INFORMATION BROCHURE

SKUAST-J CET - 2016

For Admission to
Under Graduate & Post Graduate Programmes

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu

"An Institution for sustainable Agriculture for food & nutritional security"

IMPORTANT DATES FOR SKUAST-J CET 2016

Commencement of submission of online application forms	10.00 AM of 20-05-2016
Last date for submission of online application forms	5.00 PM of 06-06-2016
Last date for submission of online application forms with late fee of Rs. 1000/=	5.00 PM of 08-06-2016
Date of Common Entrance Test (CET) • Undergraduate programmes • Masters programmes	 26-06-2016 (Sunday) 02-07-2016 (Saturday)
Test Center	Jammu

Dates of Counseling:

Undergraduate Programmes.	
14 and 15-07-2016	Ist Counseling
27-07-2016	2nd Counseling
08-08-2016	Final Counseling, if required
Postgraduate Programmes.	
19-07-2016	Counseling All candidates
29-07-2016	Final Counseling / up gradation

Application Fee for CET 2016	• **Rs. 1800/= for normal fee seats only** • **Rs. 2000/= for normal / self financing & NRI/NRI sponsored seats**

Venue for counseling: Conference Hall, SKUAST-J, Chatha.

Reporting time for counseling shall be 9.30 am to 12.30. The candidates should report for counseling as per the schedule based on rank that shall be notified separately and placed on University website. The candidate is required to record their presence for counseling by signing on the designated register at the counseling hall. The aspirants shall be called for the counseling with descending rank one by one and if a candidate called for counseling do not present him or her-self before the committee his or her claim for any seat shall get forfeited. In case the candidate report after his name is called for counseling but within stipulated time on the day of counseling the seat offered to that candidate will be out of the unallocated seat available at the point of time when he/she reports before committee. A candidate reporting for counseling after 12:30 P.M of the stipulated date shall not be allowed to mark their presence and shall not be entertained for counseling in any case.

Disclaimer

- The information contained in this brochure is of general nature for the candidates who aspire for admission in various programmes offered by the University. It is neither an exhaustive nor a legal document. The statements and all other information presented herein the brochure is believed to be correct at the time of publication. However, the competent authority reserves the right to make additions or alterations in the regulations, conditions governing admissions, the code of conduct of students, requirements for the degree or the diploma, fees and any other information or statement/rule at any time without notice.
- Competent authority may delete any programme of studies at any time without notice or reduce or enhance the number of seats. No responsibility shall be accepted by the University for any hardship encountered or expenses incurred by the students or any other person for such changes, additions, omissions or errors, no matter how they are caused.
- The students are advised to refer to the Academic Regulations, and other statutory/administrative provisions applicable on a particular point of time on various aspects, viz., system of education, residence in the University, Hostels, enrolment in NSS/NCC, award of scholarships, stipends, fellowships, medals, certificates of honour, and conduct in the premises of the University and alike.
- The students should also note that the provisions of the Act, Statutes, Academic Regulations and other legal/administrative notifications, orders, instructions, and guidelines etc can be changed by the competent authorities at any time without assigning any reason or prior notice.
- Though every effort and care is taken to stick and follow the instructions and schedule of dates given hereunder, yet under certain compelling circumstances, if there has to be a deviation, University shall not be responsible for any inconvenience, losses or ill consequences arising there from.
- Fees and other charges once paid at the time of admission shall not be refunded except for the refundable security deposits.
- Admission to the University entails acceptance of all provisions given in the University Act, Statutes, Regulations and admission policy and changes that are made from time to time there in.

Jurisdiction

Jurisdiction for all disputes is at Jammu.

Prelude

The Sher-e -Kashmir university of Agricultural Sciences and Technology of Jammu (SKUAST -Jammu) was established by the Government of Jammu and Kashmir on September 20, 1999 by amending the Act of Sher-e -Kashmir university of Agricultural Sciences and Technology of Jammu and Kashmir of 1982 and promulgated vide SRO No 408 dated 20-09-1999.

The university is mandated to develop new, refine the existing and disseminate approved agricultural technologies to the stakeholders in the state in general and Jammu Division in particular. It also steers innovate, location specific and problem solving research in agriculture and its allied sectors. The other important obligation delegated to the university is to produce competent human resource that can sustain and improvise the phenomenal growth of agriculture and allied sectors with an eye on maintenance of biodiversity and addressing the environmental concerns. Accordingly the faculty, students and scholars of the university are manning the frontier of life sciences, environmental sciences, food and energy system along with community and economic development.

On the facet of human resource and capacity development, the university strives to provide congenial learning environ at graduate as well as at postgraduate levels in the realm of Agriculture Sciences, Veterinary Sciences, Animal Husbandry and Biotechnology, and at postgraduate levels only in the areas of Food Science, Sericulture, Agricultural Engineering, Microbiology, Agribusiness & Management, and Forestry. The quality education being imparted to the students by the university is fashioning them to get selected in the most coveted services like scientists in the universities and research organizations of repute both in and out of the state, Indian administrative services, Indian forest services, Kashmir administrative services, public and private banking and others sectors besides the primary sectors like agriculture, horticulture, sheep & Animal husbandry.

UNIVERSITY CAMPUSES

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu is a multi-campus University with its headquarter located at Chatha, Jammu at a distance of 8 km from Jammu- Pathankot NH-1A, 12 km from the Jammu Railway Station, 14 km from the General Bus Stand and 6 km from the Air Port, Jammu.

The University has extensive infrastructure within its jurisdiction. The main campus at Chatha is spread over 578 acres. The Faculty of Agriculture, Faculty of Basic Sciences and School of Biotechnology are located at it. Faculty of Veterinary Sciences & Animal Husbandry at R.S.Pura has an extent of 84 acres. The total land possession with the university (including Research Stations/Sub-Stations and KVKs) is 1139.12 acres. There are six Research Stations/ Sub-Stations and six KVKs in the University and are located in different agro-climatic zones of Jammu region for catering to location-specific needs of the farming community. University pursues high standard of location specific and problem-solving research through research projects funded by various central and state agencies. At the faculties level the focal emphasis is on imparting of quality education by providing congenial atmosphere in the campus. The inception of high-tech infrastructure involving computer-based facilities, internet connectivity and modern administrative dispensation are vital characteristics of this University.

The University has highly structured infrastructure facilities in terms of buildings, laboratories, lecture rooms, instructional and research farms, modern instruments/equipments, farm machinery, transport and library facilities. It has distinguished and qualified faculty positioned at all the campuses and regional research stations. The faculty members and the post-graduate students of the University have won numerous national and international recognitions in the forms of awards, honours and fellowships awarded by the prestigious professional scientific bodies/societies.

ELIGIBILITY REQUIREMENTS

- Only permanent residents of the Jammu and Kashmir State as defined in Section 6 of the Constitution of J&K are eligible for seeking admission to all the undergraduate and postgraduate programmes.
- For admission in B.Sc. (Hons.) Biotechnology, candidates from outside states can also apply.
- The candidates hailing from states other than Jammu and Kashmir can seek admission under Non-Resident Indian (NRI)/ NRI sponsored quota for B.V.Sc & AH and B.Sc (Hons.) Agriculture, and under Self Financing Category for Postgraduate courses.

- Candidates will have to ensure that they fulfill the eligibility criteria and qualification(s) prescribed for admission to the relevant programme.

For Undergraduate Programmes

- Candidates must have passed Higher Secondary Part II (12^{th} or 10+2) or an equivalent examination with PCB/PCM/PCBM/Agriculture (with Science subjects) having 50% marks in aggregate for open/NRI/NRI-sponsored category, and 40% for reserved categories for admission to B.Sc. (Hons.) Agriculture.
- Candidates must have passed Higher Secondary Part II (12^{th} or 10+2) or an equivalent examination with PCB/PCBM subjects having 50% marks in aggregate for open/NRI/NRI-sponsored category and 40% for reserved categories for admission to B.V.Sc. & A.H.
- Candidates must have passed Higher Secondary Part II (12^{th} or 10+2) or an equivalent examination with Physics, Chemistry and Biology (PCB) subjects having 50% marks in aggregate for admission to B.Sc. (Hons.) Biotechnology against Self-Financing Seats.
- Candidates who have appeared in Higher Secondary Part II (12^{th} or 10+2) are also eligible to apply. They must produce their Higher Secondary Part II (12^{th} or 10+2) mark sheet at the time of counseling.
- Candidates must be 17 years old on or before 31.12.2016.

Note: The NRI candidates shall submit copy of their qualifying examination i.e. 10+2 certificate/marks sheet duly verified and certified by Indian Embassy/High Commission in that country, stating that such examination is equivalent to qualifying examination of Indian Boards/Universities.

For Postgraduate Programmes

- Candidates not below 19 years of age, as on 31-12-2016, are eligible to appear in the examination. No relaxation is admissible regarding the minimum age limit.
- The candidate must have passed Bachelor degree examination securing Grade point average (OGPA) at least:
    - **For general category**: 6.00/10.00 in ten point scale, 3.00/4.00 in four point scale. In other cases where grade points are not awarded and only marks are awarded, the candidate must have secured at least 60% marks.
    - **Reserved Categories:** 5.50/10.00 in ten point scale/ or at least 55% marks ehere grade point is not awarded.
- Candidate must have passed (or due to appear at the final examination) their Bachelor degree as mentioned in Table against each discipline:

S.No	M.Sc. Agriculture and allied sciences	Eligibility Criteria
1.	Agricultural Economics	B.Sc. Agriculture/ B.Sc. Horticulture /B.Sc. Forestry
2.	Agricultural Extension Education	B.Sc. Agriculture /B.Sc. Horticulture/ B.Sc. Forestry
3.	Agronomy	B.Sc. Agriculture
4.	Biotechnology	Bachelor's degree in Biotechnology/ Agriculture Veterinary Sciences/Life Sciences
5.	Entomology	B.Sc. Agriculture/ B.Sc. Horticulture/ B.Sc. Life Sciences with Zoology
6.	Floriculture & Landscape Architecture	B.Sc. Agriculture/ B.Sc. Horticulture
7.	Food Science & Technology	B.Sc. Agriculture/ B.Sc. Horticulture
8.	Forestry	B.Sc. Forestry/B.Sc. Agriculture/B.Sc. Horticulture
9.	Fruit Science	B.Sc. Agriculture/ B.Sc. Horticulture
10.	Genetics & Plant Breeding	B.Sc. Agriculture /B.Sc. Life Sciences with Botany
11.	Plant Pathology	B.Sc. Agriculture/ B.Sc. Horticulture/ B.Sc. Life Sciences with Botany
12.	Sericulture	B.Sc. Sericulture/B.Sc. Agriculture/B.Sc. Bio Sciences
13.	Soil Science & Agricultural Chemistry	B.Sc. Agriculture/B.Sc. Horticulture/B.Sc. Forestry
14.	Vegetable Sciences	B.Sc. Agriculture/ B.Sc. Horticulture

M.Tech.		
1.	Agricultural Engineering	B. Tech. Agricultural Engineering.

M.Sc Basic Sciences		
1.	Biochemistry	B.Sc. Agriculture/ B.Sc. Horticulture/ B.Sc Forestry/B.Sc. Bio-Sciences / Life Sciences with Chemistry/ Biochemistry
2.	Microbiology	Bachelors' degree in Agriculture/Life Sciences/biotechnology/microbiology

3.	Statistics	B.Sc. Agriculture/ B.V.Sc. & A.H/B.Sc. Forestry/B.Sc Horticulture/B.Sc. (Stat/Math)
4.	Plant Physiology	Bachelors' degree in Agriculture/ Horticulture/ Forestry Bio-sciences with Plant Physiology/ Botany

S.No	M.V.Sc.	Eligibility Criteria
1	Veterinary Medicine	B.V.Sc. & A.H.
2	Veterinary Surgery & Radiology	
3	Veterinary Public Health & Epidemiology	
4	Veterinary Pharmacology & Toxicology	
5	Animal Genetics and Breeding	
6	Livestock Products Technology	
7	Veterinary and Animal Husbandry Extension Education	
8	Veterinary Microbiology	
9	Animal Nutrition	
10	Veterinary Biochemistry	
11	Veterinary Parasitology	
12.	Veterinary Pathology	
13	Veterinary Anatomy	
14	Veterinary Biochemistry	
15	Veterinary Physiology	
16	Veterinary Gynecology& Obstetrics	
17	Livestock Production and Management	

NOTE: Only those candidates who have graduated from recognized institutions/ Universities are eligible to apply.

Distribution of seats for academic session 2016-17.

1. **Programme: B.Sc (Hons) Agriculture**

The admission to the seats under the ICAR /Government Nominee in B.Sc. (Hons.) Agriculture will be made on the basis of list provided by the concerned organization.

Number of seats to be filled through Entrance Test:

Free Seats:

1. Open Merit: 30
2. Reserved Category: 30

Self-Financing Seats:

1. State Domicile: 21
2. NRI/NRI Sponsored 14
3. Wards of SKUAST J Employees 03

2. Programme: B.V.Sc & A.H

The admission to the seats under the VCI* /Government Nominee/ supernumerary in B.V.Sc and AH will be made on the basis of list provided by the concerned organization.

Number of seats to be filled through Entrance Test:

Free Seats:

1. Open Merit: 17
2. Reserved Category: 17

Self-Financing Seats:

1. State Domicile: 12
2. NRI/NRI Sponsored 17 (07+10 VCI*)
3. Wards of SKUAST J Employees 03

Note: * Seats falling vacant under any category shall be filled based on merit of CET through NRI/NRI sponsored category.

Distribution of open and reserved category seats:

B.Sc (Hons.) Agriculture

Category	Codes	No. of seats
Free Seats		
Open Merit (OM)	01	30
Scheduled Caste (SC)	02	05
Schedule Tribe Gujjar and Bakerwal (STGB)	03	04
Schedule Tribe Leh District (STL)	04	01
Schedule Tribe Kargil District (STK)	05	01
Other Schedule Tribe (STO)	06	01
Weak and under privileged classes (OSC)	07	01
Resident of Backward Area (RBA)	08	12
Resident of area adjoining Actual Line of Control (ALC)	09	02
Candidates possessing outstanding proficiency in sports (SP) having represented at the State or National level events (with documentary proof	10	01
Children of State Police Personnel and para-military forces (JKPM)	11	01
Children of Defence Personnel-Permanent Residents of State only (CDP)	12	01

B.V.Sc & AH

Category	Codes	No. of seats

Open Merit (OM)	01	17
Schedule Castes (SC)	02	3
Schedule Tribe Gujjar and Bakerwal (STGB)	03	2
Schedule Tribe Leh District (STL)	04	2
Schedule Tribe Kargil District (STK)	05	On the basis
Other Schedule Tribe (STO)	06	of rotation
Weak and under privileged classes (OSC)	07	1
Resident of Backward Area (RBA)	08	6
Resident of area adjoining Actual Line of Control (ALC)	09	1
Candidates possessing outstanding proficiency in sports (SP) having represented at the State or National level events (with documentary proof)	10	1
Children of State Police Personnel and para-military forces (JKPM)	11	1
Children of Defence Personnel - Permanent Resident of State Only (CDP)	12	On the basis of rotation

Authorities Competent for Issuing Reserved Category Certificates

S.No.	Category	Authorized Officers to issue certificates
1	Residents of Backward Area (RBA)	Revenue Officer not below the rank of Tehsildar
2	Scheduled Castes (SC)	Revenue Officer not below the rank of Tehsildar
3	Scheduled Tribe Gujjar & Backwal (STGB)	Revenue Officer not below the rank of Tehsildar
4	Residents of Area Adjoining Actual Line of Control (ALC)	Revenue Officer not below the rank of Tehsildar
5	Children of Defense Personnel (Permanent residents of the state (CDP)	Commanding Officer of the unit not below the rank of DIG
6	Scheduled Tribe Leh District (STL)	Revenue Officer not below the rank of Tehsildar
7	Scheduled Tribe Kargil District (STK)	Revenue Officer not below the rank of Tehsildar
8	Weak and under Privileged Classes (OSC)	Revenue Officer not below the rank of Tehsildar
9	Candidates possessing outstanding proficiency in sports (SP)	Secretary, J&K Sports Council
10	Other Scheduled Tribes (STO)	Revenue Officer not below the rank of
11	Children of State Police Personnel and Para- military Forces (JKPM)	DIG concerned

SCHOOL OF BIOTECHNOLOGY

(Self-financing Programme)

Programme	Intake Capacity
B.Sc. (Hons.) Biotechnology	25 (to be filled on All India basis)

Note: There is no reservation in any category for B.Sc. (Hons.) Biotechnology as the University is running the programme in self-finance mode.

No. of seats available for PG Programme in Agriculture & allied sciences 2016-17

S.No	M.Sc. Agriculture	Total seats	Free Seats (State Domicile)		Self Financing Seats		ICAR seats	Govt. nominee
	Disciplines		OM	Reserved	State Domicile	All Indi Basis		
1.	Agricultural Economics	06	02	---	01	01	01	01
2.	Agricultural Extension Education	06	02	01 (RBA)	01	---	01	01
3.	Agronomy	07	03	------	01	01	01	01
4.	Biotechnology	05	---	---	04	---	01	---
5.	Entomology	09	02	01 (ST)	01	01	01	03
6.	Floriculture & Landscape Architecture	03	02	-------	---	---	---	01
7	Food Science & Technology	09	03	------	01	01	01	03
8.	Forestry	05	02	01 (RBA)	-----	01	01	----
9.	Fruit Science	06	03	------	01	---	01	01
10.	Genetics & Plant Breeding	06	03	-------	01	01	01	---
11.	Plant Pathology	07	02	01 (RBA)	01	01	01	01
12.	Sericulture	03	01	----	----	---	01	01
13.	Soil Science & Agricultural Chemistry	07	02	01 (ST)	01	01	01	01

14.	Vegetable Sciences	06	01	01 (ALC)	01	01	01	01
M.Tech. Programme								
1.	Agricultural Engineering.	04	01	01 (SC)	01	--	01	---

No. of seats available for PG Programme in Basic Sciences 2016-17

S.No.	M.Sc	Total seats	Free Seats (State Domocile)		Self financing Seats		ICAR seat
	Disciplines		OM	Reserved	State domicile	All India Basi	
1	Biochemistry	06	02	01 (RBA) 01(SC)	02	---	---
2	Statistics	04	01	01 (ALC)	01	01	---
3	Microbiology	07	02	01 (ST)	01	03	---
4	Plant Physiology	04	02	-----	01	01	---

No. of seats available for PG Programme in Veterinary Sciences 2016-17

S.No	M.V.Sc. Veterinary Sciences	Total seats	Free Seats (State Domicile)		Self Financing Seats		ICAR seats	Govt. Nominee
	Discipline		OM	Reserved	State Domicile	All India Basis		
1.	Animal Genetics and Breeding	05	01	01 (RBA)	01	01	01	---
2.	Animal Nutrition	05	01	01 (SC)	01	--	01	01
3.	Livestock Production and Management	06	03	----	01	01	01	---
4.	Livestock Products Technology	03	02	----	--	--	01	----
5.	Veterinary Anatomy	02	01	------	01	--	----	---
6.	Veterinary and Animal Husbandry Extension Education	05	01	01 (RBA)	01	01	01	---
7.	Veterinary Gynaecology & Obstetrics	03	01	-----	01	--	01	---
8.	Veterinary Medicine	07	02	01 (ST)	01	01	01	01
9.	Veterinary Microbiology	04	01	----	01	01	01	---
10	Veterinary Parasitology	03	01	-----	--	01	---	01

11.	Veterinary Pathology	04	02	-----	01	--	01	-----
12.	Veterinary Pharmacology & Toxicology	07	02	01 (RBA)	01	01	01	01
13.	Veterinary Physiology	03	02	------	01	--	---	---
14.	Veterinary Public Health & Epidemiology	01	--	----	--	---	01	--
15.	Veterinary Surgery & Radiology	07	03	-------	01	01	01	01

Note: * Seats falling vacant under any category shall be filled based on merit of CET through self-financing category.

GENERAL INFORMATION AND INSTRUCTIONS

i. It is expected that the candidates shall be behave responsibly while appearing in the entrance examination and shall not adopt any unfair/ fraudulent/ mischievous means. The candidates herein are sternly warned not to resort to any unfair/fraudulent means or act of impersonation. In case a candidate is found resorting to such acts, criminal proceedings shall be initiated under rules.

ii. The candidates seeking admission to SKUAST-J through common entrance test are advised to:

- go through this information brochure carefully and acquaint themselves with all the requirements, rules and regulations
- satisfy themselves about the eligibility criteria prescribed for appearing in the entrance examination.
- adhere strictly to the last date of submission of application form .
- Write complete address with Postal Index No, Telephone No., Mobile No, e-mail address, in the application form.

iii. Use of correcting fluid / eraser/ ink remover including use of blade on OMR application form or in OMR Answer sheet is strictly prohibited and any discrepancy in the evaluation on account of ignoring this caution shall be the sole responsibility of the candidate.

iv. The recommendation of the candidates by the selection committee for admission in the university in all the categories shall be subject to production of all the relevant certificates in original by the candidates and the verification by the University.

v. The selection made by SKUAST-J to a course shall be provisional till final verification of eligibility of the candidates.

vi. The University shall have the right to review the provisional selection list at any time, notwithstanding the fact that the selected candidate has completed his/ her admission

formalities. Mere selection in the list does not confer any right to admission of the candidate if he/ she is otherwise found ineligible.

vii. Since University is neither an appellate authority nor an investigating agency, the complaints against credibility of certificates, including those of reserved categories, will not be entertained.

viii. OMR answer sheets of candidates are machine graded and scanned / scrutinized with extreme care. As such, there shall be no re-evaluation/ rechecking of OMR answer sheets. No correspondence in this regard shall be entertained.

ix. Submission of complete and proper documents by the prescribed date shall be the responsibility of the candidate. Non-submission of documents by due date or non-production of original documents at the time of counseling shall render a candidate ineligible for admission.

x. No representation will be entertained for rejected forms and forms received after the prescribed cutoff date of receipt of the forms.

xi. The candidates applying for admission, if found eligible for appearing in the SKUAST-J common entrance test, will have to appear in the test at their own expenses.

xii. No candidate will be allowed to sit in the '**SKUAST-J Common Entrance Test'** without a valid admit card, in original, issued by the University.

xiii. In case the candidates do not receive the admit card two days before the entrance examination, they should contact Assistant Registrar (Examination Cell), SKUAST Jammu, Chatha for issuance of the duplicate admit card. In no case admit card shall be issued on the day of the entrance test.

xiv. Permission of candidates to appear in 'SKUAST-J Common Entrance Test' shall be provisional, subject to their fulfillment of all prescribed eligibility requirements for admission to the course(s) applied for.

xv. Syllabus for the entrance examination is appended in the Information Brochure along with sample questions.

xvi. Ragging is banned in the University and any culprit shall be dealt and punished as per standing rules of the university regarding it.

xvii. Re-totaling of marks will be allowed on written request accompanied by a fee of Rs. 1500/-. The application must be submitted within 3 days after the declaration of result. Any application received after the stipulated time period will not be entertained.

xviii. Some of the records shall be destroyed as under:

a. The unused question booklets and OMR answer sheets shall be destroyed after three months of the declaration of the result.

b. The used answer sheets shall be destroyed after one year of the declaration of the results.
c. The counseling forms on which the candidates have indicated their choice of the counseling for admission to a particular course will be destroyed after one year.

Instruction for photographs

Candidates must ensure that:

- the name of the candidate and date of taking of the photograph must be clear and legible in the photograph pasted on the form.
- latest coloured photographs of passport size required to be pasted in the form must not have been taken before 31-03-2016 and with a placard-indicating name of candidate (as in application form) and date of taking photograph. In case name and date are written on the photograph after taking it, the application will be rejected.

INSTRUCTIONS/ PROCEDURE FOR FILLING UP ONLINE APPLICATION FORM

Candidates are advised to read carefully the following instructions before they fill in the admission form:-

1. Candidates have to log on to www.skuast.org to apply on line, and click the link Common Entrance Test (CET) -2016.

2. The candidates must, in their own interest, download the Information Brochure and understand eligibility criteria and other required information before filling the Application Form.

3. Application Form will be accepted Online ONLY through University website www.skuast.org from 10.00 am of 20-05-2016 to 5.00 pm of 06-06-2016. However, application forms along with late fee of Rs. 1000/= will be accepted from 12 AM of 7-06-2016 to 5 PM of 08-06-2016.

4. The name should be filled in BLOCK LETTERS and should be the same as given in the certificate of the last examination passed.

5. Before applying online, candidate must ensure that he/she has scanned image of his photograph, signature and thumb-impression in JPEG/JPG format saved on the computer; uploading all of these is MANDITORY. Candidate should also have his/her payment mode details handy.

6. Open the first link, and fill in Part-I of the on-line application form (personal details).

7. While filling up the application form, the candidates shall prefer to write his own contact No(s), email Id for receiving Admit cards/updates from time to time.

8. After submission of personal details at Part-I, you will be directed to second link and fill-in the Part II of application form (academic details).

9. After submitting Part-II, programme will atomically take you to Part III for uploading of Photograph, signature and thumb impression. Upload images of photograph, signature, and thumb impression in JPEG format.

10. Once successfully done, candidate will be shown his/her complete details as recorded at part-IV of the form. Candidate is required to thoroughly check all the details.

11. At the bottom of the page candidate will have the options of printing application form. Take a print out of the application form for your record.

12. Candidate can make online payment through any Credit Card/Debit Card/Net Banking. The candidate has also an option of making payment through J&K Bank Challan, which will be automatically generated after clicking the said mode of payment option. The candidate has to download the e-challan and make payment at any Branch of J&K Bank next day.

13. Take print out of confirmation page(s) of online application format and preserve it for future reference.

14. Admission form incomplete in any respect shall be rejected.

15. Seeking admission on the basis of false identity, misrepresentation by submitting false certificates/ documents or suppression of any material fact is unlawful and will result in cancellation of admission.

16. The applicant can check the status of his/her fee online (www.skuast.org) one week after depositing the fee.

17. In case the status remains unpaid even after one week, candidate can approach SKUAST Jammu with the copy of their Bank Challan/Confirmation page of online payment

18. For any assistance please call **09419226376/01912262154** Before you call please make sure that you have read all the conditions properly and have gone through the Information Brochure in totality. All the topics/issues covered in the Information Brochure/instructions herewith will not be replied.

SELECTION PROCEDURE

- The candidates fulfilling the eligibility criteria will have to appear in the SKUAST-J Common Entrance Test.
- The selection will be purely based on the rank secured in the SKUAST-J Common Entrance Test that shall be based on the score obtained in the test.
- There will be a separate merit list for each category as listed in the Information Brochure.
- All the selections made by the University to undergraduate/postgraduate programmes shall be provisional till final verification of eligibility of the candidates by the University authority.

- The University shall have the power to review the provisional selection list in case of any bonafide error, lapse, mistake, fraud, misrepresentation or inadvertently crept injustice that might have occurred and is brought to its notice of the university before completion of the selection process or after the selection/admission process, the selection list shall be amended accordingly, if required,. Mere figuring in the selection list does not confer any right to admission of the candidate to a university programme if he/she is otherwise not found to be eligible on detection of an error/ mistake/ fraud/ misrepresentation/ impersonation.

ADMIT CARD

- Only for those candidates who fulfill the admission requirements for the programme, to which they have applied, will be issued the photo Admit Cards depicting roll no, name of Centre of Examination, date and timing of the test. The Admit Card can be downloaded from the University web site www.skuast.org.
- No admit card shall be sent by post.
- If Admit Card is not downloaded two days before the date of the Entrance Test, the candidate may contact the office of the **Assistant Registrar, Examination Cell, SKUAST Jammu, Chatha,** with a photograph same as pasted on the application form for obtaining Duplicate Admit Card.
- No Admit Card will be issued on the day of the Entrance Test in any case.

EVALUATION OF ANSWER SHEETS

i. The University shall make available the answer key on its website next day of the examination.

ii. Objection regarding the key, if any, with authenticated proof from standard quality books shall be entertained through email for two days upto 12'O' clock mid night after uploading of key.

iii. The updated key shall be made available on the web site of the university and the word of the expert shall be final

iv. Where a question has ambiguous language, which conforms to more than one answer all the answers, shall be considered correct and if a student had responded with any one of the answers he/she will be given a mark for that question.

v. Where none of the option given to a question is correct, the question will not be considered in evaluation and one mark will be given to all the candidates whether they have attempted this question or not.

vi. The evaluation of the answer sheet is carried out mechanically so there is no chance of any mistake. The result declared by the machine shall be final and not open to any manual check. The students must avoid to make faint marks or ambiguous impressions or incomplete marks on the OMR Sheet which may result in errors in evaluation. The machine will scan the OMR Sheets and the reading of the machine will be final and shall not be subjected to any manual check. It is therefore in the interest of the candidates to fill up OMR sheet carefully as shown in this Information Brochure. The re-evaluation of the answer sheets manually therefore or otherwise is not allowed as that will infringe upon the rule of equality which calls for a uniform treatment given to rest of the students.

DETERMINATION OF MERIT

i. The merit list for each course shall be prepared on the basis of inter-se merit of the candidates in the SKUAST-J CET 2016 in the descending order for Open Merit Category and for each Reserved Category, separately.

ii. Any subsequent vacancy cause by whatsoever reason in any category shall be filled from amongst the candidates of that particular category strictly according to merit. In the event of non-availability of eligible candidates from that reserved category, the relevant vacancies shall go to the self financing category.

iii. In case two or more candidates obtain equal marks, the inter-se merit of such candidates shall be determined as per the order of preference as under.

   a. Candidates obtaining higher marks in Biology/Mathematics
   b. Candidates obtaining higher marks in Biology/Mathematics and Chemistry in aggregate, if marks, in Biology/Mathematics are equal.
   c. Candidates older in age to be preferred if points as per (a) and (b) are equal.

DECLARATION OF RESULT

i. No intimation, whatsoever about non-selection will be sent individually and no correspondence in this regard shall be entertained. The result will, however, be available in the office of the Registrar, SKUAST-Jammu. The result will also be posted at the University website, www.skuast.org

ii. Candidates, whose result of the qualifying examination is not declared by the time of counseling, will not be considered for admission.

iii. Selection of the candidates in all the categories shall be subject to production and verification of all the relevant certificates in original at the time of counseling.

COUNSELLING FOR ALLOTMENT OF DISCIPLINE

i. The candidates take counseling very casually. Hence, they are advised to participate in counseling process seriously.

ii. The candidates should make a real time assessment of the streams they are likely to get and should exercise their options accordingly during counseling on the option from (sample given). The candidates must come for counseling along with all documents in original, a set of attested copies of all documents, admit card issued by SKUAST-J and a counseling fee of Rs 1000/=(non-refundable). **The facility of depositing the counseling fee shall be available in the conference hall of SKUAST J Chatha, Jammu.**

iii. Candidate must mark his/her attendance by putting his/her full signature at the time of first counseling so as to be eligible for consideration at the next counseling if they did not get seat in first counseling.

iv. Attendance in person at the time of counseling is compulsory. The candidates called for counseling must produce the following certificates in original, duly filled in option form and one set of attested copies of the same:

- **Permanent resident certificate**
- **Date of birth certificate (Matriculation certificate)**
- **Marks certificate of qualifying examination**
- **Category certificate, if applicable**

In addition to the above the NRI/ NRI sponsored candidates shall have to submit proof of NRI status. Either of the following documents shall be considered as a proof of NRI status:

- **Attested copy of Non Resident Card/Green Card/Employment Card issued by the employer.**
- **Attested copy of immigration/employment visa entry on the passport along with details of passport**
- **Certificate issued by the Indian Embassy/High Commission in that country where NRI is residing.**
- **Attested photocopy of the latest income tax assessment either in India or the country of employment filed in the status of Non Resident Indian.**
- **Certificate of sponsorship in original from NRI on the prescribed format duly attested by solicitor/legal authority in the country of NRI's residence along with proof of NRI status of the sponsor in case of NRI sponsored candidates. (Prescribed format given as Annexure B at the end of Information Brochure)**

<u>Note: No under process certificate shall be entertained at the time of counseling</u>

v. After payment of prescribed fee at the time of counseling, registration on scheduled date is a must, failing which admission shall get automatically cancelled and fees deposit forfeited.

vi. The candidates should indicate clearly his/her choices of disciplines; he/she is intends to join, in the counseling from in order of preference.

vii. The selection will be recommended strictly on the basis of merit of eligible candidates determined by rank obtained in the entrance examination. Allotment of disciplines shall be made through counseling. The candidates will be called for allotment of discipline one after the other in order of rank.

viii. The candidates have to appear personally for counseling. However, if for some unavoidable reasons a candidate is not able to appear personally, he/ she may send his / her duly authorized representative with admit card, bank draft, documents, undertaking and authority letter to effect the allotment on the basis of choices indicated by such representative and shall be binding on him/her.

ix. If a candidate or his/her representative fails to appear for counseling on the specified date but intends to appear on next date or any date during subsequent notified counseling schedule, he/she will be allowed for such counseling after he/she furnishes satisfactory justification in writing for such a failure along with Rs. 1500/-(non refundable) (Rs. 1000/- for counseling and Rs.500/- for failure to attend earlier counseling). He/she will be considered for the allotment of seats in a course available at that point of time on merit. Such candidates shall have to accept any seat among the vacant seats available at that point of time for which he/she is eligible and cannot stake any claim whatsoever on any other seat already allotted.

x. If a candidate or his authorized representative fails to appear for counseling during the entire notified period of counseling schedule, he/she will forfeit all claims for admission under any circumstances after the counseling process is over.

xi. Candidates shall have to join the course after allotment of discipline within the specified time period. Where a candidate does not join the course within the stipulated time period, his/her seat shall get automatically cancelled and the same shall be filled up as a vacant seat.

xii. The short fall, if any, of the students, after first round of counseling, shall be filled up in another round of counseling as per the merit and availability of seats.

xiii. Where a candidate fails to join the course allotted to him/her in second round of counseling, the seat allotted to him/her will get automatically cancelled and will be allotted to another candidate as per his/her merit.

xiv. Where the number of the candidates who turn up for counseling is more than the seats available, then a waiting list will be prepared.

xv. The candidates may be kept in the waiting list and the number of the candidates to be kept in the waiting list will be decided by the University on spot. This whole process is subject to change whenever and wherever the University deems it proper.

xvi. The number of the candidates to be called for counseling will be subjective and shall be decided by the University keeping in view the response of the candidates.

xvii. The decision of the University concerning allotment of courses shall be final. Choices of courses once exercised shall not be allowed to be changed subsequently expect in the cases of up gradation by merit up to certain time limit. .

xviii. The number of candidates to be called for counseling for left over vacant seats including reserved category seats will be the discretion of the University and will depend upon the response of the candidates.

FEE STRUCTURE FOR UNDERGRADUATE/POSTGRADUATE PROGRAMMES

		Undergraduate Programmes	**Postgradute Programmes**
A. At the time of Ist admission		**Rs.**	**Rs.**
1	Admission fee	5000	6000
2	University Registration fee	3000	5000
3	Caution/Security Money for Library (refundable)	3000	3000
4	College Laboratory Development charges	500	1000
5	Semester Registration fee	500	800
6	Tuition fee	2000	4000
7	Examination fee	1000	1000
8	Extra Curricular Activities fee	500	500
9	Medical Examination fee	200	200
10	Magazine fund (per annum)	200	200
11	Identity card	100	100
12	Placement and counseling fund	100	Nil
13	Educational Tour	**2000**	**Nil**
	Total (A)	**18100**	**21800**
B	**Hostel Charges**		
1.	Hostel Charges (Room rent) Per Semester		
i.	Single seater	3500	3500
ii.	Dormitory	2500	2500
iii.	NRI Rooms	5000	5000
2.	Hostel Security (refundable) for fresh admission	4000	4000
3.	Mess security in case of Hostel inmates for fresh admission * (refundable)	4000	4000
4.	Hostel maintenance fund per Semester	500	500

5.	Utensils crockery breakage fund *	150	150
6.	Common Room Fund * (Hostellers)	300	300
7.	Electricity charges Per semester *	2000	2000
8.	Generator charges ** Per Semester per Students	3000	3000
9.	**Total (B)**		
i.	**Single seater**	**17450**	**17450**
ii.	**Dormitory**	**16450**	**16450**
iii.	**NRI Rooms**	**18950**	**18950**
11.	**G Total (A+B) =**		
i.	**Single seater**	**35550**	**39250**
ii.	**Dormitory**	**34550**	**38250**
iii.	**NRI Rooms**	**37050**	**40750**

Recurring Semester Fee (per semester)

		Undergraduate Programmes	**Postgraduate Programmes**
(A)		**Rs.**	**Rs.**
1	Semester Registration fee	500	800
2	Tuition fee	3000	6000
3	Examination fee	1000	1000
4	Extra Curricular Activities fee	1000	1200
5	Medical Examination fund/fee	200	200
6	Magazine fund (per semester)	100	100
7	Amalgamated fund	600	600
8	Library Fee	300	300
9	Infrastructure development fund	500	500
10	Student Welfare Fee	500	500
11	Water Charges	100	100
	Total (A)	**7800**	**11300**
(B)	Hostel Charges (Room rent)		
1	Single seater	3500	3500
	Dormitory	2500	2500
	NRI Rooms	5000	5000
2	Hostel maintenance fund	500	500
3	Utensils crockery breakage fund	150	150
4	Common Room Fund	300	300
5	Electricity charges	2000	2000
6	Generator charges	3000	3000
	Total (B)		
	Single seater	**9450**	**9450**
	Dormitory	**8450**	**8450**
	NRI Rooms	**10950**	**10950**

	G.Total (A+B)		
	Single seater	**17250**	**20750**
	Dormitory	**16250**	**19750**
	NRI Rooms	**18750**	**22250**

Optional Charges (Per Semester)

		Rs.	Rs.
a	Refrigerator in room	800	800
b	Air Cooler	2500	2500
c	Electric Blower	2500	2500
d	Air Conditioner	12000	12000

Note: University shall not provide any of the above-mentioned appliances.

Fee structure for self-financing seats in addition to normal fees (per semester)

S.No	Programme	Category	Fees (Rs.)
1	B.Sc (Hons) Ag	NRI/ NRI Sponsored	30000
		Ward of serving employee of SKUAST-J / State domicile seats	18000
2	B.Sc (Hons) Bio-Technology	Self Financing	37500
3	B.V.Sc & AH	NRI/NRI sponsored	100000
		Ward of serving employee of SKUAST-J	75000
		State domicile seats	75000
4	M.Sc/MSc (Ag) /MVSc **(All courses except Biotechnoloyg)**	Self financing	30000
5	MSc (Bio-Technology)	Self Financing	50000

GENERAL INSTRUCTIONS FOR TEST

- Entrance Examinations will start at 10:00 a.m sharp and will be for three hours duration for selection tor undergraduate programmes and 2.30 hrs. for post graduate programme.
- The candidates must reach the Centre of Examination at 9:00 AM sharp.
- Candidate must get seated to respective seats 30 minutes before start of examination.
- 15 minutes before start of actual examination OMR sheet shall be provided to candidate.
- Question papers shall be distributed sharp at 09.55 a.m
- Candidates arriving late by more than half an hour will not be permitted to appear in the test.

- Calculator, log tables, pager, mobile phone, note book or written notes, pamphlets, slide rules, protractors, rulers, highlighters dictionary etc. are not allowed inside the Examination Hall. Any violation would amount to disqualification of candidature.
- Any candidate who creates disturbance of any kind during the test or otherwise misbehaves in or around the Examination Centre or changes his/her seat with any candidate will be expelled from the test.
- Any candidate having in his/her possession or in his/her access any paper/book or note which may have potential of providing assistance, or copying from any paper/book or note or allowing any other candidate to copy from his/her answer sheet or found writing on any other paper, or using or attempting to use any other unfair means will be expelled from the test.
- The decision of the Centre Superintendent/Coordinator/Controller of Examinations to expel a candidate from the examination centre shall be final.
- If a candidate puts any identification mark on the OMR sheet, the same shall be cancelled. The decision of the university in this regard will be final.
- If impersonation in the Entrance Test is detected, the candidature will be cancelled and a case against the candidate will be registered with the police.
- Disabled students shall be granted an extra time @ 20 minutes per hour in entrance tests.

INSTRUCTIONS FOR ATTEMPTING PAPER

- Read the instructions carefully given on the question paper.
- Write your roll number only in the space provided on the question paper and OMR sheet and nowhere else.
- The candidates are required to follow the correct procedure for attempting the question paper. Darken the oval pertaining to the most appropriate answer on the OMR sheet. If you darken more than one oval, your answer will be treated as wrong. Incorrect marking will also be taken as wrong answer. For example, if you think that the answer given against choice (B) for question number 1 is the most appropriate, then darken the oval (B) given against 1 (the number of that question) as follows on the OMR sheet:

Correct Method Wrong Method Wrong Method Wrong Method

- Do not use any other mark except to darken the oval.

- The candidates will not be allowed to leave the examination hall within first 60 minutes of commencement of the examination and during the last 30 minutes.
- Each correct answer will carry one mark and each wrong answer shall fetch minus 0.25 (-0.25) marks per question.
- There will be no re-evaluation of the answer sheets.

CANDIDATES MUST BRING

- Two ball point pens (blue/ black ink).
- Admit card issued by the University.

TEST STRUCTURE

Undergraduate

The test shall comprise of one paper of three hours duration. It will be split into different section covering different subjects. The course contents as well as the level of the paper shall be that of the qualifying examination. The paper will contain 180 multiple choice objective type questions. Each question will carry one mark. For correct one answer 1 mark will be given and for incorrect answer ¼ mark will be deducted. The subjects for the SKUAST-J Common Entrance Test-2015, shall be as under:

Physics	60
Chemistry	60
Biology/Mathematics*/Agriculture*	60

*Mathematics/Agriculture only for the candidates appearing for admission to B.Sc. (Hons.) Agriculture.

Model Questions

PHYSICS

1. A particle starts with initial velocity for 10m S^{-1}. It covers a distance of 20 cm along a straight line in two seconds. What is the acceleration of particle?

(A) Zero (B) 1m/S^2 (C) 10m/S^2 (D) 20m/S^2

2. What is the barometric height of a liquid of density 3.4 g cm-3 at a place where that for mercury barometer is 70 cm?

(A) 70 cm (B) 140 cm (C) 280 cm (D) None of these

CHEMISTRY

1. The electronic configuration 2, 8, 8, 2 represents the element:

(A) Argon (B) Potassium (C) Calcium (D) Chlorine

2. In a double bond connecting two atoms there is sharing of:

(A) 2 electrons (B) 4 electrons (C) 1 electron (D) 6 electrons

BIOLOGY

1. One of the following terms involves all others?

(A) Stock (B) Scion (C) Graft (D) Cambium

2. The following plant has male and female reproductive parts in the same flower:

(A) Papaya (B) Date palm (C) Cycas (D) Datura

GENERAL SCHEME OF ENTRANCE TEST FOR PG PROGRAMMES

Examination Schedule

Duration : 2½ hours. Time 10.a.m to 12.30 pm

Major subjects

There will be six major subject groups as given in the table below. Candidate shall have to appear in one major subject group.

Major Subject Group	Code
Basic Sciences	01
Agricultural Sciences	02
Statistics	03
Forestry	04
Sericulture	05
Veterinary Sciences	06
Agricultural Engineering	07

The examination shall have one question paper each for concerned major subject group. The questions will consist of 150 multiple choice objective type questions, each with four options.

i. In each subject, 150 multiple choice, objective type questions would be serially numbered from 1-150 and will carry one mark each.

ii. Candidate will be required to choose the correct answer and mark in the OMR answer Sheet by darkening the corresponding circle/ bubble against the serial number of the question with black/ blue ink ball-point pen.

iii. For correct answer 1 mark will be given and for incorrect answer - ¼ mark will be given.

SYLLABUS FOR SKUAST-J ENTRANCE TEST FOR ADMISSION TO UNDERGRADUATE PROGRAMMES

Note: The syllabus for the entrance test shall include the contents as prescribed for 10+1 and 10+2 by the J&K State Board of School Education for the subjects of Physics, Chemistry and Biology. The syllabus for agriculture subject is as prescribed by the university. However, for the convenience of the students, the contents of the syllabus are reproduced hereunder:

PHYSICS (2-4 marks from each unit)

UNIT 1: PHYSICAL WORLD AND MEASUREMENT

scope and excitement, nature of physical law, physics, technology & society. SI units, Fundamental and derived units. Accuracy and precision of measuring instruments, Errors in measurement, Significant figures. Dimensions of physical quantities, dimensional analysis and its applications.

UNIT 2: KINEMATICS

Motion in a straight line: Position-time graph, speed and velocity. Uniform and non-uniform motion, average speed and instantaneous velocity. Uniformly accelerated motion, velocity-time, position-time graphs, relations for uniformly accelerated motion, (graphical treatment and calculus approach). Scalar and Vector quantities, addition and Subtraction of vectors, general Vector and notation, Relative Velocity. Scalar and Vector products of two vectors with properties, unit vector, resolution of a vector in plane rectangular components, Motion in a plane, Projectile Motion, cases of uniform velocity and uniform acceleration.

UNIT 3: LAWS OF MOTION

Intuitive concept of force and Inertia, Newton's First Law of motion- Momentum and Newton's Second Law of motion, Impulse- Newton's Third Law of motion/ Law of conversation of linear momentum and its applications, Equilibrium of concurrent forces. Friction, static and kinetic friction, laws of friction, rolling friction. Dynamics of uniform circular motion: Centripetal force and examples of circular motion (vehicle on level circular road, vehicle on banked road.) .

UNIT4: WORK ENERGY AND POWER

Concept of scalar products of vectors, Work done by a constant force and, variable force; kinetic energy, work energy theorem, power. Potential energy, Potential energy of spring, conservative forces, conservation of mechanical energy (K.E. and P .E.), non-conservative forces; Elastic and inelastic collision in one and two dimensions.

UNIT 5: MOTION OF SYSTEM OF PARTICLES AND RIGID BODY

Centre of mass of a two-particle system, Centre of mass of a rigid body; concepts of vector product of vectors: moment of a force, torque, angular momentum, conservation of angular momentum with some examples. moment of inertia, radius of gyration. Values of moment of inertia for simple geometric objects (no derivation), statement of parallel and perpendicular axes Theorems and their applications. Rigid body rotation and equations of rotational motion.

UNIT 6: GRAVITATION

The universal law of gravitation. Acceleration due to gravity and its variation with altitude, depth and shape, Kepler's laws of planetary motion/ Gravitational potential; gravitational potential energy. Escape velocity. Orbital velocity of satellite. Geo-stationary satellites.

UNIT 7: PROPERTIES OF BULK MATTER

Elastic behavior, Stress-strain relationships, Hooke's Law, Young's modulus, bulk modulus, shear modulus of rigidity. pressure due to a fluid column- Pascal's law and its applications (hydraulic lift and hydraulic brakes) Viscosity, Stoke's law, terminal velocity, streamline and turbulent flow, Renold's number/ Bernoulli's theorem and its applications Surface energy and surface tension, angle of contact, applications of surface tension ideas to drops, bubbles and capillary action. Heat, temperature, thermal expansion; specific heat, calorimetry; change of state-latent heat. Heat transfer-conduction, convection and radiation, thermal conductivity, Newton's law of cooling.

UNIT 8: THERMODYNAMICS

Thermal equilibrium and definition of temperature (Zeroth law of thermodynamics), Heat work and internal energy. First law of thermodynamics. Second law of thermodynamics: reversible and irreversible processes. Heat engines and refrigerators (concept only).

UNIT 9: BEHAVIOUR OF PERFECT GAS AND KINECTIC THEORY

Equation of state of a perfect gas, work done on compressing a gas. Kinetic theory of gases assumptions, concept of pressure. Kinetic energy and temperature: rms speed of gas molecules; Degrees of freedom,

Law of equipartition of energy (Statement only) and applications to specific heat capacities of gases-concept of Mean free path, Avogadro's number.

UNIT 10: OSCILLATIONS AND WAVES

Periodic motion Period, frequency, displacement as a function of time. Periodic functions. Simple harmonic motion (S.H.M.) and its equation; phase; oscillations of a spring-restoring force and force constant; energy in S.H.M. kinetic and potential energies; Simple pendulum-derivation of expression for its time period; Free, forced and damped oscillations, resonance. Wave motion. Longitudinal and transverse waves, speed of a wave. Displacement relation for a progressive wave. Principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats, Doppler effect.

UNIT 11: ELECTROSTATICS

Electric charges. Conservation of charge, Coulombs law -forces between two point charges, forces between multiple charges; superposition principle and Continuous charge distribution. Electric field: Electric field due to a point charge, Electric field lines, Electric dipole, Electric field due to a dipole, Torque on a dipole in uniform electric field. Electric flux, Statement of Gauss theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).

Electric potential, electric potential due to a point charge, a dipole and system of charges; Equi-potential surfaces, Electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. ~conductors and insulators, Dielectrics and electric polarization, capacitor and capacitance, combination of capacitors in series and in parallel, capacitance of parallel plate capacitor with and without electric medium between the plates, Energy stored in a capacitor.

UNIT 12: CURRENT ELECTRICITY

Electric current, Drift velocity, Ohms law, Electrical resistance, V-I characteristics linear & non-linear), Electrical energy and power, Electrical resistivity and conductivity, Colour code for carbon resistors; Temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel/ Kirchhoffs laws and their applications/ Wheatstone bridge, Meter bridge. Potentiometer principle and its application to measure the potential difference and for comparing e.m.f. of two cells; measurement of internal resistance of a cell.

UNIT 13: MAGNETIC EFFECTS OF CURRENT AND MAGNETISM

Biot Savart law and its application to current carrying circular loop/amperes law and its applications to infinitely long straight wire, straight and torodial solenoids. Force on moving charge in uniform magnetic and electric fields. Cyclotron. Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current-carrying conductors-definition of ampere. Torque experienced by a current loop in uniform magnetic field; Moving coil galvanometer, its current sensitivity and conversation with examples. Current loop as a magnetic dipole and its magnetic dipole moment, magnetic field lines; Earths magnetic field and magnetic elements. Para-, dia- and ferro- magnetic substances with examples. Electromagnets and factors affecting their strength, permanent magnets.

UNIT 14: ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENTS

Electromagnetic induction. Faradays law, induced emf and curren t- Lenzs Law/ Eddy currents. Self and mutual inductance. Alternating currents, peak and rms value of alternating current/ voltage; reactance and impedance; LC oscillations (qualitative treatment only) & LCR series circuits, resonance; power in AC circuits, wattles current. AC generators and transformer.

UNIT 15: ELECTROMAGNETIC WAVES

Electromagnetic waves and their characteristics. Transverse nature of electromagnetic waves.

Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, Xrays, gamma rays) including elementary facts about their uses.

UNIT 16: OPTICS

Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and its applications, Refraction at spherical surfaces, thin lens formula, Lens-makers Formula, Magnification, Power of a Lens. combination of thin lenses in contact, Microscopes and Astronomical Telescope (reflecting and refracting) and their magnifying powers. Wave optics: wave front and Huygens principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proofs of laws of reflection and refraction using Huygen's principle. Interferences, Coherent sources, Young's double slit experiment and expression for fringe width, Diffraction due to a single slit, width of central maximum. Resolving power of pes and astronomical telescopes, Polarization, plane polarized light; Mallus's law, Brewester's law, uses of plane polarized light and Polaroids.

UNIT 17: DUAL NATURE OF MATTER AND RADIATION

Dual nature of radiation/ Photoelectric effect, Hertz and Lenard's observations, Einstein's - photoelectric equation- particle nature of light/Mater waves-wave nature of particle, de Broglie relation. Davisson-Germer experiment

UNIT 18: ATOMS AND NUCLEI

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

UNIT 19: ELECTRONIC DEVICES

Semiconductors; semiconductor diode: I-V characteristics in forward and reverse bias; diode as a rectifier; I-V characteristics of LED, photodiode, solar cell and Zener diode; Zener diode as a voltage regulator. Junction transistor and its action, characteristics of a transistor; transistor as an amplifier (common emitter configuration) and oscillator. Logic gates (OR, AND, NOT) concept of NAND and NOR gates. Transistor as a switch.

UNIT 20: COMMUNICATION SYSTEM

Basic elements of communication system (block diagram only), Bandwidth of signals (speech, TV and digital data); Bandwidth of Transmission medium, Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation. Need for modulation: Production and detection of an amplitude modulated wave.

CHEMISTRY (2-4 marks from each unit)

UNIT 1: CHEMICAL ARITHMETIC, ATOMIC STRUCTURE AND NUCLEAR CHEMISTRY

Laws of chemical combination, mole concept (numericals) calculations using chemical equations. Equivalent weight of oxidizing and reducing agents. Atomic structure, Bohr's model of Hydrogen atom, Quantum numbers, Pauli's exclusion principle, Hund's rule and Aufbau principle/ Heisenberg's uncertainty principle, de-Broglie wave equation and its significance.

UNIT 2: CHEMICAL EQUILIBRIUM

Law of mass action, Le-Chatelier's principle, and its application to physical and chemical equilibria/ lonisation of weak electrolytes (Ostwalds dilution law). Acids and bases: Acid base equilibria. Bronsted-Lowry and Lewis concept, of acids and bases. Ionic product of water. pH and pOH scales, pKa & pKb values, solubility product, buffer solutions common ion effect, hydrolysis of salts.

UNIT 3: CHEMICAL KINETICS

Effect of concentration and temperature on rate of chemical reactions, Arrhenius equation) temperature co-efficient, Concept of activation energy, first and second order reactions, half-life period, Units of rate constants for zero, first and second order reactions.

UNIT 4: SOLUTIONS

Different ways of expressing the concentration of solutions (molarity, molality, mole fraction, ppm and normality), vapour pressure, Raoults law, ideal and non - ideal solutions, colligative properties, determination of molecular masses of non- volatile solutes using various colligative properties, abnormal molecular masses and Vant Hoff factor.

UNIT 5: CHEMICAL THERMODYNAMICS

Energy changes during chemical reactions, internal Energy and enthalpy changes enthalpy of combustion solution and neutralization, Hess's Law (Numerical problems). first, second, third law of thermodynamics, concepts of entropy and free energy, spontaneity of a chemical reaction and thermodynamic equilibrium.

UNIT 6: REDOX REACTIONS AND ELECTROCHEMISTRY

Determination of oxidation numbers, oxidation and reduction in terms of electron transfer, dependence of electrode and cell potential on concentration (Nernst Equation), electrode potential as a criteria for product formation in electrolysis. E.M.F. of Galvanic cell, relationship between free energy change and E.M.F. of a cell, definition and units of equivalent, molar and specific conductivity.

UNIT 7: SOLID STATE & STATES OF MATTER

Boyle's Law, Charle's law, Dalton's law of partial pressure, Graham's law of diffusion of gases, causes of deviation from ideal behaviour, ideal gas equation and nature of R, Vander Waals equation, surface tension and viscosity of liquids, crystalline and amorphous solids, crystal lattice, crystal types, Packing efficiency, calculation of density of unit cell, number of atoms per unit cell in a cubic cell, co-ordination number,

stoichiometric defects (Schottky, Frenkel and interstitial defects.), Properties of solids(electrical, magnetic & dielectric)

UNIT 8: SURFACE CHEMISTRY & POLYMERS

Freundlich absorption isotherm, preparation of colloidal solutions by physical and chemical methods, electrical properties (cataphoresis, electorosmosis, coagulation and protective colloids) homogeneous and heterogeneous catalysis. Classification of polymers, addition and condensation free radical cationic and anionic polymerization, commercially important polymers.

UNIT 9: PERIODIC PROPERTIES

Classification of elements into s, p, d, and f blocks, variation of ionization energy, electron affinity, electro-negativity, atomic and ionic radii along the period and down the group.

UNIT 10: CHEMICAL BONDING AND MOLECULAR STRUCTURE

Types of chemical bonds, Ionic & covalent bonds, Bond parameters, quantum theory of covalent bond, pi and sigma bonds, hybridization involving s, p and d- orbitals, dipole moments and hydrogen bond. VSEPR-theory and shapes of simple molecules like H_2O, NH_3, SO_2, CO_2, PCI_3, PCIS, CIF_3, BF_3, SF_4, XeF_2, XeF_4 Molecular orbital theory, bond order and its significance, electronic configuration of H_2, H_2 +,He_2, O_2, O_2 ,$O^{2-}{}_2$ & F2.

UNIT 11: CHEMISTRY OF REPRESENTATIVE ELEMENTS.

(S and P Block Elements) Electronic configuration, oxidation states and trends in various properties like ionization energy, electron affinity, atomic radii, electro negativity and diagonal relationship of sand p block elements.

a. Alkali metals: Hydration of ions, action with ammonia, flame colouration, solubility of hydroxides, carbonates and sulphates.

b. Alkaline Earth Metals: Solubility of carbonates, hydroxides and sulphates.

c. Boron Family: Structure of halides, relative acid strength of trihalides of boron.

d. Carbon family: Hydrides and oxides.

e. Nitrogen family: Oxides of nitrogen and phosphorous, Reducing nature, basic strength and boiling points of their halides.

f. Oxygen family: Volatility, thermal stability, and acid character, reducing character and bond angles of their hydrides, oxyacids of sulphur.

g. Halogen family. Bond energy, colour and oxidizing power, boiling point, acid strength and diple moment, thermal stability, reducing power of hydracids, relative acidity and oxidizing power of oxyacids of halogens.

UNIT 12: TRANSITION METAL INCLUDING LANTHANIDES

Electronic configuration, oxidation states, colour and magnetic properties of transition elements oxides of V, Cr and Mn, alloys of copper silver and iron, oxidation states of lanthanides.

UNIT 13: CO-ORDINATION CHEMISTRY AND ORGANOMETALLICS

Werner's coordination theory, nomenclature, isomerism in co -ordination compounds (ionization, linkage, hydrate, co-ordination, geometrical and optical), bonding in co-ordination compounds on the basis of V.B. theory, stability of co- ordination compounds in solution, Ferrocene and Zeises salt.

UNIT 14: CHEMISTRY OF METALS

General aspects of Metallurgy, metallurgy of iron, copper and zinc and their properties, various forms of iron.

UNIT 15: NOMENCLATURE AND BASIC CONCEPTS IN THE ORGANIC CHEMISTRY

Nomenclature of organic compounds (monofunctional and polyfunctional groups), inductive, eletromeric resonance and hypercojugtion effects, reaction mediates, carbocations, carbanions and free radicals with their general stability order, types of organic reactions (addition, substitution, elimination and redox reactions), aromaticity on the basis of Huckel rule. Ortho, meta and para directing groups.

UNIT 16:HYDROCARBONS

Structural isomerism in alkanes, alkenes, alkynes and arenes, stereoisomerism: ,geometrical and optical isomerism, chirality, origin of chirality, specific rotation, racemisation and resolution, conformations in ethane and cyclohexane, relative configuration (D,L-Nomenclature), absolute (R and S system of nomenclature).Relations of hydrocastions:-Addition, Subsititution and Oxidation reactions, eletrophiles and neucleophiles; acidic character of aklyines.

UNIT17: ORGANIC CHEMISTRY BASED ON FUNCTIONAL GROUP-I

Haloalkanes, haloarenes, alcohols and phenols, General methods of preparation properties of haloalkanes, choloroform, iodoform.

UNIT18: ORGANIC CHEMISTRY BASED ON FUNCTION GROUP-II

(Ethers, aldehydes and ketones, monocarboxylic acids). General methods of 3ration and properties of ethers, aldehydes, ketones and monocarboxylic I derivatives of monocarboxylic acids like, acid halides, acid anhydrides acid amides and esters, relative strength of carboxylic acids.

UNIT 19: 0RGANIC CHEMISTRY BASED ON FUNCTIONAL GROUP-III

(Cyanides, isocyanides, nitro compounds and amines)General methods of preparation and properties of cyanides, Isocyanides, nitro compounds and amines, relative basic character of amines

UNIT 20: MOLECULES OF LIFE (BIOMOLECULES)

Carbohydrates: definition, classification, muta-rotation, structure of animoacids, peptides and proteins (Molish and ninhydrin tests). classification and uses of vitamins. Chemicals in medicine and health care, dyes and drugs, chemical reactions in atmosphere, ozone depletion and its effects. acid rain, green house effect & global warming

BIOLOGY (3-5 marks from each unit)
BOTANY

UNIT: 1 DIVERSITY AND CLASSIFICATION OF PLANTS

Systematics need and history; Salient features of two and five kingdom systems their merits and demerits; types of classifications (artificial, natural and phylogenetic); General characters of algae, fungi, bryophytes, lichens---basic characteristics pteridophytes, gymnosperms and angiosperms; Status of some a cellular organisms like viruses viroids;.

UNIT-2: MORPHOLOGY AND ANATOMY OF PLANTS

Morphology of root, stem and leaf and their modifications; types of inflorescence, flower, fruit and seed. Description of Liliaceae, Fabaceae, Solanaceaea. Tissues and tissue system: Types of tissues (meristematic and permanent) and their functions. Anatomy of dicot and monocot root, stem and leaves; secondary growth.

UNIT 3: PLANT PHYSIOLOGY

Transport in plants: Mechanisms of transport diffusion, facilitated diffusion, Passive and active transport. Plant water relations: Water potential; osmosis; plasmolysis; imbibition; long distance transport of water; apoplast, symplast pathways; ascent of sap; root ;sure theory and tanspirational pull theory. Transpiration: Types and significance; mechanism of opening and closing of stomata, guttation; phloem transport (Mass Flow hypothesis) Mineral Nutrition: Criteria for essentiality of nutrients; macro and micro nutrients their role and deficiency symptoms. Mechanism of nutrient uptake by plants from soil. Nitrogen metabolism nitrogen cycle, biological nitrogen fixation. Photosynthesis: Historical background; site of photosynthesis; various photosynthetic pigments; mechanism of light reaction; photophosphorylation (cyclic and non-cyclic); Dark reaction-fixation of carbon dioxide (C_3 cycle, C_4 cycle); factors affecting photosynthesis; photorespiration. Respiration: Introduction; glycolysis, Kreb's cycle, Electron Transport System; Aerobic and anaerobic respiration; respiratory quotient. Growth and Development: Characteristics and phases of plant growth; growth curve; differentiation, dedifferentiation and re-differentiation; plant growth regulators-discovery, nature and physiological effects of auxins, gibberellins, cytokinins, ethylene and abscisic acid. Photoperiodism and vernalisation.

UNIT -4: REPRODUCTION IN FLOWERING PLANTS

Modes of reproduction in flowering plants (Vegetative, asexual and sexual); flower structure, development of male and female gametophytes; Pollination types, agencies and examples; in-breeding and out-breeding, factors promoting out-breeding, pollen-pistil interaction; double fertilization; post-fertilization events; development of endosperm, embryo, seed and fruit; apomixis and polyembryony; types and importance.

UNIT -5: GENETICS

Heredity and variation (somatic and germinal)- Mendel's laws of inheritance- I deviations from Mendelism; incomplete dominance; co-dominance; multiple/alleles; pleiotropy; chromosomal theory of inheritance. Evidence for DNA as genetic material; structure of DNA and RNA; DNA packaging; I DNA replication; Protein synthesis transcription, translation, genetic code; gene expression and regulation (lac-operon).

UNIT -6: ECOLOGY AND ENVIRONMENT

Meaning of ecology, community, ecosystem and niche. Population and ecological adaptations: Characteristics of populations (birth rate (natality /fecundity), death rate (mortality) and age distribution; population interactions; competition, predation, parasitism and mutualism.

Ecosystems: Biotic and abiotic components; energy flow, nutrient cycling (carbon and phosphorus), litter decomposition and primary productivity; pyramids of number, biomass and energy; ecological succession types.
Biodiversity and its conservation: Levels of biodiversity; threats to biodiversity; mega-biodiversity countries and biodiversity hotspots; IUCN threat categories; in situ and ex situ methods of biodiversity conservation. Environmental issues: Causes and consequences of air and water pollution and their control; solid waste management; agro-chemicals and their effect; greenhouse effect and global warming; stratospheric ozone layer depletion causes and consequences.

UNIT- 7: BIOLOGY AND HUMAN WELFARE

Plant breeding: Introduction, steps in plant breeding and application of plant breeding.
Tissue culture: Cellular totipotency; technique and application of tissue culture. Microbes in human welfare: Role of microbes in food processing; industrial production; sewage treatment; energy production (biogas); bio-pesticides and bio-fertilizers Elementary idea of Genetically Modified Organisms (GMOs); bio-piracy and patents.

ZOOLOGY

UNIT -8: DIVERSITY IN THE LIVING WORLD.

Co Characteristic features of living organisms Salient features of different animal phyla (non-chordates upto phylum level, chordates upto class level). National parks of J&K State:- Dachigam National Park, Hemis High altitude National Park and Kishtwar High altitude National Park.

UNIT-9: HISTOLOGY & MORPHOLOGY

Animal Tissues:- Epithelial, Connective, Muscular and Nervous Elementary knowledge on morphology & anatomy of Frog, Earthworm and Cockroach.

UNIT-10: CELL-STRUCTURE & FUNCTION

Modern cell theory, Prokaryotic and eukaryotic cells, cell wall, cell membrane structure & function (fluid mosaic model), cell organelles (Plastids, Mitochondria, Endoplasmic reticulum, Golgi bodies/ dictyosomes, riobosomes, lysosomes, nucleus, vacuoles, centrioles, cilia & flagella). Cell division: Cell cycle, Mitosis and Meiosis Bio molecules: Structure and function of carbohydrates, proteins, lipids and nucleic acids, primary and secondary metabolites, metabolism Enzymes: Types, properties functions and factors controlling enzyme activity.

UNIT-11: HUMAN PHYSIOLOGY

Alimentary canal, digestion and absorption of food, disorders of digestive system (jaundice, vomiting, diarrhea, constipation, indigestion etc.). Respiratory organs, mechanism of breathing, respiratory volumes and capacities, transport of gases (oxygen and carbon dioxide), disorders of respiratory system (asthma, emphysema, fibrosis etc.) Circulatory system:- Blood & lymph and their functions, blood groups, coagulation of blood, human heart, cardiac cycle, ECG, double circulation, ~ disorders of circulatory system. (hypertension, coronary artery disease, angina, heart failure) Human excretory system:- urine formation, functions of tubules, mechanism of concentration of the filtrate, regulation of kidney function, micturition, role of other organs in excretion (lungs, liver and skin), haemo-dialysis and peritoneal dialysis, disorders of the excretory system (kidney failure, glomerulonephritis, renal calculi), Types of movement (amoeboid, ciliary and muscular), different types of muscles, structure of contractile proteins (actin and myosin), mechanism of muscle contraction, joints, disorders of muscular and skeletal system (Myasthenia gravis, muscular dystrophy, tetany, arthritis, gout, osteoporosis) Human nervous system:- neuron as a structural and functional unit of nervous system, generation and conduction of nerve impulse, transmission of impulses, reflex action and reflex arc, structure and functioning of the sense organs (eye and ear), Endocrine glands, Mechanism of hormone action, hormones of heart, kidney and gastrointestinal tract.

UNIT-12: REPRODUCTION

Asexual reproduction:- Characteristics and types of asexual reproduction (binary fission, sporulation, budding, gemmules, fragmentation, regeneration) Human reproduction:- male and female reproductive system, microscopic anatomy of testis and ovary, spermatogenesis and oogenesis, menstrual cycle, fertilization, embryo development upto blastocyst formation, implantation, pregnancy and placenta formation, parturition and lactation, Reproductive health:- need for reproductive health, sexually transmitted diseases and their control and prevention, birth control, (its need and methods), contraception and medical termination of pregnancy (MPT), amniocentesis, infertility and associated reproductive technologies (IVF,ZIFT,GIFT).

UNIT-13: GENETICS AND EVOLUTION

Sex determination in humans, birds and honey bee. Inheritance pattern of Mendelian disorders in humans (colour blindness, haemophilia, cystic fibrosis, sickle- cell anemia, phenylketonuria, thalesemia). Chromosomal disorders in humans:- Down's syndrome, Turner's syndrome and Klinefelter's syndrome. Genome and human genome project. DNA fingerprinting. Origin of life, theories and evidences for evolution with special reference to Darwinian theory, and Modern synthetic theory, Hardy-Weinberg principle, Adaptive radiation.

UNIT-14: BIOLOGY AND HUMAN WELFARE

Health and Diseases:- basic concepts of immunology, vaccines, common diseases in human beings (their causative agents, symptoms and prevention and control) with reference to thyphoid, hepatitis, malaria, filariasis, bubonic plague, ascariasis, common cold, amoebiasis and ring worm, Detailed account of diseases like cancer and HIV/ AIDS. Insects and human welfare:- Silk, honey and lac producing insects, their life- cycle and usefulness of their products. Adolescence and drug and alcohol abuse (effects of drug/ alcohol abuse, prevention and control.

UNIT 15: BIOTECHNOLOGY AND ITS APPLICATIONS

Genetic engineering (recombinant DNA technology), cloning. Biotechnological production of human insulin, vaccines and growth hormone. Gene therapy. Bio safety/ ethical issues regarding recombinant DNA technology

AGRICULTURE

AGRONOMY **20 marks**

Cultivation of common crops-wheat, paddy, cotton, jowar, bajra, maize, soybean, arhar, mustard, sunflower, pea, groundnut, gram, tobacco, barseem, potato and sugarcane under the following heads:

Recommended varieties and their main characteristics, suitable areas, seed rate, time and method of sowing, irrigation, fertilizer use, control of weeds, insect-pests and diseases, harvesting, processing and yield.

Soils-origin and classification loam, silt, clay, sandy loam, etc.; physical and chemical properties; soil conservation. Use of fertilizers, essential nutrients- nitrogen, phosphorus and potassium uptake by different crops, organic and inorganic fertilizers and their effects on crops and soil, methods of using fertilizers, farmyard manure, composting, green manauring, study of organic and inorganic fertilizers/ manures. Pollution of soil, water and air in modern agriculture and remedial measures.

Irrigation and Drainage - water requirement of crops, measurement of water discharge, prevention of loss of water; quality of water; different methods of irrigation - flooding, basin method, border /strip method, sprinkler and drip irrigation - their advantages and limitations. Necessity for drainage, damage to soil and crops due to excess moisture, prevention of formation of acidic and alkaline soils and their management; natural calamities- floods and drought and their management.

HORTICULTURE **10 marks**

Study of following horticultural crops including recommended varieties and their main features, suitability for different regions, time and method of sowing, fertilizer use, irrigation, diseases and pests and their control.

Crops- cabbage, cauliflower, onion, garlic, cucurbits, bittergourd, bottlegourd, muskmelon, squash, ridgegourd; root crops-carrot, radish sweet potato, turnip; peas, tomato, bringal, lady's finger, spices; fruit crops such as banana, apple, mango, litchi, citrus, guava, papaya, peach etc.

AGRICULTURAL ENGINEERING **10 marks**

Type of iron and steel, wood, plastic and tin used in agricultural implements and their forms & properties. Study of different types of ploughs-their merits and demerits; mechanical devices such as cultivator, harrow, sprayer, seed drill, thereshers etc. their management & cost, selection of prime movers, water lifting devices; discharge, command area, cost of different system; soil preparation, methods of ploughing, need for tillage, kinds of tillage, interculture, equipment for interculture.

Power transmission through belts, pullies and gears, questions relating to number of teeth in gears according to speed and size of pullies, hand operated chaff cutters, cane crusher etc., draught and its measurement.

AGRICULTURAL ECONOMICS **10 marks**

Introductory agricultural economics-meaning and scope, significance of agricultural economics in national planning. Production - meaning, factors of production such as land, labour, capital and management, properties of factor of production; law of returns; intensive and extensive agriculture; Exchange - meaning,

types, advantages; types of markets, general price determination; money and credit; banks and their functions; principle of international trade, Distribution-meaning, rent, wages, interest and profit; Consumption -meaning, wants and their properties, law of diminishing marginal utility, law of demand, relative prices and standard of living; Cooperation - meaning, principles of cooperation, types of cooperative societies in agriculture, single purpose and multi-purpose cooperative societies, land development banks: Agriculture-place in Five Year Plans; statistics of agricultural production in the State; Major programmes of agricultural development.

ANIMAL HUSBANDRY AND VETERINARY SCIENCE 10 marks

Study of major breeds of cows, buffaloes, goat, sheep and poultry; elementary physiology and anatomy of cows and bullocks; estimate of their age; characteristics of good milch cows and buffaloes, bulls and bullocks. Care and management of pregnant cow, during calving, newborn calves, young calves, mulch cows; poultry management. Principles of feeding of various classes of livestock and poultry. Economic feeds for various classes of livestock and poultry. Clean milk production and maintenance of hygiene. Common medicines and vaccines used in treatment/prevention of animal diseases; handling of animals for treatment; castration. Operation flood, Milk and Milk products, Identification of Adult rated milk.

Note: Questions from similar topics can also be included.

MATHEMATICS (06 marks each unit)

UNIT 1: SETS, RELATIONS AND FUNCTIONS

Sets and their representation, finite and infinite sets, empty set subsets, subset of real numbers especially intervals, power set, universal set. Venn diagram, union and intersection of sets. Difference of sets, Compliment of a set. Ordered pairs, Cartesian product of sets, number of elements in the Cartesian product of two finite sets. Cartesian product of real with itself (upto RxRxR). Relation, Domain, co-domain and range of relation, types of relations, reflexive, symmetric, transitive and equivalence relations. Function as special kind of relation from one set to another, domain, co-domain and range of a function. One to one, onto functions. Real valued functions of the real variable, constant identity, polynomial, rational modulus signum and greatest integer functions with their graph. Sum, difference, product and quotients of functions. Composite of functions, inverse of a function, binary operations.

UNIT 2: COMPLEX NUMBER; LINEAR INEQUATION; LINEAR PROG

Complex number: Conjugate of a complex number, modulus and amplitude (argument) of a complex number, Argand's plane and polar representation of complex numbers, algebraic properties of complex numbers. Fundamental theorem of algebra, solution of Quadratic equation in the complex number system. Square root of a complex number. Linear inequation: Algebraic solution of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities of two variables. Linear programming: Introduction , definition of related terminology such as constraints, objective function, optimization, different type of linear programming problem (L.P), mathematical formulation of L.P problem, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

UNIT 3: SEQUENCE AND SERIES, PERMUTATION AND COMBINATION

Sequence and series: Arithmetic progression (A.P), arithmetic mean (A.M), nth term, sum to n-terms of an A.P, Geometric progression (G.P) , Geometric Mean (G.M), nth term, sum to n-terms and sum to infinity of a G.P. Relation between A.M and G.M. Sum to n terms of $n, n2\ and\ n3$. Permutation and combination: Fundamental principle of counting, factorial n., permutations P(n,r) and combinations C(n,r), derivation of formulae and their connections, simple applications. Mathematical Induction and Binomial Theorem: The principle of mathematical induction and simple applications. Binomial theorem, statement and proof of Binomial theorem for positive integral power. Pascal's triangle, general and middle terms in the Binomial expansion, simple application.

UNIT 4: TRIGONOMETRIC AND INVERSE TRIGONOMETRY FUNCTIONS

Positive and negative angles, measuring angles in radians and in degrees, Conversion from one measure to another. Definition of trigonometric functions with the help of unit circle, identity sin2x+cos2x=1 for all Sign of x, Trigonometric functions and their graphs. Expression of sin $x \pm y\ and$ cos $x \pm y$ in terms of Sin x, Sin y, Cos x and Cos y.

Identities related to Sin2x, Cos2x, tan2x, Sin3x, Cos3x, and tan3x. General solution of trigonometric equations of the type Sin, Cos. Sine and Cosine formulae and their simple applications. Inverse

trigonometric functions, defunction, range, domain, principal value branches. Graphs of inverse trigonometric functions, elementary properties of inverse trigonometric functions

UNIT 5: MATRICES AND DETERMINANTS

Matrices, concepts, notation, order, equality, types of matrices, Zero matrix, transpose of matrix, Symmetric and skew symmetric matrices. Addition, multiplication, scaler multiplication of matrices, simple properties of addition, multiplication and scalar multiplication of matrices. Non-cumulative of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (order 2x2). Concept of elementary row and column operation, Invertible matrices and uniqueness of inverse, if it exists. (Matrices with real entries). Determinants of square matrix (upto 3x3 matrices) properties of determinants, minors, cofactors and applications of determinants in finding area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables using inverse of a matrix. Crammer‘s Rule and its applications.

UNIT 6: LIMIT, CONTINUITY AND DIFFERENTIATION

Concept of limit of a function. Theorems on Limits, Evaluation of limits using standard results

Continuity of a function at a point. Continuity of Sum, product and quotient of functions. Derivative: definition of a derivative of a function, geometrical interpretation of the derivative.

- Derivative of sum, difference, product and quotient of two or more functions.
- Derivative of algebraic and composite functions.
- Derivative of trigonometric and inverse trigonometric functions.
- Chain rule, derivative of implicit functions.
- Derivative of logarithmic and exponential functions.
- Logarithmic differentiation.
- Derivative of functions expressed in parametric forms.
- Second order derivatives.
- Rolle‘s and Lagrange‘s Mean Value Theorem and their geometrical interpretation and their simple applications.
- Chain Rule, derivative of implicit functions.

Application of Derivative: rate of change, increasing and decreasing functions, tangents and normals, approximation, maxima and minima (first derivative and second derivative test). Simple problems.

UNIT 7: INTEGRATION AND DIFFERENTIAL

Integration as inverse process of differentiation. Integration of variety of functions by Substitution, by parts, by partial fractions. Simple integrals. Definite integrals as a Limit of a sum. Fundamental Theorem of calculus. Basic properties of definite integrals Evaluation of definite integrals. Application of integrals: Application in finding the area under simple curves, especially lines. Areas of circles, parabolas and ellipses (in standard form) Area under the curve y= Sinx, y= Cosx, area between the above two curves. Differential Equations: Definition, order and degree of a differential equation. General and particular solutions of a differential equation. Formation of a differential equation whose general solution is given. Solution of differentiation equation by method of separation of variables. Solution of Homogeneous differential equation of first order and first degree. Solution of linear differential equation of the type:

$\frac{dy}{dx} + py = q$, where p and q are functions of x alone and

$\frac{dx}{dy} + px + = q$, where p and q are functions of y alone.

UNIT 8: STRAIGHT LINES AND CONIC SECTIONS

Distance between two points, section, slope of a line, angle between two lines, various forms of equations of lines, point-slope form, intercept form, two point form, and normal form. General equation of a line, distance of a point from a line. Conic Section: Sections of a cone, circles, parabola, ellipse, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of conic section. Standard equation of a circle, parabola, ellipse, and hyperbola and their simple properties.

UNIT 9: STATISTICS AND PROBABILITY

Measure of dispersion, mean, deviation, variance and standard deviation of ungrouped/ grouped data. Analysis of frequency distribution with equal means but different variances. Random Experiment: outcome, sample spaces. Events: Mutually exclusive events. Axiomatic (set theoretic) probability, probability of an event, probability of “Not” and “Or” events. Multiplication theorem on probability, conditional probability, independent events, total probability, Baye‘s theorem, random variable and its

probability, distribution, mean and variance of a random variable. Repeated independent (Bernouli) trials and Binomial distribution.

UNIT 10: VECTORS AND THREE DIMENSIONAL GEOMETRY

Vectors and scalers, magnitude and direction of a vector Direction Cosines and ratios of a vector. Types of vector, equal, zero, unit, parallel and collinear vectors. Position vector of a point , negative of a vector, components of a vector, addition of vectors, Scalar multiplication, position vector of a point dividing a line segment in a given ratio.

SYLLABI FOR SKUAST-JAMMU ENTRANCE EXAMINATION FOR ADMISSION TO MASTER DEGREE PROGRAMMES

Code 01: Major Subject Group- Basic Sciences

1. General Agriculture 30 marks

Importance of agriculture in national economy; basic principles of crop production; cultivation of rice, maize, wheat, rapeseed, mustard, chickpea, pigeon-pea, tomato, and mango. Major soils of India; role of NPK and their deficiency symptoms. General structure and function of cell organelles; mitosis and meiosis; Mendelian genetics. Elementary knowledge of growth, development, photosynthesis, respiration and transpiration; Elements of economic botany. General structure and function of carbohydrates, proteins, nucleic acids, enzymes and vitamins. Major pests and diseases of rice, wheat, cotton, chickpea, sugarcane and their management. Organic farming; bio-fertilizers; bio-pesticides. Recombinant DNA technology; transgenic crops. Important rural development programmes in India; organizational set up of agricultural research, education and extension in India. Elements of statistics.

2: Biochemistry 30 marks

UNIT-I: Importance of biochemistry in agriculture. Acid-base concept and buffers; pH. Classification, structure and metabolic functions of carbohydrates, lipids and proteins. Structure and function of nucleic acids. Enzymes, nomenclature, mechanism of action enzyme kinetic purification vitamins and minerals as coenzymes and cofactors. Metabolic pathways: glycolysis, TCA cycle, fatty acid oxidation, triglyceride biosynthesis. Electron transport chain; ATP formation. Photosynthesis: C-3, C-4 and CAM pathways. Nitrate assimilation; biological nitrogen fixation. Secondary metabolites, pathways and its role in biological sciences. DNA replication, transcription and translation; genetic code; operon concept Centrifugation, spectrophotometric , electrophoresis and chromatographic techniques, concept and application of Radio Isotopes in Biological Sciences.

3: Biotechnology 30 marks

Characteristics of prokaryotic and eukaryotic organisms; differences between fungi, bacteria, mycoplasms and viruses. Physical and chemical basis of heredity; cell organelles, chromosome structure. DNA replication, transcription and translation; genetic code; operon concept. Genetic engineering; restriction enzymes; vectors; gene cloning; gene transfer. Molecular markers and their applications . Basic techniques of cell , tissue and organ culture and their implications. General applications of biotechnology. Molecular and immunological techniques. Concept of bioinformatics, genomics and proteomics.

4- Genetics & Plant Breeding 60 marks

Unit-I: Mendel's laws of inheritance and exceptions to the laws. Types of gene interactions, Pleiotropism-Penetrance and expressivity. Multiple alleles, Quantitative traits and qualitative traits and differences between them, Multiple factor hypothesis. Ultra structure of cell and cell organelles and their functions. Study of chromosome structure, morphology, number and types-karyotype and ideogram. Numerical chromosomal aberrations (Polyploidy) . Structural chromosomal aberrations. Mitosis and meiosis-their significance and differences between them. DNA and its structure, function, types, modes of replication and repair. Cytoplasmic inheritance-its characteristic features and differences between chromosomal and cytoplasmic inheritance. Mutation- its characteristic features, methods of inducing mutations and ClB technique. Gene expression and differential gene activation. Lac operon and fine structure of gene.

Unit -II: Aims and objectives of Plant Breeding; Modes of reproduction, Sexual, Asexual, Apomixis and their classification, significance in plant breeding. Modes of pollination, genetic consequences, differences between self and cross-pollinated crops. Methods of breeding – introduction and acclimatization. Selection . Mass selection Johannson's pure line theory, genetic basis, pure line selection. Hybridization – Aims and objectives, types of hybridization. Methods of handling of segregating generations – pedigree method, bulk method, back cross method and various modified methods. Incompatibility and male sterility and their utilization in crop improvement. Heterosis, inbreeding depression, various theories of Heterosis, exploitation of hybrid vigour-development of inbred lines, single cross and double cross hybrids. Population improvement programmes, recurrent selection, synthetics and composites. Methods of breeding for vegetative propagated crops. Clonal selection. Mutation breeding – Ploidy breeding. Wide hybridization, significance in crop improvement.

Unit-III: Chemical composition of seed. Seed dormancy, Seed germination, Male sterility, self-incompatibility and their role in hybrid seed production. Principles and methods of seed production of varieties and hybrids of cereals like wheat, paddy, sorghum, pearl millet and maize; pulses like chickpea, pigeon pea, green gram, black gram, soybean and cowpea; oilseeds like groundnut, brassica, sesame, sunflower and castor. Different classes of seed (Breeders seed, foundation seed, certified seed, etc.,) Seed Certification Schemes, concepts and procedures. Seed Testing concepts and objectives, its role in seed quality control. Seed sampling, seed moisture testing, purity analysis, germination testing, tolerance tests and equipment. Testing for genuineness of varieties – principles and methods based on seed, seedling and plant characters, biochemical techniques namely electrophoresis of proteins and iso-enzymes and DNA fingerprinting.

Code 02: Major Subject Group- Agricultural Sciences

1: General Agriculture **30 marks**

Importance of agriculture in national economy; basic principles of crop production; cultivation of rice, maize, wheat, rapeseed, mustard, chickpea, pigeon-pea, tomato, and mango. Major soils of India; role of NPK and their deficiency symptoms. General structure and function of cell organelles; mitosis and meiosis; Mendelian genetics. Elementary knowledge of growth, development, photosynthesis, respiration and transpiration; Elements of economic botany. General structure and function of carbohydrates, proteins, nucleic acids, enzymes and vitamins. Major pests and diseases of rice, wheat, cotton, chickpea, sugarcane and their management. Organic farming; bio-fertilizers; bio-pesticides. Recombinant DNA technology; transgenic crops. Important rural development programmes in India; organizational set up of agricultural research, education and extension in India. Elements of statistics.

2: Agronomy **12 marks**

UNIT-I: Principles of Agronomy, Crop ecology and geography and Agricultural Meterology: Agronomy-meaning and scope, National & International agricultural research institutes in India, Agro climatic zone of India , Tillage, crop stand establishment and planting geometry and their effect on crop, Physiological limits of crop yield and variability in relation to ecological optima, organic farming , Precision farming , integrated farming system, principles of field experimentation. Principles of crop ecology and crop adaptation, crop plants, Greenhouse effect, climatic factors and their effect on plant processes and crop productivity. Atmospheric temperature and global warming. Crops and atmospheric humidity, weather forecasting, sustainable agriculture parameter and indicators, conservation agriculture.

UNIT-II: Field crops: Origin, distribution, economic importance, soil and climatic requirement, varieties, cultural practices and yield of cereals (rice , wheat, maize, etc), pulses (chickpea, lentil, peas, Pigeon pea, mungbean, urdbean), oilseeds (rapeseed & mustard, sunflower, sugarcane, fodder & forage crops)sorghum, maize, napier , berseem, Lucerne, oats, medicinal & aromatic plants and commercial crops.

UNIT-III: Weed management: Principles of weed management, classification, biology and ecology of weeds, crop weed competition and allelopathy, concepts and methods of weed control, integrated weed management, Classification, formulations, selectivity and resistance of herbicides, Herbicide persistence in soil and plants, Application methods and equipments, Weed management in field crops.

UNIT-IV: Water management: Principles of irrigation, water resources and irrigation development in India , water and irrigation requirements, concepts and approaches of irrigation scheduling , methods of irrigation, Measurement of irrigation water, application, distribution and use efficiencies, conjunctive use of water, irrigation water quality and its management , water management in major field, crops (rice, wheat, maize , groundnut, sugarcane) Agricultural drainage.

UNIT-V: Dry land Agronomy: Characteristics of Dry land farming and delineation of Dry land tracts, constraints of Dry land farming in India, types of drought and their management, contingency crop planning and mild-season corrections for aberrant weather and its recycling. Watershed management.

3: Soil Science and Agricultural Chemistry **12 marks**

UNIT-I: Soil as medium for plant growth, weathering of rocks and minerals, soil profile, soil -physical mineralogical and chemical nature. Biological properties and soil, calculations of porosity and bulk density. Soil air , Soil temperature its importance in plant growth. Soil-water plant relationship, Soil colloids-properties, structure of silicate clay minerals, sources of negative charges, properties, kaolinite , iolite, montmorillonite and vermiculite clay minerals, milli-equivalent concept, ion exchange capacity, buffering of soils. Problems soils-acid, saline and acid sulphate soils- their characteristics, formation, problems and management. Irrigation, water quality. Waterlogged soils.

UNIT-II: Essentiality criteria for plant nutrition, mechanism for movement and uptake of ions in soils and plants, Forms of nutrients in soil, deficiency symptoms in plants, luxury consumption of K nutrient, nutrient interactions

and chelated micronutrients. Soil fertility, evaluation and management for plant growth, soil testing and fertilizer recommendations. Soil, soil survey-type, objectives, uses, land capability classifications. Remote sensing and its application in agriculture. SIS, GIS and GPS, basic features and uses in agriculture, Elementary concepts of radio isotopes and uses in agriculture. Soil micro-organisms, classifications and their roles. Organic matter decomposition, C:N ratios, mineralization and immobilization processes, humus, role of organic matter in soil quality. Soil erosion, types and control measures. Fertilizers and manures-classifications, NPK fertilizers, their reactions in soils, green manuring , recycling of organic wastes, composting . Soil and water pollution-sources, brief idea about different pollutants in soils and their managements.

4: Fruit Science **12 marks**

UNIT-I: Definition and importance of horticulture, Layout and establishment of orchards; propagation methods & use of root stocks, pruning and training methods, Use of growth regulators in fruit production, High density planting, advantages of HDP and tree vigor control, Assessment of requirement of irrigation water & its methods: merits and demerits, methods of application and fertigation for important fruit crops, studies on flower & fruit drop and its control, Studies on post harvest management in major fruit crops climatic requirement and cultivation practices of fruits like mango, banana, citrus, guava, grape, litchi, spota, papaya , apple, pear, peach, pineapple, pomegranate, ber, fig, phalsa, Jack, cherry and plum; nutritive value of fruits and their role in human nutrition; basic physiology of ripening in fruits and their products; type of fruits and control of fungal and bacterial diseases; plant nutrients, deficiency symptoms of nutrients, manures and fertilizers, system of irrigation, management of important pests and diseases of fruits .

Unit-II: Nursery management: Importance of commercial nurseries in India and its management/ planning, Use of controller structures, shade houses, poly houses in fruit cultivation and propagation, Micro-propagation of plants, aseptic cultures and disadvantages, Study of tools , accessories and other equipment necessary for nursery.

5: Food Science & Technology **12 marks**

Unit-I Importance of post harvest technology in horticulture crops. Maturity indices, harvesting and post harvest handling of fruits and vegetables. Pre-harvest factors affecting quality on post harvest life of fruits and vegetables. Factors responsible for deterioration of harvested fruits and vegetables. Methods of storage- pre-cooling, pre-storage treatments, low temperature storage, controlled atmospheric storage, hypobaric storage, irradiation and low cost storage structure. Various methods of packing, packaging material and transport. Types of containers, cushioning material, vacuum packing, poly shrink packing, specific packing for export of mango, banana, grapes etc.

Unit-II Importance and scope of fruits and vegetables preservation in India. Principles of preservations by heat, low temperature, chemical and fermentations. Preservation through canning, freezing, dehydration, drying, ultraviolet and ionizing radiations. Preparation of jam, jellies, marmalades, candies, crystallized and glazed fruits, preserve, chutneys, pickles, ketchup, sauce, puree, syrups, juices, squashes and cordials. Spoilage of canned products-biochemical, enzymatic and microbial spoilage. Preservatives, colors-permitted and prohibited in India.

6: Vegetables Sciences **12 marks**

Unit:-I Origin & Importance of vegetables in human diet; Vegetable Gardens; Classification of Vegetables; Vegetables regions and their climatic requirements; Seed treatment; Preparation of germination media; Containers and growing of nurseries of different vegetables; Hardening of seedlings; Different methods of fertilizer application; Different irrigation & weed management practices in vegetable crops.

Unit-II: Package of Practices for various fruit vegetables (Tomato, Brinjal, Chilli & Okra); Cucurbitaceous vegetables(Melons, Cucumber & Gourds) ; Cole crops (Cauliflower, Cabbage & Knol-Khol); Bulb Crops (Onion& Garlic); Leguminous crops (Peas & Beans); Root Crops (Carrot, Radish, Turnip & Beetroot) tuber crops (Sweet Potato, Colocasia, Tapioca & Yam), Leafy vegetables (Spinach & fenugreek); Perennial Vegetables (Drum stick, Coccinia & Curry leaf)

Unit-III: Introduction ,history, definition & world scenario of protected cultivation ; Green House effect; Uses of Green Houses; Status & scope of green house technology in India ; Planning & Designing for green house – Site selection , green house orientation; Plan layout ; Green house utilities-Water electricity etc; Type of green houses-classification based on the shape, material utility and covering material; Consideration of greenhouse establishment ; Materials for green house construction ; Management of green house – Temperature, Light , Relative Humidity, Ventilation, Carbon dioxide, Irrigation & Nutrition.; Methods of green house cooling; Methods of ventilation- Natural & forced Ventilation ; Green house Heating – Heating Systems heat distribution & heat Conservation practices; Nutrient film techniques (NFT)/ hydroponics; Detailed production technology of vegetables – tomato, capsicum ,lettuce & cucumber, under protected conditions ; Marketing of green house crops; Major diseases & insect pests of green house crops & their management .

Unit:-IV Scope & importance of vegetables seed industry in India; Different categories of seed; Techniques of seed production:-Annual & biennial habits with reference to seed production in different vegetables; Seed

harvesting, curing, extraction, cleaning, drying, grading, packing & storage; Viability maintenance; Minimum seed germination standards for vegetable crops ; Seed certification and seed act.

7: Floriculture & Landscape Architecture 12 marks

Unit-I: History and Principles of landscaping ; Characteristics of formal & informal gardens ; Cultivation & landscape utilization of important trees, shrubs, climbers, ground covers, potted and shade loving plants ; Principles and practices of lawn management, principles of floriculture; Importance & planning of ornamental Garden; Types & styles of ornamental gardens.

Unit-II: Regulation of commercial flowers, Post harvest management; Oil extraction techniques in commercial flowers; Dry flower arrangements , Making of greetings ; Flower dyeing ; Practicing the art of bonsai-wiring, selection of plants and training the bonsai plants; Constructed features- greenhouse, conservatory design; Economics of commercial flowers.

Unit:-III_ Production technology of Rose, Jasmine , Chrysanthemum, Gladiolus , Marigold, Tuberose, Lilium, Gerbera, Dahlia, Carnation , Anthurium & Orchids both under open and green house conditions ; Pot culture; Cacti and Succulents; Scope & importance of flower seed industry in India; Seed harvesting, curing, extraction, cleaning, drying, grading, packing & storage of flower crops; Minimum seed germination standards for flower crops .

8: Plant Pathology 12 marks

UNIT-I: Pesticides- History, Production and Consumption of pesticides in India and world,. Introduction- Important plant pathogenic organisms- different groups- fungi, bacteria, fastidious vesicular bacteria, phytoplasmas, spiroplasmas, viruses, viriods, algae, protozoa and phanerogamic parasites with examples of diseases caused by them. Characteristics of prokaryotic and eukaryotic organisms, integrated diseases management; sterilization, disinfection and pasteurization; Koch;s postulates; etiological agents of rusts, smuts, powdery/downy mildews, wilts, yellows, mosaic, necrosis, enations, blights and witchesbrooms; pH , buffer, vitamins, Major pests and diseases of major field crops like rice, wheat, Maize, rapeseed mustard, pulses, vegetable/fruit crops, chickpea, and their management.,

UNIT-II: Microflora of Rhizosphere and Phyllosphere ,microbes in composting Microbiology of water and food, Importance of stored grain pests, types of damage of stored product insects. Application of biotechnology in plant disease management – Importance, production of pathogen free plants through tissue culture techniques. Development of disease resistant transgenic plants through gene cloning. Importance of Mushrooms morphology and types of cultivated Mushrooms. Disease and pests of Mushroom and their management. Post harvest handling of Mushrooms.

9: Entomology 12 marks

UNIT-I**:** Classification of animal kingdom up to class; distinguishing characters up to orders in class general organization of an insect external morphology; metamorphosis and moulting; different physiological systems; insect pests of agricultural and horticultural crops, and their stored/processed products, insect vectors of plant disease; pests of household, medical and veterinary importance and their control; useful and beneficial insects like honeybee, lac insect, silkworm and pollinators; important plant parasitic nematodes and their control; entomopathogenic nematodes, pest surveillance and sampling; basic principles of insect pest management-cultural, mechanical, physical, biological control (bio-control agents, techniques in biocontrol, biopesticides, microbial pesticides), host plant resistance, insecticidal (classification, mode of action, formulations), quarantine, regulatory and other novel techniques; plant protection equipments; safety measures in handling of pesticides; biotechnological approaches in IPM.

10: Agricultural Economics 12 marks

UNIT-I: Elementary principles of economics importance of Agriculture/Forestry/ livestock in national economy. Theory of consumer behavior, theory of demand, elasticity of demand, indifference curve analysis, theory of firm, cost curves, theory of supply, price determination , market classification, concept of macroeconomics, money and banking, national income. Agricultural marketing-role, practice , institutions, cooperatives, capital formation in agriculture agrarian reforms, globalization, WTO & its impact on Indian agriculture.

11: Agricultural Extension Education 12 marks

UNIT-I: Education and their characteristics. Teaching-Learning process Extension Education and Agricultural Extension Concepts, Objectives and Principles. Sociology and Rural Sociology and its Classification. Motivation and its role. Social stratification and its form. Social Institutions and its role — and role of Social change –Classification, Role of a leader, Different methods Training learning processes and Educational Psychology.

UNIT-II: Rural development and developmental programmes of pre and post independence era , community development Programme _ National Extension service and Panchayati Raj system types, powers and functions. Agricultural Development Programmes –Entrepreneur behaviour, Infrastructure and

Policy support for entrepreneurship forecasting market demand, sustainability of enterprise. Technical Appraisal.
UNIT-III: Communication Extension Programme Planning Project, Importance, Principles and Steps in Programme Development process, Monitoring and Evaluation of Extension Programmes Extension Teaching methods, Result Demonstration, Field trials Group contact methods and Field Trips Symposium, Panel, Debate, Forum, Buzz group, Workshop, Brain Storming, Seminar and Conference, Mass contact Methods Merits & Demerits. Factors influencing in selection of Extension Teaching Methods and Combination (Media Mix) of teaching methods. Innovative Information sources- Internet, Cyber Cafes, Video and Tele conferences, Kisan Call centers, Consultancy clinics. Agricultural and Journalism innovation. Models of adoption process, Innovation – Decision process – Elements, Adopter categories and their characteristics, factors influencing adoption process.

Code 03: Major Subject Group- Statistics

1: General Agriculture **30 marks**

Importance of agriculture in national economy; basic principles of crop production; cultivation of rice, maize, wheat, rapeseed, mustard, chickpea, pigeon-pea, tomato, and mango. Major soils of India; role of NPK and their deficiency symptoms. General structure and function of cell organelles; mitosis and meiosis; Mendelian genetics. Elementary knowledge of growth, development, photosynthesis, respiration and transpiration; Elements of economic botany. General structure and function of carbohydrates, proteins, nucleic acids, enzymes and vitamins. Major pests and diseases of rice, wheat, cotton, chickpea, sugarcane and their management. Organic farming; bio-fertilizers; biopesticides. Recombinant DNA technology; transgenic crops. Important rural development programmes in India; organizational set up of agricultural research, education and extension in India. Elements of statistics.

2: Statistics **120 marks**

UNIT-I: Mathematics: Real and complex numbers; polynomial and roots; de Moivre's theorem and its applications. Elements of set theory-De Morgan's laws; vector space, linear independence , orthogonality; matrices addition and multiplication, rank of matrix , determinants, inverse of matrix ,solution of a system of linear equations, characteristic roots and vectors; convergence of infinite sequences and infinite series-tests for convergence, absolute convergence ; co-ordinate geometry in two dimensions-line, circle, parabola, ellipse and hyperbola.
Differential calculus: limits, differentiation of function of a single variable; Tylor's and Maclaurin's theorem, composite functions, total derivatives, derivative of an implicit function, change of variables, Jocabians. Integral calculus; integration by simple methods, standard forms, simple definite integrals, double integrals, change of order of integration, Gamma and Beta functions, application of double integrals to find area. Ordinary differential equations: differential equations of first order, Exact and Bernoullis's differential equations, equations reducible to exact form by integrating factors, equations of first order and higher degree, Clairaut's equation, methods of finding complementary functions and particular integrals. Calculus of finite differences, interpolation; numerical differentiation and integration, difference equations; solution of simple non-linear equations by numerical methods like Newton method.
UNIT-II: Introduction: Statistics-definition , use and limitations; Frequency Distribution and Curves; Measures of Central Tendency : Arithmetic mean; Geometric mean, Harmonic mean, Median, Mode; measures of Dispersion: Range , Mean deviation, Quartile deviation, Variance and Coefficient of Variation, Probability: Definition and concepts , law of addition and multiplication, conditional probability, Bayes' theorem; Binomial, multinomial, Poisson and normal distribution; Introduction to sampling: Random sampling; standard Error; Tests of Significance- Types of Errors, Null Hypothesis, Level of Significance-Testing of hypothesis; Large sample Test-SND test for Means, single sample and two samples; Student's t-test for Single Sample, Two Samples and Paired t test. F test; Chi-Square Test for goodness of fit and independence of attributes; Correlation and Regression and associated tests of significance. Experimental Designs: basic principles, Analysis of variance, Completely Randomized Design (CRD), Randomized Block Design (RBD).

Code 04: Major Subject Group - Forestry

1: General Agriculture **30 marks**

Importance of agriculture in national economy; basic principles of crop production; cultivation of rice, maize, wheat, rapeseed, mustard, chickpea, pigeon-pea, tomato, and mango. Major soils of India; role of NPK and their deficiency symptoms. General structure and function of cell organelles; mitosis and meiosis; Mendelian genetics. Elementary knowledge of growth, development, photosynthesis, respiration and transpiration; Elements of economic botany. General structure and function of carbohydrates, proteins, nucleic acids, enzymes and vitamins. Major pests and diseases of rice, wheat, cotton, chickpea, sugarcane and their management. Organic farming; bio-fertilizers; biopesticides. Recombinant DNA technology; transgenic crops. Important rural development programmes in India; organizational set up of agricultural research, education and extension in India. Elements of statistics.

2: Forestry **90 marks**

UNIT-I: Forest-importance, types, classification; ecosystem , biotic and abiotic components; ecological succession and climax; nursery and planting techniques; social forestry , farm forestry, urban forestry , community forestry; forest mensuration, forest management; silvicultural practices, natural regeneration; man-made plantations, shifting cultivation, taungya; dendrology, hardwoods, softwoods, pulp woods, fuel woods, multipurpose tree species; wasteland management. Agroforestry- importance and classification; forest soils, classification and conservation, watershed management; tree improvement- forest genetics and biotechnology; tree seed technology; rangelands, wildlife- importance, abuse, depletion, management; major and minor forest products including medicinal and aromatic plants; forest inventory, aerial photo interpretation and remote sensing; forest depletion and degradation – importance and impact on environment; global warming, role of forests and trees in climate mitigation; tree diseases, wood decay and discolouration; tree pests, integrated pest and disease management; biological and chemical wood preservation; forest conservation, Indian forest policies, Indian forest act; forest engineering; forest economics, joint forest management and tribology.

3: Plant Pathology **15 marks**

UNIT-I: Pesticides- History, Production and Consumption of pesticides in India and world,. Introduction- Important plant pathogenic organisms- different groups- fungi, bacteria, fastidious vesicular bacteria, phytoplasmas, spiroplasmas, viruses, viriods, algae, protozoa and phanerogamic parasites with examples of diseases caused by them. Characteristics of prokaryotic and eukaryotic organisms, integrated diseases management; sterilization, disinfection and pasteurization; Koch;s postulates; etiological agents of rusts, smuts, powdery/downy mildews, wilts, yellows, mosaic, necrosis, enations, blights and witches brooms; pH , buffer, vitamins, Major pests and diseases of forest trees and their management.,

UNIT-II: Microflora of Rhizosphere and Phyllosphere ,microbes in composting Microbiology of water and food, Application of biotechnology in plant disease management – Importance, production of pathogen free plants through tissue culture techniques. Development of disease resistant transgenic plants through gene cloning.

4: Entomology **15 marks**

UNIT-I: **:** Classification of animal kingdom up to class; distinguishing characters up to orders in class general organization of an insect external morphology; metamorphosis and moulting; different physiological systems; insect pests of agricultural and horticultural crops, and their stored/processed products, insect vectors of plant disease; pests of household, medical and veterinary importance and their control; useful and beneficial insects like honeybee, lac insect, silkworm and pollinators; important plant parasitic nematodes and their control; entomopathogenic nematodes, pest surveillance and sampling; basic principles of insect pest management-cultural, mechanical, physical, biological control (biocontrol agents, techniques in biocontrol, biopesticides, microbial pesticides), host plant resistance, insecticidal (classification, mode of action, formulations), quarantine, regulatory and other novel techniques; plant protection equipments; safety measures in handling of pesticides; biotechnological approaches in IPM.

Code 05: Major Subject Group- Sericulture

1: General Agriculture **30 marks**

Importance of agriculture in national economy; basic principles of crop production; cultivation of rice, maize, wheat, rapeseed, mustard, chickpea, pigeon-pea, tomato, and mango. Major soils of India; role of NPK and their deficiency symptoms. General structure and function of cell organelles; mitosis and meiosis; Mendelian genetics. Elementary knowledge of growth, development, photosynthesis, respiration and transpiration; Elements of economic botany. General structure and function of carbohydrates, proteins, nucleic acids, enzymes and vitamins. Major pests and diseases of rice, wheat, cotton, chickpea, sugarcane and their management. Organic farming; bio-fertilizers; biopesticides. Recombinant DNA technology; transgenic crops. Important rural development programmes in India; organizational set up of agricultural research, education and extension in India. Elements of statistics.

2: Sericulture **90 marks**

Unit-I: Introduction and brief history of Sericulture, Morphology and systematic of silkworm, Anatomy of silkworm- reproductive system, digestive system, nervous system and silk gland, Life cycle of silkworm, Disinfection and disinfectants used in Sericulture, Eggs their incubation, brushing, Chawki rearing, late age rearing moulting, seriposition and post cocoon operations, Grainage operations, Silkworm rearing technology, Diseases and pests of silkworm, Different silkworms and their host plants, Taxonomy and systematic of mulberry, Propagation and cultivation practices, Application of manures and fertilizers, Training and pruning, Leaf quality and its importance, leaf harvesting and preservation, Chawki rearing garden, Diseases and pests of mulberry.
Unit-II: Mendel's laws of inheritance and exceptions to the laws. Types of gene interactions, Pleiotropism-Penetrance and expressivity. Multiple alleles, Quantitative traits and qualitative traits and differences between them, Multiple factor hypothesis. Ultra structure of cell and cell organelles and their functions. Study of chromosome structure, morphology, number and types-karyotype and ideogram. Numerical chromosomal aberrations (Polyploidy) . Structural chromosomal aberrations. Mitosis and meiosis-their significance and differences between them. DNA and its structure, function, types, modes of replication and repair. Cytoplasmic inheritance-its characteristic features and differences between chromosomal and cytoplasmic inheritance. Mutation- its characteristic features, methods of inducing mutations and ClB technique. Gene expression and differential gene activation. Lac operon and fine structure of gene.

3: Plant Pathology **15 marks**

UNIT-I: Pesticides- History, Production and Consumption of pesticides in India and world,. Introduction-Important plant pathogenic organisms- different groups- fungi, bacteria, fastidious vesicular bacteria, phytoplasmas, spiroplasmas, viruses, viriods, algae, protozoa and phanerogamic parasites with examples of diseases caused by them. Characteristics of prokaryotic and eukaryotic organisms, integrated diseases management; sterilization, disinfection and pasteurization; Koch;s postulates; etiological agents of rusts, smuts, powdery/downy mildews, wilts, yellows, mosaic, necrosis, enations, blights and witches brooms; pH , buffer, vitamins, Major pests and diseases of forest trees and their management.,
UNIT-II: Microflora of Rhizosphere and Phyllosphere ,microbes in composting Microbiology of water and food, Application of biotechnology in plant disease management – Importance, production of pathogen free plants through tissue culture techniques. Development of disease resistant transgenic plants through gene cloning.

4: Entomology **15 marks**

UNIT-I: **:** Classification of animal kingdom up to class; distinguishing characters up to orders in class general organization of an insect external morphology; metamorphosis and moulting; different physiological systems; insect pests of agricultural and horticultural crops, and their stored/processed products, insect vectors of plant disease; pests of household, medical and veterinary importance and their control; useful and beneficial insects like honeybee, lac insect, silkworm and pollinators; important plant parasitic nematodes and their control; entomopathogenic nematodes, pest surveillance and sampling; basic principles of insect pest management-cultural, mechanical, physical, biological control (biocontrol agents, techniques in biocontrol, biopesticides, microbial pesticides), host plant resistance, insecticidal (classification, mode of action, formulations), quarantine, regulatory and other novel techniques; plant protection equipments; safety measures in handling of pesticides; biotechnological approaches in IPM.

Code 06: Major Subject Group- Veterinary Sciences

Veterinary Medicine **(10 marks)**

Clinical examination and diagnosis, Etiology, epidemiology, symptoms, diagnosis, prognosis, treatment and control of diseases affecting different body systems of various species of domestic animals,. Deficiency diseases, metabolic diseases, metabolic disorders

Veterinary Surgery & Radiology **(10 marks)**

Asepsis-antisepsis, management of shock, haemorrhage. Symptoms, diagnosis and management of wound, abscess, tumors, cyst, haematoma, necrosis, gangrene. Introduction to anaesthesia, preanaesthetics, local analgesia, General anaesthesia & anaesthetic agent (barbiturates, dissociative agents). Anaesthetic emergencies and their management. Interpreting X-ray films, Classification of radiographic lesions. Introduction to contrast radiography, radiation hazards and their prevention principles of ultrasonography. Sinusitis, pus in the sinus. Horn affection, irregular molars, shear mouth, sharp teeth, wave form mouth, step formed mouth dental tartar and dental caries, bishoping. Salivary, cysts, salivary fistula. Ear haematoma, chronic otorrhoea. Entropion, ectropion, conjunctivitis, glaucoma, keratitis, corneal ulcer, cataract, worm in the eye. Choke. Hernia. Pyloric stenosis , gastric torsion, ruminal impaction, traumatic reticulitis, diaphragmatic hernia, abomasal displacement, omasal impaction, intestinal obstruction, intussusceptions, rectal prolapse, rectal tear, hyderadenitis, atresia-ani et-recti et-coli. Urolithiasis. Surgical

affections of udder and teat. Caesarean, spaying, castration. Lameness, definition, classification and diagnosis. Sweeny, bicipital bursitis, capped elbow, radial paralysis, hygroma of knee, contraction of digital flexors, splints, ringbone, quitter, side bone, navicular disease, pyramidal disease. Laminitis, sand crack. Canker, thrush and corn, Upward luxation of patella, stringhalt, bog spavin, spavin. DJD, intervertebral disc protrusion, hip dysplasia, fracture and dislocation, principles of physiotherapy.

Veterinary Anatomy (10 marks)

Gross anatomy of bones, different joints of the animal body & their classification, muscles, heart & blood vessels, nervous system, body cavities, visceral organs and sense organs in principal domesticated animals and birds, biomechanics, structure of cell and its organelles, basic tissues of the body, different types of epithelium, histology of different body system, gametogenesis, fertilization, blastulation, gastrulation, development of uro-genital, digestive and cardiac systems.

Animal nutrition (10 marks)

History of Animal nutrition ; proximate principles and fibre fractions, digestion and metabolism of carbohydrates, proteins and fats in ruminants and non-ruminants, energy partitioning in body, measures of protein quality, general functions of minerals and vitamins and associated disorder, classification of feedstuffs, Common anti-nutritional factors and unconventional feedstuffs, Hay and silage making, improvement of poor quality roughages, Nutritional disorder of livestock.

Veterinary Physiology (10 marks)

Blood composition & functions. Haemostatis. Morphological characteristics of heart, conduction system, cardiac cycle. Electero- physiology of heart & regulation of cardiac functions. Haemodynamics, circulatory control & regional circulation. Functional morphology of nephrone, urine formation & concentration mechanism. Electrolyte & Water balance, acid-base balance. Structure and functions of skeletal & smo9oth musxle, properties, neuromuscular junction and transmission. Neuron structure, classification, synapse, receptors, properties of nrve fibres, reflexes, ANS, higher function of neuron. Sturcture & functions of monogastric & polygastric digestive system. Funtional morpholoigy of respiratory system. Transport of gases, control of respiration. Endocrine glands. Hormones & their functions. Male & female reproduction, in-vitro fertilization synchronization superovalation, cloning, sperm sexing. Lactation, mamogenesis, galatoposis, milk ejection, composition of milk, colostrums. Growth & animal behaviour. Influence of environment of growth, production & reproduction. Thermoregulation & climatology.

Vety. Biochemistry (10 marks)

Scope & importance of biochemistry in animal sciences , cell structure and functions. Chemistry and biological significance of carbohydrates, lipids, proteins, nucleic acids, vitamins & hormones. Enzymes chemistry, kinetics & mechanism of actions & regulation. Metabolic inhibitors with special reference to antibiotics and insecticides. Biological ocidation, energy metabolism of carbohydrates, lipids, amino acids & nucleic acids. Colorimetry, spectrophotometry, chromatography and electrophoresis methods.

Livestock Product Technology (10 marks)

Structure, composition and nutritive value of milk, meat and egg, preservation and packaging of milk, meat and egg, processing of livestock products, legal standards of milk and meat products, sensory evaluation of livestock products, layout and management of abattoir, slaughtering techniques, ante mortem and post mortem examination, conversion of muscles to meat, utilization of glandular and non glandular by products, fraudulent substitution of meat and its recognition, grading and processing of wool

Animal Genetics & Breeding (10 marks)

History of Animal Breeding, classification of breeds, Economics characters of Livestock and poultry and their importance, Breeding/Selection techniques for optimal production, Selection: Response to selection and factor affecting it, Bases of selection individual, pedigree, family, sib, progeny and combined, Indirect selection and Multitrait selection, Classification of mating system, Inbreeding and out-breeding, Genetic and phenotypic consequence viz. Inbreeding depression, and heterosis, Systems of utilization of heterosis Selection for combining ability, Breeding methods for the improvement of dairy cattle and buffaloes crossbreeding, sine evaluation, field progeny testing, Open nucleus breeding system (ONBS), Sheep, goat, swine and poultry breeding programmes in the state and country . History of Genetics, Chromosome nos. And types in diff. Sp including poultry, Mitosis, Meiosis & Gametogenesis Overview of Medallion Principles, Modified Mendallion inheritance Mutation, Chromosome aberration & Cytoplasm Inheritance, Gene Interaction, Epistasis, Multiple alleles, Lethals, Sex limited, Sex linked , & Sex influenced traits, Linkage & Crossing Over, Gene concept- Classical and Molecular, Population Genetics, Genetic structure of population , Gene frequency, Genotype frequency, Hardy- Weinberg law d its application, Forces(Mutation, Migration, Selection & Drift) changing, Gene & genotype frequencies, Quantitative genetics,

Nature & Properties, Values & Means-Pop mean, Average effect, Components of phenotypic & Genotypic variance, Concept of genotype and environmental interaction, Resemblance b/w relatives & heritability, Repeatability, genetic & phenotypic correlation.

Veterinary Pharmacology & Toxicology (10 marks)

Source and nature of drugs, pharmacokinetics, drugs acting on different body systems. Antimicrobial agents- their mechanism, therapeutic indication, toxicity & resistance. Toxicity & treatment of importance metals, non-metals, poisonous plants, agro chemicals and mycotoxins.

Veterinary Pathology (10 marks)

Introduction, history and scope of pathology. Predisposing factors, intrinsic and extrinsic factors. Disturbances of circulation / haemodynamic derangements. Pigment metabolism, pathological calcification / ossification. Degenerative changes. Inflammation, healing. Immunopathology, immune mediated tissue injury, hypersensitivity reactions. Genetic abnormalities. Disturbance in cell growth, neoplasms. Posmortem examination, histopathology, histochemistry. Histoenzymology, electron microscopy. Clinical laboratory examination of complete blood hemogram, serum enzymology, bone marrow examination, urine, skin scrapings stools, CSF and milk for pathological constituents and interpretation of results. Pathology of cardiovascular, haemopoietic, respiratory, digestive, urinary, genital, nervous and musculoskeletal systems, endocrine glands, organ of special senses i.e, eye, ear, skin, appendages. Pathology of bacterial, mycotic, viral, mycoplasmal, rickettsial, chlamydial and parasitic diseases. Diseases caused by prions. Pathology of nutritional deficiency disease. Etiopathology of common diseases of laboratory, wild and aquatic animals.

Livestock Production and Management (10 marks)

General concepts of livestock production and management, status of dairy and poultry industry, impact of livestock farming in Indian Agriculture. Livestock housing, production and reproduction management, lactation management, breeding programmes for livestock and poultry. Composition, quality and preservation of livestock products, method of processing and storage livestock products. International trade/WTO/IPR issues related to livestock products.

Veterinary Parasitology (10 marks)

General classification, morphology, life cycle, epidemiology, symptoms, pathogenesis, diagnosis, immunity and control of important parasitic diseases (Helminths, Protozoa and Arthropods) of Veterinary importance.

Veterinary Microbiology (10 marks)

Classification and growth characteristics of bacteria, important bacterial diseases of livestock and poultry, general characters, classification of important fungi. Nature of viruses, morphology and characteristics, viral immunity, important viral diseases of livestock and poultry. Viral vaccines. Antigen and antibody, antibody formation, immunity, allergy, anaphylaxis, hypersentivity, immunoglobulins, complement system

Veterinary Public Health and Epidemiology (10 marks)

Zoonotic diseases through milk and meat, Zoo animal health. Epidemiology-aims, objectives, ecological concepts and applications.

Veterinary Extension Education (10 marks)

Concept of sociology, differences between rural, tribal and urban communities, social change, factors of change. Principles and steps of extension education, community development-aims, objectives, organizational set up and concept evolution of extension in India, extension teaching methods. Role of livestock in economy. Identifying social taboos, social differences, obstacles in the way of organizing developmental programmes. Concept of marketing, principles of cooperative societies, animal husbandry development planning and programme, key village scheme, ICDD, Gosadan, Goshalla, role of gram panchayat in livestock development. Basics of statistics, data analysis and computational techniques.

SYLLABUS: M.TECH. AGRICULTURAL ENGINEERING

UNIT-I: Elementary Statistics and theory of probability, differential and integral calculus,linear algebra and Fourier series, differential equations, vector algebra & vector calculus, elementary numerical analysis. **(10 marks)**

UNIT-II: Electric motors: Types, performance, selection, Installation and maintenance, measuring instruments, fundamentals of computers, power distribution **(10 marks)**

UNIT-III: Thermodynamic principles; fluid mechanics, theory of machines **(10 marks)**

UNIT-IV: Soil mechanics, soil classification, compaction& shear strength of soils, engineering mechanics, strength of materials **(10 marks)**

UNIT-V:- Importance of farm equipment and role of mechanization in enhancing productivity & profitability of Indian agriculture; analysis of forces, design and production of farm machinery and power units; mechanics of tillage &traction operation, repair and maintenance of farm machines and equipment, farm engines; tractors and power tillers; tractor stability and operators comfort; field capacity and cost analysis; test codes and procedure; safety and ergonomic principles. Role of energy in economic development; solar, wind and bio-energy; biogas plants & gasifiers; bio-fuels from biomass; collection, characterization and storage of biomass, solar cookers & solar refrigerators. **(40 marks)**

UNIT-VI:-Biochemical and engineering properties of biological materials ;quality control & safety of raw and finished products. Principles, practices and equipments for drying, milling, separation and storage of agricultural produce and by-products; material handling equipment and operations; farmstead planning; heating & cooling load calculation ;seed processing practices and equipments; food preservation methods and products development; refrigeration and air conditioning; cold stores; waste management, cost analysis& food processing plants layout, feasibility reports **(30 marks)**

UNIT-VII: Surveying and leveling; hydrology, water resources in India; efficiency in water use; irrigation system and equipment; water conveyances and associated efficiency; soil-plant-water relationship; estimation of evaporation and water requirements of crop; water harvesting and use, farm ponds and reservoirs, command area development, land use capability classification, ground water development, wells and pumping equipment, soil erosion and its control, land shaping and grading equipment and practices, hydraulic structures, drainage of irrigated and humid areas; salt balance and reclamation of saline and alkaline soils. **(40 marks)**

Annexure - B

Affidavit to Certify Sponsorship by NRI

I _____ son/daughter of _____

Resident of _____Telephone No. _____

Fax number _____ e-mail _____, do hereby solemnly declare on oath as under:

1. That I migrated to _____ in the year _____ and my passport number is _____
2. That Mr./Ms/Mrs. _____ seeking admission to _____course at Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Jammu, India, is related to me (nature of relationship) _____
3. That I do hereby sponsor Mr./Ms/Mrs. _____ for admission to above stated course.
4. That I undertake to make full payment of prescribed fee for the entire duration of the programme in the manner as may be fixed by the University.
5. That I make this affidavit to certify my sponsorship as NRI of Mr./Ms/Mrs. _____ for admission to above mentioned course.

I solemnly declare on oath that the above facts and particulars are true to the best of my knowledge and belief.

Deponent

Sworn to and appeared before me
at _____
on this day _____

_____
Signature and seal of Solicitor

Note: To be sworn in and attested in the country of NRI's residence

SAMPLE OF OPTIONS FORM FOR COUNSELLING

Counselling Date: -2016 **S.No.**

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu
DISCIPLINE ALLOTMENT PREFERENCE FORMAT FOR SKUAST-J CET COUNSELLING-2015

Roll No.		**Name**			
Category		**Marks**		**Rank**	
Telephone/cell No.		**Email ID**			

OPTIONS/PREFERENCE FORMAT FOR ALLOTMENT OF DISCIPLINE

S.No.	**Name of the Discipline where you desire admission (in order of preference)**
A. Undergraduate Programmes	
1.	
2.	
3.	
4.	
B. Postgraduate Programmes	
1.	
2.	
3.	
4.	
	(Sample Preferred-Please write only one choice in one row)

I have deposited non refundable counseling fee of Rs. 1000/-

Signature of the Candidate

Recommended provisionally for admission in Discipline _____

Signature of Counseling Committee Members