbon cycle is
- Chemosynthesis
  - Photosynthesis
  - Breakdown of organic matter
  - Assimilation of nitrogen compounds
54. The last stable community in succession that is in equilibrium with the environment, is called
- climax community
  - pioneer community
  - seral community
  - all of these
55. Which of the following methods of surface irrigation is considered as water and fertilizer efficient and ideal for several crops?
- Check basin and border strip irrigation
  - Raised bed planting method of irrigation
  - Surge irrigation
  - Furrow irrigation
56. Which one of the following is not a commercial crop –
- Sugarcane
  - Cotton
  - Banana
  - Bajra
57. Which of the following is not an insecticide?
- Parathion
  - Aldrin
  - Triazines
  - Baygon
58. Which of the following terms is associated with Dairying?
- I. Pasturisation
- II. Homogenisation
- III. Cream Neutralisation
- Correct code is –
- Only I
  - Only I and II
  - I, II and III
  - Only II and III

59. Dry land farming in India is largely confined to areas with rainfall less than -  
a. 100 cm  
b. 85 cm  
c. 80 cm  
d. 75 cm
60. The leaf curl disease in Chilli, Tobacco, Papaya and Tomato is a –  
a. Difeciency of Zinc  
b. Virus borne disease  
c. Difeciency of Phosphoras  
d. Difeciency of Iron
61. Pusa RH-10 is a hybrid variety of –  
a. Basmati rice  
b. Wheat  
c. Mustard  
d. Soyabin
62. The vegetable crop highly tolerant to low pH is  
a. Radish  
b. Carrot  
c. Potato  
d. Cauliflower
63. The Agroclimatic zone XIII, comprising the state gujarat represents ..... type climate.  
a. Semi arid  
b. Arid and semi arid  
c. Sub humid  
d. Humid
64. The type of eyes found in larvae is \_\_\_\_\_  
a. Ocelli  
b. Stemmata  
c. Compound eyes  
d. Ommatidia
65. Chromosomes present in Eukaryotic cell are composed of \_\_\_\_\_  
a. RNA + DNA  
b. DNA + Protein  
c. Only RNA  
d. Only DNA

66. Deficiency of which element in soil causes chlorosis in plants?
- Iron
  - Potassium
  - Carbon
  - Sodium
67. Product are at the maximum for a farm business when output is at a level where \_\_\_\_\_
- $MC = AC$
  - $MR = AR$
  - $MR = AC$
  - $MC = MR$
68. International Potato Research Centre at \_\_\_\_\_
- Shimla
  - Peru
  - Rome
  - USA
69. Boucherie process is related to
- Charcoal making
  - Preserving of wood
  - Seasoning of wood
  - Pulping of wood
70. The famous book 'Silviculture of Indian Trees' was written by
- R.S. Troup
  - W. Schlich
  - H.G. Champion
  - Dietrich Brandis
71. Which of the following is not a minor forest produce
- Charcoal
  - Fodder
  - Lac
  - None of these
72. Pressler's borer is primarily used to determine
- Bark thickness
  - Age of tree
  - Tree diameter
  - Damage to wood due to stem borer insect

73. Which of the following systems is applied to a highly unevenaged forest crop
- Clearfelling system
  - Selection system
  - Shelterwood system
  - Coppice with standards
74. The forest policy presently followed in India was enacted in the year
- 1878
  - 1927
  - 1988
  - 2014
75. *Hoplocerambyx spinicornis* is associated with
- Tectona grandis*
  - Santalum album*
  - Corymbia* species
  - None of these
76. Tracheids are usually present in
- Softwoods
  - Hardwoods
  - Shrubs
  - All of the above
77. Which major natural chemical in the wood increases its resistance against decay
- Hemicellulose
  - Cellulose
  - Lignin
  - Ash
78. Ratio of additive genetic variance to total phenotypic variance is known as
- Narrow-sense heritability
  - Broad-sense heritability
  - Genetic gain
  - Co-heritability
79. Which among the following tree species is found at the highest altitudes in the Himalayas
- Betula utilis*
  - Pinus wallichiana*
  - Abies pindrow*
  - Ailanthus altissima*

80. In a silviculture system with four periodic blocks PB-1, PB-2, PB-3 and PB-4, and regeneration period of 160 years, which PB will have trees of age class 1-40 years
- PB-1
  - PB-2
  - PB-3
  - PB-4
81. **National Income in India measured in terms of**
- Gross National Product
  - Gross Domestic Product
  - Net National Product at Market Price
  - Net National Product at Factor Cost
82. **India is regarded as a country with Demographic Dividend. This is due to**
- Its high population in the age group below 15 years
  - Its high population in the age group of 15-64 years
  - Its high population in the age group above 65 years
  - Its high population in the age group 15-59 years
83. **The Climate and associated weather conditions in India are governed by the following atmospheric conditions.**
- Pressure and surface winds
  - Upper air circulation
  - Western cyclonic disturbance
  - Temperate cyclones
- Select the correct answer from the code given below:**
- 1 and 2 only
  - 3 and 4 only
  - 1, 2 and 3 only
  - All the above
84. **As one goes from Equator towards Poles air temperature generally decreases. What is/are the reason/reasons?**
- Presence of strong winds in sub-tropical zone
  - Due to curvature of earth, amount of solar energy received varies according to the latitude
  - The influence of polar ice
  - Cold currents in polar region
- Select the correct answer using the codes below:**
- 1 only
  - 1, 3 and 4 only
  - 2 only
  - All the above

85. **Which of the following explains the importance of shelter belts?**
- a. Shelter belts are flat steps made on the steep slopes
  - b. Shelter belts are rows of trees planted in coastal or dry regions to check wind movement to protect soil cover.
  - c. Shelter belts are water harvesting structures in dry areas.
  - d. Shelter belts are rows of trees planted to protect the soil from rain wash.
86. **Which of the following statements is/are correct about Smelting?**
- a. Smelting is the process in which metals are extracted from their ores by cooling below the boiling point.
  - b. Smelting is the process in which metals are extracted from their ores by heating beyond the melting point.
  - c. Smelting is the process of producing refined goods.
  - d. Smelting is the major process used in Nuclear Reactors.
87. **With which of the following countries of South East Asia, India shares a maritime boundary?**
- a. Indonesia
  - b. Malaysia
  - c. Singapore
  - d. Vietnam
88. **Which among the following rivers originates from the Amarkantak?**
- a. Betwa
  - b. Mahi
  - c. Narmada
  - d. Tapi
89. **The Chamara Dam is located in which state/UT?**
- a. Puducherry
  - b. Uttar Pradesh
  - c. Himachal Pradesh
  - d. Jharkhand
90. **The constitution of India does not provide for impeachment of which of the following?**
- a. Chief Justice of India
  - b. President of India
  - c. Vice President of India
  - d. Governor of an Indian State
91. **Which of the following is not the recommendation of the Simon Commission?**
- a. Abolition of diarchy
  - b. Extension of responsible government in the provinces
  - c. Establishment of federation of British India and princely states
  - d. Discontinuation of communal electorate

92. All India Kisan Sabha was founded by whom in 1936?
- Mahatma Gandhi
  - Sardar Vallabhbhai Patel
  - JB Kriplani
  - Sahajanand Saraswati
93. Who among the following is known as the “Grand Old Lady of the Independence movement”?
- Aruna Asaf Ali
  - Renuka Ray
  - Matangini Hazra
  - Sarojini Naidu
94. The person who established British rule in India
- Robert Clive
  - Duplex
  - Mirjafer
  - Hestings
95. The official language of Pallavas was
- Tamil
  - Pali
  - Sanskrit
  - Kharosti
96. Khajuraho' temple was built by
- Sandelas
  - Chauhans
  - Pratiharas
  - Rajputs
97. Iconography was introduced by
- Cholas
  - Later Cholas
  - Pallavas
  - Later Pallavas
98. The Article which deals with 'Education for All'
- Article 41
  - Article 43
  - Article 45
  - Article 44
99. The significance of the presence of 'Great bath' in Harappan Civilization
- Importance of water
  - Holiness of water
  - Water Harvest
  - Utility of water

100. The Atmospheric layer responsible for weather changes
- Stratosphere
  - Troposphere
  - Ionosphere
  - Exosphere
101. The square root of all positive integers is irrational.
- Not exist
  - No
  - Yes
  - 0
102. The difference of each observation of a series from the mean is....
- Zero
  - Infinite
  - No of observations
  - 1
103. If  $x^{\frac{1}{12}} = 49^{\frac{1}{24}}$ , find the value of x.
- 12
  - 5
  - 6
  - 7
104. A truck covers a distance of 376 km at a certain speed in 8 hours. How much time would a car take at an average speed which is 18 kmph more than that of the speed of the truck to cover a distance which is 14 km more than that travelled by the truck ?
- 6 hr
  - 5 hr
  - 7 hr
  - 4 hr
105. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?
- Sunday
  - Friday
  - Saturday
  - Wednesday
106. A ship sails out into the sea at the rate of 15 km/hr and sails back at the rate of 20 km/hr. What will be the average rate of sailing?
- 16.85 km
  - 17.85 km
  - 17.14 km
  - 18 km

107. What is the greatest possible length which can be used to measure exactly the lengths 8 m, 4 m 20 cm and 12 m 20 cm?
- 10 cm
  - 25 cm
  - 30 cm
  - 20 cm
108. If the S.P. of an article for is  $\frac{4}{3}$  times its C.P. the profit percent is.....
- $33\frac{1}{3}\%$
  - $20\frac{1}{2}\%$
  - $25\frac{1}{4}\%$
  - $20\frac{3}{4}\%$
109. A man had seven children. When their average age was 12 years a child aged 6 years was lost. Find the average age of the remaining 6 children.
- 12 yrs
  - 14 yrs
  - 11 yrs
  - 13 yrs
110. What least number must be added to 859622, to get a number exactly divisible by 456?
- 485
  - 467
  - 394
  - 387
111. X and Y start from the same point and run around a circular stadium, whose circumference is 2800 m, at the rate of 250 m and 350 m per minute respectively in the opposite direction. They will meet each other in?
- $\frac{16}{3}$  min
  - $\frac{14}{3}$  min
  - $\frac{18}{5}$  min
  - $\frac{12}{5}$  min
112. Which is largest amongst  $\frac{5}{8}$ ,  $\frac{2}{3}$ ,  $\frac{7}{9}$ ,  $\frac{3}{5}$ ?
- $\frac{5}{8}$
  - $\frac{2}{3}$
  - $\frac{7}{9}$
  - $\frac{3}{5}$
113. Find the percentage decrease of 500 to 240
- 50%
  - 52%
  - 48%
  - 24%

114. The average age of the 6 students is 11 years. If 2 more students of age 14 and 16 years join than their average will become
- 10 years
  - 12 years
  - 14 years
  - 8 years
115. 30 apples and 75 oranges were purchased for Rs. 510. If the price per apple is Rs. 2 than the average price of the oranges was
- Rs. 12
  - Rs. 10
  - Rs. 15
  - Rs. 14
116. The main advantage of hexadecimal numbers is the ease of conversion from hexadecimal to.....
- Decimal
  - ASCII
  - Binary
  - BCD
117. Walking  $\frac{5}{6}$  of its usual speed, a train is 10 minutes late. Find its usual time to cover the journey?
- 20 min
  - 30 min
  - 40 min
  - 50 min
118. The average income of Suraj and Gopal is Rs. 3000 and that of Alay and Vinit is Rs. 500. What is the average income of all the four people?
- Rs. 2500
  - Rs. 1000
  - Rs. 1850
  - Rs. 1750
119. How many odd days are there from 13<sup>th</sup> May, 2005 to 19<sup>th</sup> August 2005 (both inclusive)?
- 1
  - 2
  - 3
  - 4
120. Correlation ranges between
- 0 to 1
  - 1 to 0
  - 1 to 1
  - Not defined

121.  $\frac{4}{7}$  of  $\frac{2}{3}$  of  $\frac{5}{6}$  of  $\frac{5}{8}$  of 1008 is
- 100
  - 144
  - 200
  - 64
122. The ratio between the speeds of two trains is 7 : 8. If the second train runs 400 kms in 4 hours, then the speed of the first train is:
- 70.5 km/hr
  - 87.5 km/hr
  - 75.5 km/hr
  - 84 km/hr
123. Rahul is travelling on his cycle and has calculated to reach point A at 2 P.M. if he travels at 10 kmph, he will reach there at 12 noon if he travels at 15 kmph. At what speed must he travel to reach A at 1 P.M.?
- 8 km/hr
  - 10 km/hr
  - 12 km/hr
  - 14 km/hr
124. In a class  $\frac{3}{4}$ th of the students do not know either English or Hindi. But  $\frac{1}{6}$ th of the students know English. How much students know both English and Hindi if students who know Hindi are  $\frac{1}{8}$ th of total students in the class?
- $\frac{100}{24}$
  - $\frac{1}{4}$
  - $\frac{10}{12}$
  - $\frac{1}{24}$
125. Mode is ....number
- Highest frequency
  - Most times occurring
  - Highest time repletion
  - None
126. The graph of  $y = 4$  is a line
- Making an intercept 4 on the x –axis
  - Making an intercept 4 on the y –axis
  - Parallel to the x-axis at a distance of 4 units from the origin
  - Parallel to the y-axis at a distance of 4 units from the origin
127. If one angle of a triangle is equal to the sum of the other two angles, then the triangle is
- Right angled
  - An equilateral triangle
  - An isosceles triangle
  - None

128. The angles of a triangle are in the ratio 3 ; 5 ; 7. The triangle is
- Acute angled
  - Right angled
  - Obtuse angled
  - An isosceles triangle
129. The number of interwoven isosceles triangles in *Sriyantra* is
- Five
  - Seven
  - Eight
  - Nine
130. What is length of its period for  $15/7$ .
- 4
  - 5
  - 6
  - 7
131. Euclid belongs to the country
- India
  - Greece
  - Japan
  - Egypt
132. The number of plane passing through 3 noncollinear points is
- 0
  - 1
  - 2
  - 3
133. Median is .....
- Arithmetic average
  - Geometric average
  - Positional average
  - None
134. How many dimensions does a point have
- 0
  - 1
  - 2
  - Infinite

135. The linear equation  $3x - 5y = 15$  has
- A unique solution
  - Infinitely many solutions
  - Two solutions
  - No solution
136. The point of the form  $(a, -a)$ ,  $a \neq 0$  lies on
- The x – axis
  - The line  $y = x$
  - The line Y – axis
  - The line  $x + y = 0$
137. Which of the following is binomial?
- $X^2 + x + 3$
  - $3x^2$
  - $X^2 + 4$
  - $X + 3 + 1/x$
138. Variance of 20 equal observations is
- One
  - Infinite
  - Zero
  - None
139. What is degree of a zero polynomial?
- Not defined
  - Infinite
  - 0
  - 1
140. Which are not nonterminating and nonrepeating?
- $\sqrt{2}$
  - $\sqrt{3}$
  - Both a and b
  - None
141. Betwa is a tributary of
- Ganga.
  - Yamuna
  - Son
  - Chambal
142. The World Meteorological Organisation is headquartered in which country
- Vienna.
  - Rome
  - New York
  - Geneva

143. The Bhoodan or the Land Gift Movement was founded by
- Baba Amte.
  - Aurobindo Ghosh
  - Vinoba Bhave
  - Rabindranath Tagore
144. If there were no atmosphere, the length of the day would
- decrease
  - remain unaffected
  - increase
  - remain almost half
145. To which movement was 'Teenkathiya Contract' related
- Non- cooperation Movement
  - Salt Satyagraha
  - Champaran Satyagraha
  - Quit India Movement
146. The quorum in Lok Sabha is
- 50
  - 55
  - One- fourth of the strength
  - One- tenth of the strength
147. Heat from the sun reaches the earth by
- Convection
  - Radiation
  - Conduction
  - Friction
148. The venue of 2022 ICC Women Cricket World Cup is
- India
  - Australia
  - New Zealand
  - South Africa

149. When were the India States first organised on a linguistic basis
- 1947
  - 1950
  - 1952
  - 1956
150. What kind of soil is treated with gypsum to make it suitable for cropping
- Alkaline
  - Acidic
  - Water logged
  - Soil with excess clay content
151. Which among the following is known as the "home of Asiatic lion"
- Gir National Park
  - Dudhwa National Park
  - Kanha National Park
  - Corbett National Park
152. Venue of 2028 Olympics games is
- Paris
  - Rome
  - Los Angeles
  - Moscow
153. Which country is the largest sugar exporter of the world
- Thailand
  - Brazil
  - India
  - Australia
154. India's first Open Rock Museum is located in which city
- Mysuru
  - Trivandrum
  - Varanasi
  - Hyderabad
155. International Youth Day is celebrated on
- 12 August
  - 18 August
  - 25 August
  - 5 September

156. Maharana Pratap fought against the Mughals in the historic battle of
- Chittorgarh
  - Lahore
  - Haldighati
  - Mewar
157. Which poisonous gas killed thousands of people in the Bhopal Gas Tragedy
- Methyl iso cyanate
  - Methane
  - Carbide iso cyanate
  - Ethyl iso cyanate
158. Dandi March had inaugurated which movement
- Swadeshi- boycott movement
  - Civil disobedience movement
  - Quit India movement
  - Non cooperation movement
159. 'Red Sanders' is a
- Bird species
  - Tree species
  - Mammal species
  - Amphibian species
160. 'Ohm' is a unit of measuring
- Voltage
  - Current
  - Gravity
  - Resistance
161. The metal having highest melting point is
- Osmium
  - Chromium
  - Tungsten
  - Aluminium
162. Ohm is a unit of measuring
- Resistance
  - Voltage
  - Current

- d. Luminous Intensity
163. The famous World Heritage site "Basilica of Bomb Jesus" is located in
- Pondicherry
  - Mahe
  - Daman
  - Goa
164. "Statue of Equity" at Hyderabad features which Bhakti saint
- Vallabhacharya
  - Chaitanya Mahaprabhu
  - Ramajunacharya
  - Madhvacharya
165. "Jallikattu" a bull taming event is celebrated in which state
- Karnataka
  - Tamil Nadu
  - Andhra Pradesh
  - Odisha
166. The World Happiness Report is published by
- The World Bank
  - World Health Organization
  - NITI Aayog
  - United Nations
167. Blood is red in colour due to the presence of
- Cytochrome
  - Chlorophyll
  - Haemoglobin
  - Hemocyanin
168. The study of relation of animals and plants to their surroundings is called
- Ethology
  - Ecology
  - Iconology
  - Genealogy
169. Article 368 in the Indian Constitution is related to
- Amendment of the Constitution
  - Proclamation of Emergency

- c. Presidential rule
- d. Panchayats

170. Which poisonous gas killed thousands of people in Bhopal Gas Tragedy
- a. Methane
  - b. Carbide iso cyanate
  - c. Ethyl iso cyanate
  - d. Methyl iso cyanate

**Q171- Q173.** Select the word **closest** in meaning to the given words:

171. **Raucous**
- a. Rough
  - b. Orderly
  - c. Amenable
  - d. Soft
172. **Rickety**
- a. Shaky
  - b. Firm
  - c. Unshakable
  - d. Strong
173. **Diabolic**
- a. Kind hearted
  - b. Pleasant
  - c. Cruel
  - d. None of these

**Q174- Q176.** Select the **opposite** of the given words:

174. **Proscribe**
- a. Ban
  - b. Reject
  - c. Veto
  - d. Sanction
175. **Spurious**
- a. Genuine
  - b. Counterfeit
  - c. Forged
  - d. Bogus
176. **Mediocre**
- a. Average
  - b. Pedestrian

- c. Ordinary
- d. Superior

**Q177- Q179.** Mark the **most appropriate** word for the given description:

177. A person who brings goods illegally into the country
- a. Importer
  - b. Loader
  - c. Smuggler
  - d. Slumber
178. Study of birds
- a. Ornithology
  - b. Penology
  - c. Anthropology
  - d. Otology
179. That which cannot be read
- a. Illegible
  - b. Illiterate
  - c. Incurable
  - d. Illegitimate

**Q180-Q182.** Match the given **idioms** with the most appropriate meanings:

180. Early to bed and early to rise makes a man healthy, wealthy and wise.
- a. Going to bed early and waking up early leads to all good things in life.
  - b. Only if you go to bed early do you get all good things in life.
  - c. Only if you wake up early, you get all what you desire.
  - d. None of the above.
181. If you want a thing done well, do it yourself.
- a. Others do not do things as well as you can do.
  - b. Only do those things yourself which you want to be done well.
  - c. You cannot always rely on other people to do things the way you want.
  - d. None of the above.
182. Out of question
- a. resemble
  - b. easy
  - c. impossible
  - d. for the end

**Q183- Q184.** Read each of the components of the given sentences and mark the component with the **grammatical error**:

183. P. With their hard work and dedication,  
 Q. from a tiny room in the slums, they have  
 R. progressed to move to a big  
 S. house in a posh locality.  
 a. P  
 b. Q  
 c. R  
 d. No Error
184. P. Ever since the government  
 Q. Announced its new education policy  
 R. All the private institutions had  
 S. Run into heavy weather.  
 a. P  
 b. Q  
 c. R  
 d. No Error

**Q185-186.** Choose the **correct alternative** out of the four options.

185. She is so \_\_\_\_\_ that she always believes my fairy tales.  
 a. credible  
 b. vociferous  
 c. credulous  
 d. innocent
186. On the \_\_\_\_\_ occasion of Laxmi Puja the Mathurs bought a new car.  
 a. officious  
 b. auspicious  
 c. fortuitous  
 d. prosperous

**Q187- Q188.** Mark the option with the **correct spelling** of the word:

187. a. Anasthetic  
 b. Anesthetic  
 c. Aeneshtetic  
 d. Anaesthetic
188. a. Committee  
 b. Committe  
 c. Comitee  
 d. Comitttee

**Q189-Q191.** Mark the option with the **incorrect spelling** of the word:

189. a. Appraize  
b. Apprise  
c. Appraise  
d. None of these
190. a. Complacent  
b. Complaisant  
c. Complascent  
d. None of these
191. a. Wait  
b. Weight  
c. Waite  
d. None of these

**Q192-193. Punctuate** the given sentences:

192. monica let me show you how to do it  
a. Monica let me show you how to do it?  
b. Monica, let me show you how to do it.  
c. Monica let me show you how to do it.  
d. Monica, let me show you how to do it
193. whos that man wearing a red tie and a blue hat  
a. Whos that man wearing a red tie and a blue hat.  
b. Who's that man wearing a red tie and a blue hat!  
c. Who's that man wearing a red tie and a blue hat?  
d. Who's that man wearing a red tie, and a blue hat;

**Q194-195.** In the following question, some part of the sentence may have errors. Find out which part of the sentence has an **error** and select the appropriate. If a sentence is free from error, select '**No Error**'

194. Either Ravi (a)/ or Raj forgot (b)/ to take (c)/ their pen (d)/ No error (e)
195. There are certain animals (a)/ that can live without any effort (b)/ both in water and land (c)/No error (d)

**Q196- Q197.** Fill in the blanks with the most **appropriate determiners** from the options that follow:

196. \_\_\_\_\_ books from the library are missing.  
a. Fewer  
b. Several

- c. Both
- d. All

197. \_\_\_\_\_ the twins have green eyes.

- a. Fewer
- b. Several
- c. Both
- d. All

**Q198- Q200. Change the Direct Narration to Indirect Narration:**

198. He said, "I have found the files."

- a. He said I have found the files.
- b. He said that he had found the files.
- c. He said that I had found the files
- d. None of the above

199. My father said to me. "Don't be careless in studies."

- a. My father said to me don't be careless in studies
- b. My father said to me to be careful in studies
- c. My father told me not be careless in studies
- d. None of the above

200. "You are late for the examination", he told us.

- a. He told us that you are late of the examination
- b. He told us we were late for the examination
- c. He told them that they were late for the examination.
- d. None of the above.

