ICAR ACCREDITED
GRADE 'A'
UNIVERSITY

nirf
20TH Rank
(AGRI UNIVERSITIES & INSTITUTES)

Admissions-2025

SKUAST–JAMMU CET 2025
UG & PG ADMISSIONS

For domiciles of UTs of Jammu and Kashmir & Ladakh
NRI / NRI-Sponsored / OCI / All India

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

Contact:

Registrar
Email: registrar@skuast.org
Phone: 0191-2262012

Controller of Examination
Email: examinationcellskuastj@gmail.com
Mobile: 9419226376

For other details and downloading the information brochure
vist University website https://skuast.org

An institution for sustainable agriculture for food and nutritional security

Admissions-2025

SKUAST–JAMMU CET 2025
UG & PG ADMISSIONS

For domiciles of UTs of Jammu and Kashmir & Ladakh
NRI / NRI-Sponsored / OCI / All India

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

An institution for sustainable agriculture for food and nutritional security

Website: https://skuast.org

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 are believed to be correct at the time of publication. However, the University 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.
- University 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 at 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.
- 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 in the brochure, yet, under certain compelling circumstances, if there has to be any deviation, the 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 component (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 therein.
- If a student after registration, fails to attend the classes without written permission of the Dean of the faculty concerned for seven consecutive working days during the spell of 12 calendar days commencing from the date of registration, his/her registration shall stand automatically cancelled
- Students should be in formal dress while on campus. They should also wear prescribed lab coats/aprons in the laboratories and required protective gear in the field.

Jurisdiction

The jurisdiction for any disputes is located in Jammu City.

Published by the Directorate of Education, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu.

April 2025

MESSAGE

Dear Prospective Students,

Dr. B.N. Tripathi
Ph.D. FRCPath (England)
FNAAS, FNAVS, DICVP
Vice-Chancellor

It gives me great pleasure to extend a warm invitation to you to consider Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST Jammu) as your academic destination for pursuing studies in Agriculture and allied sciences. Renowned as one of the premier institutions in this field, SKUAST Jammu offers a plethora of Undergraduate and Postgraduate programs tailored to meet the demands of the dynamic global landscape.

At SKUAST Jammu, we take immense pride in our world-class academic programs, which are complemented by cutting-edge research initiatives and technological advancements. Our curriculum is meticulously designed to foster teamwork, critical thinking, and problem-solving skills, ensuring that our students are well-equipped to tackle real-world challenges. Moreover, our robust engagement with industry stakeholders ensures that our programs remain relevant and aligned with emerging trends. Recognizing the significance of practical exposure, we place a strong emphasis on employability development activities and internships to prepare our students for their future careers. Our state-of-the-art laboratories and extensive academic infrastructure provide a conducive environment for top-notch research and innovation, offering students a truly international learning experience.

Our University is deeply committed to producing professionals who can serve the agriculture sector at regional, national, and global levels. Through strategic partnerships with various institutions, organizations, and corporate houses, we aim to leverage collective potential in elevating the livestock sector. The alumni of our university are well-established in India and abroad, serving the sector in various capacities or excelling in their own exemplary enterprises, with high stature recognitions in the field of academics, research, and beyond. The academic reputation of SKUAST-Jammu has consistently attracted meritorious candidates from all corners of India and abroad. We anticipate that the upcoming academic session 2025-26 will attract the best talent from all parts of India, and we are optimistic that students will excel in academics, co-curricular, and extra-curricular activities, thus transforming into proficient professionals poised to contribute significantly to achieving the envisaged socio-economic national goals.

Our esteemed faculty members, recipients of national and international accolades, are dedicated to nurturing talent and guiding students towards academic excellence. Despite this, our established incubation center fosters student innovations and start-ups, providing a platform for entrepreneurial endeavours. Beyond academics, SKUAST-Jammu boasts of a vibrant student community, offering ample opportunities for extracurricular engagement and personal growth.

I extend an invitation to overseas students to join us at SKUAST-Jammu and embark on a journey of academic excellence and career development. We endeavour to offer education of the highest international standards, providing you with a comprehensive learning experience that is both enriching and fulfilling.

I am confident that your time at SKUAST-Jammu will be both pleasant and productive, laying a strong foundation for your future endeavours.

Vice-Chancellor,
SKUAST-Jammu

CONTENTS

Important information for inviting online applications for SKUAST-J CET-2025 Undergraduate & Masters Programmes	
Commencement of submission of online application forms	**02/05/2025 from 10:00 am (Friday)**
Last date for submission of online application forms	**31/05/2025 at 12:00 mid-night (Saturday)**
Last date for submission of online application forms with late fee	**05/06/2025 at 12:00 mid-night (Thursday)**
Opening of correction window for submitted Online applications forms	**06/06/2025 from 10:00 a.m. (Friday) to 08/06/2025 at 12:00 mid-night (Sunday)**
Date and time of Common Entrance Test CET **Undergraduate Programmes** **Masters programmes**	**Shall be notified separately**
Date of download of Admit card **Undergraduate programmes** **Masters programmes**	**Shall be notified separately**
Test Centre	**Jammu**

Application fee to be paid online (Non-refundable)

Undergraduate Programme	Application Fee	Application fee with late fee
OM /Reserved / Self Financing / Wards of SKUAST-J Employees/ In-Service Govt. Nominee categories	Rs. 2000/-	Rs. 3000/-
NRI* / NRI Sponsored /OCI* category	Rs. 8000/-	Rs. 10000/-
Post graduate Programmes	Rs. 2500/-	Rs. 3500

NRI: Non-Resident Indian,*
OCI: Overseas citizen of India*

HOW TO APPLY

Application Forms will be accepted **Online ONLY** through the University website www.skuast.org.

IMPORTANT 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 University website (www.skuast.org) to apply online, and click the link **SKUAST-J Common Entrance Test-2025 (CET-2025).**
2. **The candidates must, in their own interest, download the Information Brochure and understand eligibility criteria and other requirements before filling the Application Form.**
3. Application Form will be accepted **online ONLY** through the University website www.skuast.org from 10.00 am of 02/05/2025 to 12:00 mid- night of 31-05-2025. However, duly filled application forms along with late fee will be accepted from 10:00 a.m. of 01-06-2025 to 12:00 mid-night of 05-06-2025.
4. The candidate can make corrections, during the correction window opened for the purpose from 06.06.2025 to 08.06.2025 (mid-night). Thereafter, no corrections shall be allowed/entertained in the application form submitted online by the candidate.
5. The name should be filled in BLOCK LETTERS and should be the same as given in the certificate of the last examination passed.
6. 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 MANDATORY. Candidate should also have his/her payment mode details handy.

7. Reserved category certificate in the name of the applicant duly issued by the Competent Authority shall have to be uploaded with the online application form
8. The category mentioned/claimed by the candidate at the time of submission of application (supported by relevant document), including during the correction window, shall be considered as final.
9. Open the first link, and fill in Part-I of the on-line application form (personal details).
10. While filling up the application form, the candidates shall prefer to write his/her own contact No(s), email Id for receiving updates from time to time.
11. 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).
12. After submitting Part-II, programme will automatically take you to Part III for uploading of Photograph, signature and thumb impression. Upload images of photograph, signature, and thumb impression in JPEG format.
13. 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.
14. At the bottom of the page candidate will have the options of printing application form. Take a print out for your record.
15. Candidate can make online payment through any Credit Card/Debit Card/Net Banking.
16. Take print out of confirmation page(s) of online application format and preserve it for future reference.
17. Admission form incomplete in any respect shall be rejected.
18. 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 at any point of time when discovered.
19. The applicant can check the status of his/her fee online (www.skuast.org) one week after depositing the fee.
20. In case the status remains unpaid even after one week, candidate can approach the University Examination Cell, SKUAST Jammu with the copy of their Confirmation page of online payment
21. The candidates appearing in the qualifying examination in the current year can also apply for admission. The eligibility of all the candidates and the original certificates/provisional degree certificate, notification of qualifying examination/NRI certificate will be checked at the time of counselling/verification of documents only.
22. For any assistance, please call **09419226376**. Before you call please make sure that you have read all the conditions properly and have gone through the Information Brochure in totality.

Students are prohibited for parking two wheelers and four wheelers in the campus.

Students will be allowed to use only bicycle in the University Campuses.

Formal/ casual dress on daily basis. However, during university functions the dress decided by the different faculties shall be applicable to all the students.

For any assistance, please call 9419803486 /9419226376/9419158729.

Venue of Counseling: SKUAST-Jammu, Main Campus Chatha

Counseling Process:

- Qualified candidates, as per merit, shall be called for counseling on a specified date and time for consideration of admission.
- For admission to undergraduate programmes, there will be four rounds of counseling followed by a mop-up round, if required.
- For admission to postgraduate programmes, there will be three rounds of counseling followed by a mop-up round, if required.
- Upgradation will be permitted only in the 2nd, 3rd, and 4th rounds of counseling in case of admission to undergraduate programmes and 2nd and 3rd rounds of counseling in case of post-graduate programmes.
- Seats falling vacant on account of upgradations during a particular round of counseling shall not be filled in the same round of counseling.
- No up-gradation shall be permitted in the mop-up round.
- The merit list will be uploaded on the university website (**www.skuast.org**). The candidates are advised to regularly check the website of the University for counseling dates. No separate letter will be sent to the candidates. The counseling schedule will be notified in the newspapers as well as on the University website.
- The candidates who are called for counseling must pay an online counseling fee of Rs. 1000/- before appearing on the scheduled date of counseling.
- If the candidate does not participate in the 1st counseling, he/she can participate in the subsequent counseling as per the counseling schedule by online payment of Rs. 1500.
- The allotment of seats will be rank/merit wise, considering the choice/priority of programme filled up by the candidate while participating in the counseling.
- Those candidates who scored zero or negative marks in the SKUAST Jammu CET 2025 are not eligible to participate in counselling.
- De-reservation or seat conversion will be effected in the mop-up round.

The candidates shall be called for counseling and preliminary verification of certificates as per the rank obtained in CET. The category-wise cut-off rank for each counseling shall be notified separately and placed on the university website from time to time till the last counseling. The candidate is required to record his/her 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 after the other, and if a candidate called for counseling does not present him/herself before the committee, his/her claim for any seat shall be forfeited. In case the candidate reports after his name is called for counseling but within the stipulated time on the day of counseling, the seat offered to that candidate shall be out of the unallocated seats available at that point in time when he/she reports before the committee. A candidate reporting for counseling after 5.00 pm of the stipulated date shall not be allowed to mark their presence and shall not be entertained for counseling in any case. Accordingly, the candidates are advised to meet the deadline of cut-off time on the day of counseling(s).

The candidates who are called for counseling must pay an online counseling fee of Rs. 1000/- before appearing on the scheduled date of counseling. The details for depositing the online counseling fee and a payment link for the same shall be available on the university website (www.skuast.org).

Prelude

The Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu) has been established by the Government of Jammu and Kashmir on September 20, 1999 by promulgated vide SRO No 408 dated 20-09-1999 an amendment in the Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu and Kashmir Act of 1982.

The prime mandate to the University is to produce competent human resource that can sustain and improvise the phenomenal growth of agriculture & 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. The University is also mandated to develop new, refine the existing and disseminate appropriate agricultural technologies to the stakeholders in the Union Territory in general and Jammu Division in particular. It also steers innovate, location specific and problem solving research in agriculture and allied sectors.

The University is having excellent facilities in terms of teaching, research, sports and other extracurricular activities. The University strives to provide congenial learning environment at graduate as well as at postgraduate levels to churn out the competent human resource in the realm of Agriculture Sciences, Veterinary Sciences, Animal Husbandry and Biotechnology, Food Science, Sericulture, Agricultural Engineering, Microbiology, MBA (Agri-business Management), Forestry and Basic Sciences. The University is having well qualified and trained faculty well known nationally /internationally and 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 Union Territory; 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.

ABOUT THE UNIVERSITY

The Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu) stands as a testament to the vision of the Government of Jammu and Kashmir, established on September 20, 1999, through an amendment in the Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu and Kashmir Act of 1982 (vide SRO No 408 dated 20-09-1999). The University's prime mandate is to produce competent human resources capable of sustaining and advancing the remarkable growth of agriculture and allied sectors, while also prioritizing biodiversity conservation and addressing environmental concerns.

Our faculty, students, and scholars are at the forefront of life sciences, environmental sciences, food and energy systems, as well as community and economic development. We are committed to developing and disseminating new agricultural technologies, refining existing ones, and addressing agricultural challenges specific to the Union Territory, particularly in the Jammu division. Innovation, location-specific research, and problem-solving are the cornerstones of our endeavours in agriculture and allied sectors.

SKUAST-Jammu offers excellent facilities for teaching, research, sports, and extracurricular activities. We strive to create a conducive learning environment at both undergraduate and postgraduate levels, empowering our students to excel in fields such as Agriculture Sciences, Veterinary Sciences, and Biotechnology, Horticulture, Food Science, Sericulture, Agricultural Engineering, MBA (Agri-business Management), Forestry, Basic Sciences, Dairy Technology, and Fisheries. Our faculty members, nationally and internationally renowned, impart quality education that prepare students for prestigious career opportunities. Graduates from the University find placements in esteemed positions such as Scientists in reputed Universities and Research Organizations, Indian Administrative Services, Indian Forest Services, Kashmir Administrative Services, and various sectors including Public and Private Banking.

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-44, 12 km from the Jammu Railway Station, 14 km from the General Bus Stand and 6 km from the Jammu Air Port,

The University has extensive infrastructure within its jurisdiction and command. The main campus at Chatha is spread over 578 acres, where Faculty of Agriculture, Faculty of Basic Sciences, Faculty of Agricultural Engineering, Faculty of Horticulture & Forestry and Institute of Biotechnology are located. Faculty of Veterinary Sciences & Animal Husbandry and Faculty of Dairy Technology at R.S. Pura have an extent of 84 acre campuses. The total land possession with the University (including Research Stations / Sub-Stations and KVKs) is 1139.12 acres. There are 09 Research Station and Sub Stations, and

Faculty of Agriculture

Faculty of Veterinary Sciences & Animal Husbandry

nine KVKs in the University that are located in different agro-climatic zones of Jammu region for catering to location-specific needs of the farming community. The University pursues high standard of location specific and problem-solving research through research projects funded by various central, state agencies & other funding agencies. At the Faculty level the emphasis is on imparting 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 the 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.

Faculty of Basic Science

Faculty of Dairy Technology

Faculty of Agricultural Engineering

Faculty of Horticulture & Forestry

01. Faculty of Agriculture

i. Division of Agronomy
ii. Division of Agricultural Economics and ABM
iii. Division of Agricultural Extension Education
iv. Division of Plant Breeding and Genetics
v. Division of Soil Science and Agril. Chemistry
vi. Division of Seed Science and Technology
vii. Division of Plant Pathology
viii. Division of Sericulture
ix. Division of Entomology

02. Faculty of Veterinary Sciences & Animal Husbandry

i. Division of Veterinary Clinical Complex
ii. Division of Veterinary Microbiology and Immunology
iii. Division of Livestock Production Management
iv. Division of Veterinary Anatomy
v. Division of Veterinary Physiology and Biochemistry
vi. Division of Animal Nutrition
vii. Division of Veterinary and Animal Husbandry Extension Education
viii. Division of Livestock Products Technology
ix. Division of Veterinary Gynaecology and Obstetrics
x. Division of Veterinary Surgery and Radiology
xi. Division of Veterinary Medicine
xii. Division of Pharmacology and Toxicology
xiii. Division of Veterinary Parasitology
xiv. Division of Veterinary Pathology
xv. Division of Veterinary Public Health and Epidemiology
xvi. Division of Animal Genetics and Breeding
xvii. Division of Livestock Farm Complex
xviii. Division of Fisheries

03. Faculty of Basic Sciences

i. Division of Statistics and Computer Science
ii. Division of Biochemistry
iii. Division of Plant Physiology
iv. Division of Microbiology

04. Faculty of Dairy Technology i. Division of Dairy Technology ii. Division of Dairy Engineering iii. Division of Dairy Chemistry iv. Division of Dairy Microbiology v. Division of Dairy Business Management	
05. Faculty of Agricultural Engineering i. Division of Farm Machinery and Power Engineering ii. Division of Soil and Water Engineering iii. Division of Processing and Food Engineering iv. Division of Basic Engineering & Sciences	
06. Faculty of Horticulture & Forestry i. Division of Fruit Science ii. Division of Vegetable Science iii. Division of Post-Harvest Management iv. Division of Floriculture and Landscaping v. Division of Silviculture & Agroforestry vi. Division of Forest Biology and Tree Improvement vii. Division of Forest Products and Utilization	
07. Institute of Biotechnology	

Contact Details
Dr. Anil Kumar
Registrar
SKUAST-Jammu, Chatha-180009
Contact No.: 0191-2262012
Mobile: 8825087701
Email: registrar@skuast.org

HOLISTIC AND MULTIDISCIPLINARY EDUCATION IN LINE WITH NEP-2020

Implementation of NEP 2020

The National Education Policy (NEP) 2020 has been implemented at the undergraduate level in the University, following the adoption of the ICAR 6th Deans' Committee Report from the academic session 2024-25. With this, the undergraduate degrees (except BVSc. & A.H.) have multiple entry and exit options for award of Certificate and Diploma in the concerned subject after first and second year, respectively with an internship of 10 weeks. The UG degree programmes are embedded with Internships, RAWE, ELPS, PCP courses, READY programmes, etc., to make them more practical oriented. Deeksharanbh-a Foundation Course of 15 days has been initiated to acquaint the newly admitted 1st year students with holistic education system of the University, including Regulations on Resident Instructions and student amenities on the Campus.

Dual degree programme

A dual degree programme with Western Sydney University, Australia, has been introduced for B.Sc. (Hons.) Agriculture and B.Tech. (Biotechnology) B.Sc (Hons) Horticulture.

Adoption of ICAR-BSMA recommendations

ICAR-BSMA Committee recommendations have been adopted for PG and Ph.D. programmes. Master's degree programmes have options of project works/internships with industries as an alternative to research basedthesis/dissertations.

Fellowships to masters' and Ph.D. students

Ph.D. students are getting teaching assistantships after the successful completion of comprehensive exams. All the master and Ph.D students are getting fellowship @ Rs. 5000 per month under HADP project of JK UT Govt.

Sandwich and Bilateral Postgraduate Programmes

In line with NEP 2020, the University has formulated the guidelines for Master's and Ph.D. sandwich/bilateral degree programmes. The peer review process for a Ph.D. student's research synopsis has been adopted for thorough assessment by independent experts in the field.

Industry-Academia collaborations

Industry-Academia collaborations have been strengthened through R&D partnerships. Seven Memorandums of Understanding (MoUs) have been signed with industry partners for making students Industry-ready and attract internships, fellowships and funding for PG/Ph.D. research.

SKUAST Jammu leads the way in implementing UGC directive on appointment of 'Professors of Practice'

In a significant stride towards enhancing student skill development and aligning academic pursuits with industry needs SKUAST Jammu leads the way in implementing UGC directive on appointment of 'Professors of Practice'. Three Professors of Practice have been appointed for making students Industry-ready and attract internships, fellowships and funding for PG/Ph.D. research.

International Students' Desk

Under the 'Study in India' initiative, foreign students have been admitted to postgraduate programmes. Guidelines have been formulated to attract admissions of students from SAARC nations.

International Students' Desk in the University is actively involved in publicizing academic programmes of the University at International level.

NCC Air and Army Wings for Undergraduate Students

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J) has raised its NCC Air Unit under the aegis of the 01 J&K Air NCC Unit led by Commanding Officer of the Unit, Wing Commander Mr. Nitin Yadav. The initiative aligns with NEP-2020's focus on holistic student development. Under the first enrollment in January 2025, 39 students (22 Senior wing for female cadets and 17 Senior Division for male cadets) were selected for enrollment. In a historic milestone, the newly raised 01 J&K Air Squadron conducted its maiden flight at Udhampur under the aegis of the NCC Directorate, Jammu Kashmir & Ladakh, providing cadets with an exhilarating hands-on aviation experience. Cadet Siya Kotwal from SKUAST Jammu had the honor of being the first to airborne, describing it as "a dream come true." Dr. Susheel Sharma and Dr. Sabahat Gazal, serving as Caretaker Officers (CTOs) of the NCC at SKUAST Jammu, have been actively involved in organizing and overseeing various training activities for the SD and SW cadets, respectively. The university has also been sanctioned NCC Army Wing (girls) during the current year.

Counselling & Placement Cell

The Counselling & Placement Cell has been created for the overall development of the students through creating opportunities for them to interact with the experts in the different fields and conducting training programmes for their personality development through specialized lectures on resume making, communication skills, and how to face the interview etc. Another major mandate of the Counselling & Placement Cell is to forge liaisons with the industry for campus placement and guidance to the students.

FACILITIES AT SKUAST-JAMMU

Facilities available for Sports/Cultural activities

It is instrumental in catering the need of regular games and sports activities for the students in all the faculties. The University has a large playground and gymnasium, with the facilities of different games and sports. The students are encouraged to participate in state and inter-university competitions. Inter / intra-faculty sports competitions are also organized annually. The organization conducts programmes / competitions to identify best talents in literary and cultural activities. Students of SKUAST-Jammu have been regularly participating in All India Inter University Youth Festival since last many years and have bagged many awards.

Students Centre

Student Amenities

The Students' Welfare Section under the ambit of Dean Students Welfare of the University attends to the residential requirements of the students. To make life comfortable for the students, common-use facilities such as cafeteria, shopping centre, banks, post-office, health centre and transportation are available on the campus.

Hostel Facilities:

The University provides accommodation to the students who are admitted in UG, PG and Ph.D. courses. Separate hostel accommodation for boys and girls are available at Chatha and R.S. Pura campuses. All the hostels have sufficient rooms with adequate furniture and fixture.

Sl. No.	Name of the Hostel & Location	Warden
1.	Sankalp Boys Hostel, Chatha	Dr. A.K. Singh, Professor, Biotechnology
2.	Urja Girls Hostel, Chatha	Dr. Puja Rattan, Associate Professor, Veg. Science
3.	Ujala Girls Hostel, Chatha	Dr. Shilpa Sood, Professor, Vet. Pathology
4.	New Girls Hostel (Farmer Hostel), Chatha	Dean Students Welfare
5.	International Family Hostel, Chatha	Dr. V.B. Singh, Professor, Plant Pathology
6.	Pragti Girls Hostel, R.S. Pura	Dr. Shalini Sharma, Associate Professor, Vet. Biochemistry
7.	Lakshya Boys Hostel, R.S. Pura	Dr. Anil Kumar Pandey, Professor, F.V.Sc. & AH, R.S. Pura
8.	Sanskriti Girls Hostel, R.S. Pura	Dr. Jonali Devi, Professor, Vet. Biochemistry

Pragati Hostel (Girls)

Lakshya Hostel (Boys)

Urja Hostel (Girls)

Sankalp Hostel (Boys)

Ujala Hostel (Girls)

New Hostel (Girls)

International Family Hostel

Sanskriti Hostel (Girls)

Contact Details:

Dr. Sudhakar Dwivedi
Dean Students Welfare
SKUAST-J, Main Campus, Chatha-180 009
Contact No. 7006927532

Healthcare Facilities:

- Two Health Centres: One at Chatha and one at R.S. Pura.
- Two full-time Medical Officers along with paramedical Staff are available to ensure healthcare facility to the Students & Staff.
- Dental services are being provided twice a week by visiting Dental Surgeon at Chatha Campus.
- Physiotherapy services are available at Chatha Campus by a full-time physiotherapist.
- Clinical laboratory tests (Biochemistry, Hematology & routine urine tests) are done in the Health Centre, which are free of cost to the Students & Staff.
- Three bed indoor facility at Chatha Campus & two bed indoor facilities at R.S. Pura Campus are available for emergency treatment at Health Centres.
- Highly sick patients are referred to higher Medical Centres for which ambulance at both the campuses is available
- Counsellor services are available for students

Health Centre

Contact Details:
Dr. Anil Kumar Gupta, Medical Officer
Dr. Sushma Gupta, Medical Officer
SKUAST-J, Main Campus, Chatha–180009
Contact No. 9419196057

University Library

Sher-e-Kashmir the University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu) comprises of Central Library at Faculty of Agriculture (FOA), Main Campus, Chatha and Faculty Library at R.S. Pura. Both the libraries have open access and are housed in their respective modern and spacious buildings. The Central Library is a modern three-storey glazed building having 5382 sq. meter area built up at the cost of Rs. 945 lacs. The Faculty Library at R.S. Pura, has an area of 2937 sq. meter area. In both the libraries the collection comprises of documents in the field of Agricultural, Veterinary and allied sciences. Online Library system consisting of network terminals for providing access to e-journals, e-books, internet and other e-reference resources are provided to the scientists, scholars, students and staff. Library functions and requirements have been kept in view while planning and equipping it. Both the libraries contribute and support the University in building an internationally top ranked academic and research driven institution by establishing a knowledge hub. Library services are witnessing radical changes world over and accessibility and instant retrieval of information is the main focus.

Central Library, Chatha Campus

Contact Details:

Prof. R.K. Samotra, University Librarian
Central Library, Main Campus, Chatha–180009
Phone: 0191-2262037
Fax: 01912262037,
E-mail: clskuastj2@gmail.com

University Examination Cell

The examination cell of the University was established in November 2012, to conduct and regulate the examinations smoothly, as well as to set up a confidential communication channel with external examiners.

The University Examination Cell Conducts and Regulates

- SKUAST-J Common Entrance Test, for admissions to various undergraduate, postgraduate and doctoral degree programmes.
- The external end-term examinations of undergraduate programmes.
- The annual board examinations (theory and practical) of undergraduate programme in veterinary sciences.
- The final examinations of Basic Agricultural and Horticultural Training Programmes
- Recruitment tests of the government and other competitive examinations.

Contact Details:

Prof. M.S. Bhadwal
Controller of Examination,
SKUAST-Jammu, Main Campus Chatha-180009
Contact no. 9419226376 (M)
Email: examinationcellskuastj@gmail.com

Dual Degree Programme with Western Sydney University — Australia

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu (Union Territory of Jammu & Kashmir- India) has entered in an MoU with Western Sydney University— Australia for offering an opportunity of dual degree for the Undergraduate students in the following programmes

- B.Sc. (Hons.) Agriculture
- B.Sc. (Hons.) Horticulture
- B. Tech. (Biotechnology)

Modalities for Undergraduates for Dual Degree programmes:-

- The Indian Council of Agricultural Research (ICAR) which is the apex Governing Body of the Agriculture Education at the national level has signed MoU with the Western Sydney University equating the Student READY programme (Rural Entrepreneurship Awareness Development Yojana) offered in final year of degree programme in State Agriculture Universities (SAUs) with one-year academic attachment in Western Sydney University. The graduating students under this arrangement will have two undergraduate degrees: one from Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu and another from Western Sydney University-Sydney, Australia. The students obtaining degree from Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu under this arrangement will have entitlement for admission into MSc programmes of all SAUs in India including those offered by Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu. The degree offered by the Western Sydney University; Australia will have equivalence in all world leading universities/ organizations/ regions where the WSU is recognized for further studies.
- The dual degrees offered will be as per the following articulations

Degree	Degree Articulation	
	First Degree from SKUAST-Jammu	***Second Degree from WSU- Sydney (Australia)***
Agriculture	B.Sc. (Hons) Agriculture	B.Sc. (Agrifood)
Horticulture	B.Sc. (Hons) Horticulture	B.Sc. (Agrifood)
Biotechnology	B. Tech. (Biotechnology)	B.Sc. (Biology)

- The students opting for this dual degree arrangement will be attached to Western Sydney University (WSU) in their campus at Sydney (Australia) for complete duration of final year of their degree programme (7^{th} and 8^{th} semester). Western Sydney University, formerly the University of Western Sydney, is an Australian multi-campus public research university in the Greater Western region of Sydney, New South Wales, Australia.
- The interested students have to meet the expenses of dual degree programmes at their own; however, work permit as per the rules of the Western Sydney University will be provided to the students for partially generating, their living costs. A representative from Western Sydney University will provide all the logistic supports for furnishing application forms and completing other visa formalities.
- This dual degree (3+1) will make students eligible for direct admission into the MSc programmes (3+1+1) of Western Sydney university with waiving off of first year enabling them to complete their M.Sc. degree in Western Sydney University in one year. The students will also be entitled for PhD degree in different programmes of the Western Sydney University.

Dual Degree Programme, MRes (Master in Research) and PhD (Doctor of Philosophy) with Western Sydney University-Australia

1. MRes (Master in Research)

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu is offering the option of dual degree for the post graduate students as per the following details of the MRes (Master in Research) programme.

- The students under this programme will get two degrees; one Master of Science (MSc and Equivalent- Registered discipline) SKUAST-Jammu and second Master of Research (M. Res.) at

WSU- Western Sydney University. The opting students have to complete course work at SKUAST-Jammu and the research work will be carried out in Western Sydney University, Sydney (Australia) after approval of Confirmation of Enrolment (COE). There will be two advisors, one from SKUAST-Jammu (India) and second from WSU- Sydney (Australia). The maximum duration at WSU will be for one year. The student will have to submit two M.Sc theses one to SKUAST-Jammu - India and second to the WSU- Sydney (Australia). There is following provision for tuition fee waiver during attachment with Western Sydney University:

A grade of 85 % or higher will lead to full tuition fee waiver for 12 months at the WSU
A grade of 80% to 84 % will have 75% tuition fee waiver at the WSU
75% to 79% will have 50 % tuition fee waiver at the WSU

- The interested students have to pay for their study (Except for waived tuition fee as per their OGPA) and stay of Western Sydney University during their dual degree programmes; however, work permit as per the rules of the Western Sydney University will be provided to the students for partially funding their living costs. The students obtaining degree from Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu under this arrangement will have entitlement for admission into PhD programmes at all SAUs in India including those offered by the Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu. The degree offered by the Western Sydney University; Australia will have equivalence in all world leading universities/ organizations/ regions where the WSU is recognized including PhD admission in WSU- Sydney (Australia).

2. Ph.D. (Doctor of Philosophy)

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu is offering the option of dual degree for the PhD students as per the following details of the PhD (Doctor of Philosophy).

- The students opted under this programme will get two degrees; one Doctor of Philosophy (PhD and its equivalent- Registered discipline) in SKUAST-Jammu and second PhD at WSU- Western Sydney University. The opting students have to complete course work at SKUAST-Jammu and the research work will be carried out in Western Sydney University, Sydney (Australia). There will be two advisors, one from SKUAST-Jammu (India) and second from WSU- Sydney (Australia). The student will have to submit two PhD theses one to SKUAST-Jammu - India and second to the WSU- Sydney Australia. There is following provision for tuition fee waiver during attachment with Western Sydney University
  - OGPA of 9.00 or higher or higher will lead to 100 % tuition fee waiver for 12 months
  - OGPA of 8.50-9.00 will lead to 75 % tuition fee waiver
  - OGPA of 8.00-8.50 will lead to 50 % tuition fee waiver
- The students obtaining degree from Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu under this arrangement will have eligibility for placements /job avenues for all SAUs in India including those offered by Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu. The degree offered by the Western Sydney University; Australia will have equivalence in all world leading universities/ organizations/ regions for placement/job avenues where the WSU (Australia) is recognized.
- The interested students have to pay for their study (Except for waived tuition fee as per their OGPA) and stay of Western Sydney University during their dual degree programmes; however, work permit as per the rules of the Western Sydney University will be provided to the students for partially funding their living costs. A representative from Western Sydney University will provide all the logistic supports for submission of application forms and other visa formalities.

Eligibility Requirements for Admission to UG and PG Programmes

- Candidates having a Domicile certificate of Union Territories of J&K and Ladakh are eligible for seeking admission to all the undergraduate and post-graduate programmes.
- For admission to undergraduate programme in Biotechnology, candidates from outside Union Territories of J&K and Ladakh can also apply.
- The candidates hailing from states/ UTs other than Jammu and Kashmir & Ladakh can only seek admission under Non-Resident Indian (NRI)/NRI sponsored/OCI quota for B.V.Sc. & A.H., B.Sc. (Hons) Agriculture, B.Sc. (Hons) Horticulture and B. Tech. (Agriculture Engineering), B.Tech. Dairy Technology. However, self-Finance seats for postgraduate courses in Agriculture, Horticulture, Forestry, Sericulture, Basic Sciences. Fisheries, Agricultural Engineering admission shall be done under All India basis.
- PG programmes in Biotechnology and Microbiology shall be in self-finance mode on All India basis
- Candidates will have to ensure that they fulfil the eligibility criteria and qualification(s) prescribed for admission to the relevant programme by the University which is specified below:

(i) For Undergraduate Programmes:

S.No.	Programme	Eligibility
01.	B.Sc. (Hons) Agriculture	Candidates must have passed 10+2 with PCB/PCM/PCBM or Agriculture from recognized board/examining body besides English. Having 50% marks in aggregate for OM, NRI/NRI-sponsored / OCI category, and 40% for reserved categories.
02.	B.Sc. (Hons.) Horticulture	
03.	B. Tech. Dairy Technology	
04.	B. Tech. Biotechnology	
05.	B.V.Sc. & A.H.	Candidates must have passed Higher Secondary Part II (12th or 10+2) or an equivalent examination with PCB subjects, besides English Having 50% marks in aggregate for OM, NRI/NRI-sponsored/OCI category and 40% for reserved categories.
06.	B. Tech. Agricultural Engineering	Candidates must have passed 10+2 or an equivalent examination from a recognized board/examining body with PCM or Agriculture besides English. Having 50% marks in aggregate for OM, NRI/NRI-sponsored/OCI category, and 40% for reserved categories.

P, C, B. and M are Physics, Chemistry, Biology and Mathematics, respectively

- **Candidate must be 17 years old on or before 31.12.2025.**
- Candidates who have appeared in Higher Secondary Part II (12th or 10+2) are also eligible to apply, provided they produce their Higher Secondary Part II (12th or 10+2) mark sheet issued by competent examining body at the time of counselling and fulfil all the above prescribed requirements to be eligible for admission.

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

(ii) For Post graduate Programmes

- Candidate not below 19 years of age, as on 31-12-2025, is 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:

✓ **General category**:

a) for Agriculture, Horticulture, Forestry and Agricultural Engineering: 6.00/10.00 on ten

point scale, 3.00/4.00 on 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.

b. ***for Basic sciences stream:*** 5.50/10.00 on ten point scale/ or at least 55% marks, where grade point is not awarded.

✓ **Reserved Categories**: 5.50/10.00 on ten point scale/ or at least 55% marks where grade point is not awarded.

- Candidate must have passed or due to appear at the final examination, and likely to get awarded the degree on or before the date of counselling date.

The subject wise eligibility requirements are given below:

(a) M.Sc. Agriculture[#]:

S.No.	M.Sc. Agriculture	Feeder Streams
1.	M.Sc. (Agri.) Agronomy	B.Sc. Agriculture/ B.Sc. (Hons.) Agriculture
2.	M.Sc. (Agri.) Genetics & Plant Breeding	B.Sc. Ag. / Horti. / Forestry or B.Sc. (Hons.) Agriculture / Horticulture/Forestry /B. Tech. Biotechnology
3.	M.Sc. (Agri.) Agricultural Economics	B.Sc. Agriculture/ B.Sc. (Hons.) Agriculture / B.Sc. Horticulture /B.Sc. (Hons.)/Horticulture/B.Sc. Forestry
4.	M.Sc. (Agri.) Soil Science	
5.	M.Sc. (Agri.) Agricultural Extension Education	
6.	M.Sc. (Agri.) Entomology	B.Sc. Agriculture/ B.Sc. (Hons.) Agriculture /B.Sc. Horticulture/B.Sc. (Hons.) Horticulture/ B.Sc. Life Sciences with Zoology
7.	M.Sc. (Agri.) Plant Pathology	B.Sc. Agriculture / B.Sc. (Hons.) Agriculture /B.Sc. Horticulture/ B.Sc. (Hons.) Horticulture/ B.Sc. Life Sciences with Botany
8.	M.Sc. (Agri.) Sericulture	B.Sc. Sericulture /B.Sc. Agriculture / B.Sc. (Hons.) Agriculture / B.Sc. Bio Sciences/ B.Sc. Forestry
9.	M.Sc. (Agri.) Seed Science & Technology	B.Sc. Agriculture/B.Sc. (Hons.) Agriculture/ B. Tech. Agriculture Engineering /B. Sc. Biotechnology
10.	M.Sc. (Agri.) Organic Farming	B.Sc. Agriculture/ B.Sc. (Hons.) Agriculture /B.Sc. Horticulture/B.Sc. (Hons.) Horticulture

[#]A 4 year (10+2+4) or 6 year (10+6) undergraduate degree in Agriculture shall be the essential requirement for admission to Masters degree in Agriculture. However, candidates who have completed a 3 year Bachelor's degree programme are eligible for admission only in Sericulture discipline in Faculty of Agriculture

(b) M.Sc. Molecular Biology & Biotechnology

(c) M.Tech. Biotechnology

1.	M.Sc. (Agri.) Molecular Biology & Biotechnology	Bachelor's degree in Biotechnology/ Agriculture / Life Sciences and Veterinary Sciences
	M.Tech. Biotechnology	Minimum 4-year undergraduate degree in: B. Tech. Biotechnology/ B.Sc. Biotechnology/ B.Sc.(Hons.) Biotechnology/ B.Sc. (Hons.) Agriculture / B.Sc. (Hons.) Horticulture/ B.Sc. (Hons.) Biology

(d) M.Sc. Horticulture

S.No.	M.Sc. Horticulture	Feeder Streams
1.	M.Sc. (Horti.) Floriculture & Landscaping	B.Sc. Agriculture/ B.Sc. (Hons.) Agriculture/ B.Sc. Horticulture /B.Sc. (Hons.) Horticulture/ B.Sc. Forestry
2.	M.Sc. (Horti.) Post Harvest Management	
3.	M.Sc. (Horti.) Fruit Science	
4.	M.Sc. (Horti.) Vegetable Sciences	

(e) M. Sc. Forestry

S.No.	Programme / Discipline	Feeder Streams
1.	M.Sc. (Forestry) Silviculture and Agroforestry	B. Sc. Forestry/ B. Sc. (Hons) Forestry

(f) M. Tech. (Agricultural Engineering)

S.No.	Programme / Discipline	Feeder Streams
1.	M. Tech. Farm Machinery & Power Engineering	B. Tech. (Agricultural Engineering)
2.	M. Tech. Soil & Water conservation Engineering	

(g) M.Sc. Basic Sciences:

S.No.	Programme / Discipline	Feeder Streams
1.	M.Sc. (Agri.) Biochemistry	B.Sc. Agriculture / B.Sc. (Hons.) Agriculture /B.Sc. Horticulture / B.Sc. (Hons.) Horticulture/ B.Sc. Forestry /B.Sc. Bio-Sciences/Life Sciences with Chemistry/ Biochemistry
2.	M.Sc. (Agri.) Plant Physiology	B.Sc. Agriculture / B.Sc. (Hons.) Agriculture / Horticulture / Forestry / Life Sciences / Bio-sciences with Plant Physiology/ Botany
3.	M.Sc. (Agri.) Microbiology	B.Sc. Agriculture / B.Sc. (Hons.) Agriculture / Life Sciences /Biotechnology/Microbiology
4.	M.Sc. (Agri.) Agricultural Statistics	B.Sc. with one of subject as Statistics / Mathematics / Computer application / IT/ B.Sc. (Hons) Agriculture / B.Sc. (Hons) Horticulture/ B.Sc. (Forestry) / B.Tech. Biotechnology.

(h) M.F. Sc. Fisheries:

S.No.	Programme / Discipline	Feeder Streams
1.	M.F.Sc. Fisheries Resources Management	Bachelor of Fisheries Science

Admission guidelines for SKUAST-J in-service candidates and in-service State Govt. Nominee:

- For admission of SKUAST-J In-Service Employees' and In-service UT-Govt. nominee, only those applications with the prior permission from their employer shall be entertained. All Such candidates have to appear in SKUAST-J CET-2025. The admission to such candidates shall be granted only after the submission of the "permission letter of their employer" at the time of counselling.
- The admission of the In-service J&K UT Government nominees shall also be made on the basis of SKUAST-CET 2025.

Distribution of seats for academic session 2025-26

(A.) Programme: B.V. Sc. & A.H

Total Number of seats to be filled through Entrance Test: 96 +4* =100
The breakup of seats is as under:

(a) Free Seats:
1. Open Merit: 21
2. Reserved Category: 21
3. Economically weaker section 04*

(b) Self-Financing Seats:
1. Domicile of UT of J&K & Ladakh: 18
2. NRI/NRI Sponsored /OCI: 20
3. Wards of SKUAST-J Employees: 03

(c) VCI Quota: 13
The admission to the seats under the VCI quota will be made on the basis of list provided by the VCI through their counselling portal.

*seats over and above reserved for economical weaker section.

Category wise Seat Matrix B.V.Sc. & A.H., under open merit and reserved category seats (Normal Fee Seats):

Category	Codes	Number of seats
Open Merit (OM)	01	21
Schedule Castes	02	03**
Schedule Tribes (i)	03	04
Schedule Tribes (ii)	04	04
Other Backward Classes	05	04**
Residents of areas adjoining Line of Actual Control (ALC) /International Border (IB)	06	02
Residents of Backward Area (RBA)	07	04
Economically Weaker Sections (EWSs)	08	04*
Person with Disabilities	09	02 (Horizontal)
Children of Defense Personnel	10	01 (Horizontal)
Children of Para military forces and UT Police Personnel	11	01 Nil (Horizontal)
Candidates possessing outstanding proficiency in Sports	12	01 (Horizontal)

Note:

i. *seats over and above reserved for economical weaker section.
**** one seat rotating among SC and OBC categories over the years**

ii. Physically Challenged persons:

- **A candidate shall not be allowed admission to Bachelor of Veterinary Science and Animal Husbandry degree course including those admitted under 15% reserved quota of Veterinary Council of India if he or she suffers the following disabilities, namely.**
  - **a. disability of total body including disability of chest or spine more than 50%.**
  - **b. disability of lower limb of more than 50%.**
  - **c. disability of upper limb.**
  - **d. visually handicapped candidates and those with hearing disability.**
  - **e. candidates with progressive diseases like myopathies etc.**
  - **f. disabilities which otherwise would interfere in the performance of the duties of a veterinarian.**

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

Total Number of seats to be filled through Entrance Test: 138 + 7*=145
The breakup of seats is as under:

(a) Free (Normal Seats):
  1. Open Merit: 35
  2. Reserved Category: 35
  3. Economically weaker section 07*

(b) Self-Financing Seats:
  1. Domicile of UT of J&K & Ladakh: 19
  2. NRI/NRI Sponsored /OCI: 14
  3. Wards of SKUAST-J Employees: 03

(c) In-service Govt. Nominee: 04

(d) ICAR Quota: 28

*seats over and above reserved for economical weaker section.
The Admission to the seats under the ICAR quota will be made on the basis of the list provided by ICAR through All India Counselling by ICAR after CUET-2025 is conducted by NTA.

Category-wise seat matrix B.Sc. (Hons.) Agriculture under open merit and reserved category seats (Normal Fee Seats):

Category	Codes	Number of seats
Open Merit (OM)	01	35
Schedule Castes	02	05**
Schedule Tribes (i)	03	07
Schedule Tribes (ii)	04	07
Other Backward Classes	05	06**
Residents of areas adjoining Line of Actual Control (ALC) /International Border (IB)	06	03
Residents of Backward Area (RBA)	07	07
Economically Weaker Sections (EWSs)	08	07*
Person with Disabilities	09	03(Horizontal)
Children of Defence Personnel	10	02(Horizontal)
Children of Para military forces and UT Police Personnel	11	01(Horizontal)
Candidates possessing outstanding proficiency in Sports	12	01(Horizontal)
Note: ***seats over and above reserved for economical weaker section. **one seat rotating among SC and OBC categories over the years**		

(C) Programme B.Tech. Biotechnology

(Self-financing Programme)

Programme	Intake Capacity
B. Tech. Biotechnology	**50 (to be filled on All India basis)**
Note: ***There is no reservation in any category for B. Tech. Biotechnology as the University is running the programme in self-finance mode.***	

(D) Programme: B.Sc. (Hons.) Horticulture

Total Number of seats to be filled through Entrance Test: 57+3*=60
The breakup of seats is as under:

(a) Free (Normal Seats):
1. Open Merit: 15
2. Reserved Category: 15
3. Economically weaker section 03*

(b) Self-Financing Seats:
1. Domicile of UT of J&K & Ladakh: 15
2. Wards of SKUAST-J Employees: 02

(c) In-service Govt. Nominee: 04

(d) NRI/NRI Sponsored / OCI: 06

*seats over and above reserved for economical weaker section.

Category wise Seat Matrix B.Sc. (Hons.) Horticulture under open merit and reserved category seats (Normal Fee Seats):

Category	Codes	Number of seats
Open Merit (OM)	01	15
Schedule Castes	02	02**
Schedule Tribes (i)	03	03
Schedule Tribes (ii)	04	03
Other Backward Classes	05	03**
Residents of areas adjoining Line of Actual Control (ALC) / International Border (IB)	06	01
Residents of Backward Area (RBA)	07	03
Economically Weaker Sections (EWSs)	08	03*
Person with Disabilities	09	01(Horizontal)
Children of Defense Personnel	10	01(Horizontal)
Children of Para military forces and UT Police Personnel	11	nil (Horizontal)
Candidates possessing outstanding proficiency in Sports	12	01(Horizontal)
Note: ****seats over and above reserved for economical weaker section.*** ***** one seats rotating among SC and OBC categories over the years***		

(E) B.Tech. (Agricultural Engineering)

Total Number of seats to be filled through Entrance Test: 36+2* =38
The breakups of seats are as under:

(a) Free (Normal Seats):
1. Open Merit: 13
2. Reserved Category: 13
3. Economically weaker section 02*

(b) Self-Financing Seats:
1. Domicile of UT of J&K & Ladakh: 06
2. NRI/NRI Sponsored /OCI: 04

*seats over and above reserved for economical weaker section.

Category wise Seat Matrix B.Tech. (Agricultural Engineering) under open merit and reserved category seats (Normal Fee Seats):

Category	Codes	Number of seats
Open Merit (OM)	01	13
Schedule Castes	02	02
Schedule Tribes (i)	03	03**
Schedule Tribes (ii)	04	02**
Other Backward Classes	05	02
Residents of areas adjoining Line of Actual Control (ALC) / International Border (IB)	06	01
Residents of Backward Area (RBA)	07	03**
Economically Weaker Sections (EWSs)	08	02*
Person with Disabilities	09	01(Horizontal)
Children of Defense Personnel	10	01(Horizontal)
Children of Para military forces and UT Police Personnel	11	nil (Horizontal)
Candidates possessing outstanding proficiency in Sports	12	nil (Horizontal)
Note: ****seats over and above reserved for economical weaker section.*** ***** one seat rotating among ST(i), ST(ii) and RBA categories over the years***		

(F) B.Tech. (Dairy Technology)

Total Number of seats to be filled through Entrance Test: 29+1*=30

The breakups of seats are as under:

(a) Free (Normal Seats):
- 1. Open Merit: 12
- 2. Reserved Category: 12
- 3. Economically weaker section 01*

(b) Self-Financing Seats:
- 1. Domicile of UT of J&K &Ladakh: 05

*seat over and above reserved for economical weaker section.

Category wise Seat Matrix B. Tech. (Dairy Technology under open merit and reserved category seats (Normal Fee Seats):

Category	Codes	Number of seats
Open Merit (OM)	01	12
Schedule Castes	02	02
Schedule Tribes (i)	03	02**
Schedule Tribes (ii)	04	03**
Other Backward Classes	05	02**
Residents of areas adjoining Line of Actual Control (ALC) /International Border (IB)	06	01
Residents of Backward Area (RBA)	07	02**
Economically Weaker Sections (EWSs)	08	01
Person with Disabilities	09	01(Horizontal)
Children of Defense Personnel	10	01(Horizontal)
Children of Para military forces and UT Police Personnel	11	nil (Horizontal)
Candidates possessing outstanding proficiency in Sports	12	nil (Horizontal)
Note: ****seats over and above reserved for economical weaker section.*** ***** Seats rotating among ST(i), ST(ii) and RBA categories over the years***		

Summary of Seat Matrix of Undergraduate Degree Programmes

Sl. No.	Programme	OM 50%	SC (8%)	ST1 (10%)	ST2 (10%)	OBC (8%)	ALC/ IB (4%)	RBA 10%	PWD* (4%)	CDP* (3%)	CPF& UT-PP* (1%)	SP* (2%)	EWS (Up to 10%)	SF – Domicile of UT of J&K and Ladakh	AIB (SF)	NRI/ NRI sponsored/OCI	WUE	GOJK	VCI/ ICAR	Grand Total
1.	B.V.Sc. & A.H[#]	21	03	04	04	04	02	04	02	01	-	01	04	18	-	20	03	-	13	**100**
2.	B.Sc. (Hons) Agriculture[#]	35	05	07	07	06	03	07	03	02	01	01	07	19	-	14	03	04	28	**145**
3.	B.Tech. Biotechnology	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-	**50**
4.	B.Sc. (Hons) Horticulture[#]	15	02	03	03	03	01	03	01	01	-	01	03	15	-	06	02	04	-	**60**
5.	B.Tech. Agricultural Engineering[§]	13	02	03	02	02	01	03	01	01	-	-	02	06	-	04	-	-	-	**38**
6.	B. Tech. Dairy Technology[§]	12	02	02	03	02	01	02	01	01	-	-	01	05	-	-	-	-	-	**30**
	Total	**96**	**14**	**19**	**19**	**17**	**8**	**19**	**08**	**06**	**01**	**03**	**17**	**63**	**50**	**44**	**8**	**8**	**41**	**423**

***Horizontal Reservation**

[#]One seat rotating among SC and OBC categories over the years

[§]One seat rotating among ST(i), ST(ii) and RBA categories over the years

Notes:

***** Scheduled Tribes

ST (i): 1. Bakarwal 2. Balti 3. Beda 4. Bot, Boto 5. Brokpa, Drokpa, Dard, Shin 6. Changpa 7. Garra 8. Gaddi 9. Gujjar 10. Mon 11. Purigpa 12. Sippi; (existing list as per the Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989 and the Constitution (Scheduled Tribes) Order (Amendment) Act, 1991.

ST (ii): l. Gadda Brahmin 2. Koli 3. Paddari Tribe 4. Pahari Ethnic Group; (added vide the Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Act, 2024)

- The above reservation is based on SO 176 dated 15th of March, 2024 SO 305 and 21st May 2024 amendments made in the Jammu and Kashmir Reservation Rules, 2005.
- Seats falling vacant under any category shall be filled through NRI/NRI Sponsored / OCI category candidates on the basis of merit in SKUAST-J-CET.
- Candidates admitted under NRI/NRI Sponsored /OCI category/Self-financing seats have to pay additional fee as per category & course that shall be over and above normal fee
- In case seat(s) remain vacant under any category shall be filled through NRI/NRI sponsored/OCI category and if there is no candidate available in NRI/NRI sponsored/OCI then seat shall be filled through self-financing category.
- Horizontal reservation shall be filled from the candidates belonging to concerned categories in order of percentage given in the seat matrix above.

(G) POSTGRADUATE PROGRAMMES

Seat Matrix under open merit and reserved category seats (% age):

Category	Codes	Percentage of Reservation
Open Merit (OM)	01	50%
Schedule Castes	02	08%
Schedule Tribes (i)	03	10%
Schedule Tribes (ii)	04	10%
Residents of Backward Area (RBA)	05	10%
Residents of areas adjoining line of Actual Control (ALC) / International Border (IB)	06	04%
Other Backward Classes	07	08%
Children of Defence Personnel	08	01% Horizontal
Children of Para military forces and UT Police Personnel	09	01% Horizontal
Candidates possessing outstanding proficiency in Sports	10	01% Horizontal
Economically Weaker Sections (EWSs)	11	10%

Seat Matrix M.Sc. Agriculture and Allied Sciences

Sl. No.	Programme	OM	SC	ST*		OBC	LAC/ IB	BA	Total*	EWS	SF – Domicile of UT of J&K and Ladakh	AIB (SF)	GOJK	ICAR#	Grand Total
				(i)	(ii)										
1.	M.Sc. (Agri.)Agronomy	03	01	01	01	01	0	01	**08**	0	01	01	01	04	**15**
2.	M.Sc. (Agri.) Agricultural Economics	01	0	0	0	0	0	0	**01**	01	01	01	0	03	**07**
3.	M.Sc. (Agri.) Agricultural Extension Education	02	0	0	0	0	01	0	**03**	0	01	01	0	03	**08**
4.	M.Sc. (Agri.) Entomology	01	0	01	01	0	0	01	**04**	0	01	01	0	02	**08**
5.	M.Sc. (Agri.) Genetics & Plant Breeding	02	0	0	0	01	0	0	**03**	01	01	01	0	02	**08**
6.	M.Sc. (Agri.) Plant Pathology	02	01	01	01	0	0	0	**05**	0	01	01	01	03	**11**
7.	M.Sc. (Agri.) Sericulture	0	0	0	0	0	01	01	**02**	0	01	0	01	01	**05**
8.	M.Sc. (Agri.) Soil Science	03	01	01	0	0	0	0	**05**	01	01	01	0	03	**11**
9.	M.Sc. (Agri.) Seed Science and Technology	01	0	0	01	0	0	01	**03**	0	0	0	0	0	**03**
10.	M.Sc. (Agri.) Organic Farming	02	0	0	0	01	0	0	**03**	01	01	0	0	0	**05**
Total		17	03	04	04	03	02	04	37	04	09	07	03	21	81

*Horizontal Reservation out of 37 seats: PWD (Person with Disability) = 4% (1 seat); CDP (Children of Defense Personal) =3% (1 seat); CPF&UT-PP (Children of Para-Military Forces & UT Police Personal) = 1%; SP (Candidates possessing outstanding proficiency in Sports) = 2%(1 seat). #Communicated to the ICAR by Registrar's Office Roster as per SO:305 dated 21.05.2024. In 2025, the roster closed at S.No. 42 of the said SO

Seat Matrix M.Sc. Horticulture & Forestry

Sl. No.	Programme	OM	SC	ST* (20%)		OBC	LAC/ IB	BA	Total*	EWS	SF – Domicile of UT of J&K and Ladakh	AIB (SF)	GOJK	ICAR#	Grand Total
				(i)	(ii)										
1.	M.Sc. (Horti.) Floriculture & Landscaping	01	0	0	0	0	0	0	**01**	0	01	01	0	02	**05**
2.	M.Sc. (Horti.) Post Harvest Management	01	01	0	0	0	0	0	**02**	0	01	01	01	02	**07**
3.	M.Sc. (Horti.) Fruit Science	0	0	01	0	0	0	0	**01**	0	01	01	02	02	**07**
4.	M.Sc. (Horti.) (Vegetable Sciences)	01	0	0	01	0	0	0	**02**	0	01	01	01	02	**07**
5.	M.Sc. (Forestry) Silviculture and Agroforestry	0	0	0	0	01	0	01	**02**	01	0	01	0	01	**05**
Total		**03**	**01**	**01**	**01**	**01**	**0**	**01**	**08**	**01**	**04**	**05**	**04**	**09**	**31**

*Horizontal Reservation out of 08 seats: PWD (Person with Disability) = 4% (0 seat); CDP (Children of Defense Personal) =3% (0 seat); CPF&UT-PP (Children of Para-Military Forces & UT Police Personal) =1% (0 seat); SP (Candidates possessing outstanding proficiency in Sports) = 2% (0 seat). #Communicated to the ICAR by Registrar's Office

Roster as per SO:305 dated 21.05.2024. In 2025, roster closed at S.No. 09 of the said SO

Seat Matrix M.Tech. Agricultural Engineering

Sl. No.	Programme	OM 50%	SC (8%)	ST* (20%)		OBC (8%)	LAC/ IB (4%)	BA 10%	Total*	EWS (Up to 10%)	SF – Domicile of UT of J&K and Ladakh	AIB (SF)	GOJK	ICAR#	Grand Total
				(i)	(ii)										
1.	M.Tech. Farm Machinery & Power Engineering	01	01	0	0	0	0	0	02	0	01	0	0	01	**04**
2.	M.Tech. Soil & Water Conservation Engineering	01	0	01	01	0	0	0	03	0	01	0	0	01	**05**
Total		**02**	**01**	**01**	**01**	**0**	**0**	**0**	**05**	**0**	**02**	**0**	**0**	**02**	**09**

Roster as per SO:305 dated 21.05.2024. In 2025, roster closed at S.No. 05 of the said SO. #Communicated to the ICAR by Registrar's Office

Seat Matrix M.Sc. (Basic Sciences)

Sl. No.	Programme	OM 50%	SC (8%)	ST* (20%)		OBC (8%)	LAC/ IB (4%)	BA 10%	Total*	EWS (Up to 10%)	SF – Domicile of UT of J&K and Ladakh	AIB (SF)	GOJK	ICAR#	Grand Total
				(i) (10%)	(ii) 10%)										
1.	M.Sc. (Agri.) Biochemistry	01	01	0	0	0	0	0	02	0	01	01	0	03	**07**
2.	M.Sc. (Agri.) Plant Physiology	01	0	01	01	0	0	0	03	0	01	0	0	02	**06**
3.	M.Sc. (Agri.) Microbiology	0	0	0	0	0	0	0	0	0	0	04	0	0	**04**
4.	M.Sc. (Agri.) Agricultural Statistics	01	0	0	0	0	0	0	01	0	01	0	0	0	**02**
Total		**03**	**01**	**01**	**01**	**0**	**0**	**0**	**06**	**0**	**03**	**05**	**0**	**05**	**19**

***There is no reservation for* M.Sc. (Agri.) Microbiology, *which is being offered by the University in a self-finance mode.*

*Horizontal Reservation: PWD (Person with Disability) = 4%; CDP (Children of Defense Personal) =3%; CPF&UT-PP (Children of Para-Military Forces & UT Police Personal) = 1%; SP (Candidates possessing outstanding proficiency in Sports) = 2%. #Communicated to the ICAR by Registrar's Office

Roster as per SO:305 dated 21.05.2024. In 2025, roster closed at S.No. 06 of the said SO

Seat Matrix M.Sc. Fisheries

Sl. No.	Programme	OM	SC	ST*		OBC	LAC/ IB	BA	EWS	SF – Domicile of UT of J&K and Ladakh	AIB (SF)	GOJK	ICAR#	Grand Total
				(i)	(ii)									
1.	Master of Fisheries Science (Fisheries Resource Management)	03	01	01	01	0	0	0	0	01	0	0	0	**07**

*Horizontal Reservation: PWD (Person with Disability) = 4%; CDP (Children of Defense Personal) =3%; CPF&UT-PP (Children of Para-Military Forces & UT Police Personal) = 1%; SP (Candidates possessing outstanding proficiency in Sports) = 2%. #Communicated to the ICAR by Registrar's Office

Roster as per SO:305 dated 21.05.2024. In 2025, roster closed at S.No. 06 of the said SO

Seat Matrix M.Sc. & M.Tech. Biotechnology

Sl. No.	Programme	AIB (SF)
1.	**M.Sc. (Agri.)** Molecular Biology & Biotechnology**	08
2.	**M. Tech. ** Biotechnology**	10

***There is no reservation for M.Sc. (Agri.) Molecular Biology & Biotechnology and M.Tech. Biotechnology is being run by the University in a self-finance mode.*

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

* The reservation to M.Sc. (Ag.)/M.Sc. (Horti.) / M.Tech. /M.Sc. Basic Sciences and M.F.Sc. programme shall be given as per SO 176 dated 15/03/2024 amendments in Jammu & Kashmir Reservation Act, 2005.

** *In addition to above 10% of seats over and above be filled from the candidates of Economically Weaker Sections (EWSs) in each degree course.*

No. of seats reflected against the ICAR/VCI is as per the information provided by the Registry.

* Candidates admitted under Self-financing seats have to deposit an additional fee as per category & course over and above normal fee.

(H.) AUTHORITIES COMPETENT FOR ISSUING RESERVED CATEGORY CERTIFICATES

S.No.	Category	Authorized Officers to issue certificates
1.	Scheduled Caste (SC)	Revenue Officer not below the rank of Tehsildar.
2.	Schedule Tribe (i)	Revenue Officer not below the rank of Tehsildar
3.	Schedule Tribe (ii)	Revenue Officer not below the rank of Tehsildar
4.	Other Backward Classes	Revenue Officer not below the rank of Tehsildar
5.	Resident of area adjoining Actual Line of Control /International Border(IB)	Revenue Officer not below the rank of Tehsildar
6.	Resident of Backward Area (RBA)	Revenue Officer not below the rank of Tehsildar
7.	Candidate possessing outstanding proficiency in sports	Secretary, J&K Sports Council
8.	Children of Defence Personnel	Commanding Officer of the unit not below the rank of DIG
9.	Children of Para military forces and UT Police Personnel	DIG concerned / Commanding Officer of the unit not below the rank of DIG
10.	Persons with Disabilities	Medical officer/ Medical Board
11.	Economic Weaker Section	Revenue Officer not below the rank of Tehsildar

GENERAL INFORMATION

i. 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.

ii. Since the 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.

iii. No representation will be entertained for rejected forms and forms received after the prescribed cut-off date of receipt of the forms.

iv. The candidates fulfilling the eligibility criteria will have to appear in the SKUAST-J Common Entrance Test.

v. Permission of candidates to appear in '**SKUAST-J Common Entrance Test**' shall be provisional and subject to fulfilment of all prescribed eligibility requirements for admission to course(s) applied for on the date of first counselling.
vi. Syllabus for the entrance examination is appended in the Information Brochure along with sample questions.
vii. Ragging is banned in the University and any culprit shall be dealt and punished as per standing rules of the University.
viii. 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 counselling forms on which the candidates have indicated their choice at the time of counselling for admission to a particular course will be destroyed after one year.

(J) INSTRUCTIONS

(I) Instructions for photographs

Candidates must ensure that:

- latest colored photograph of passport size required to be uploaded must not have been taken before 31-03-2025 with a placard-indicating name of candidate (as in application form) and date of taking photograph.
- the name of the candidate and date of taking of the photograph must be clear and legible in the photograph.

(K) SELECTION PROCEDURE

- The selection and allotment of UG stream will be purely based on the rank secured in the SKUAST-J Common Entrance Test as per choice/preference indicated in the counselling form.
- The selection and allotment of PG stream will be purely based on the rank secured in the SKUAST-J Common Entrance Test and option made at the time of counselling.
- 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.
- The University shall have the power to review and reframe the provisional selection list in case of any bonafide error, lapse, mistake, fraud, misrepresentation or inadvertently crept injustice that might have occurred and comes to the notice of the University before completion of the selection process or after the selection/admission process. Mere figuring in the selection list does not confer any right to admission of the candidate to the University programme if he/she is otherwise not found to be eligible on detection of an error/ mistake/ fraud/ misrepresentation/ impersonation at any stage during the degree programme.
- Admission in the University in all the categories shall be subject to production of all the relevant certificates in original at the time of counselling.

(L) ADMIT CARD

- Only for those candidates who fulfil the prescribed 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.
- If Admit Card is not downloaded two days before the date of the Entrance Test, the candidate may contact the office of the University Examination Cell, SKUAST Jammu, Chatha, with a photograph same as uploaded on e-form for obtaining Duplicate Admit Card.
- No Admit Card, in any case will be issued on the day of the Entrance Test.

(M) EVALUATION OF ANSWER SHEETS

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

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

iii. The updated key (with modifications, if any) shall be made available on the web site of the University.

iv. Where a question has ambiguous language, which conforms to more than one answer among the given options, all such answers, shall be considered correct and if a student had responded with any one of the correct 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 after the machine marking shall be final and not open to any manual check. The students must avoid making faint marks or ambiguous impressions or incomplete marks on the OMR Sheet, which may result in errors in evaluation. It is therefore in the interest of the candidates to fill up OMR answer sheet carefully as shown in this Information Brochure. The re-evaluation of the answer sheets manually is not allowed, as that will infringe upon the rule of equality, which calls for a uniform treatment given to all the students.

(N) DETERMINATION OF MERIT

- The merit list for each course shall be prepared on the basis of inter-se merit and option/choice of the candidates in the SKUAST-J CET 2025 in the descending order for Open Merit Category and for each Reserved Category, separately.
- Any subsequent vacancy caused 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 be filled through NRI/ NRI-sponsored /OCI / self-financing category as the case may be.
- 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) Undergraduate

i. Candidates obtaining higher marks in Biology/or Mathematics as the case may be
ii. Candidates obtaining higher marks in Biology/or Mathematics and Chemistry in aggregate, if marks in Biology/or Mathematics are equal.
iii. Candidates older in age to be preferred if points as per (i) and (ii) are equal.

(b) Postgraduate

(i) Candidates obtaining higher marks at graduation level
(ii) Candidates older in age to be preferred if points as per (i) are equal

(O) 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 be posted at the University website, www.skuast.org

ii. Candidates, whose result of the qualifying examination is not declared by the time of counselling, 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 counselling

(P.) COUNSELLING FOR ALLOTMENT OF DISCIPLINE

i. The candidates must come for counselling along with all documents in original, a set of attested copies of all documents, admit card issued by SKUAST-J and a counselling fee of Rs 1000/- (non-refundable).
ii. Candidate must mark his/her attendance by putting his/her full signature at the time of counselling.
iii. The candidates called for counselling must produce one set of original and one set of attested copies of following certificates along with duly filled in option form.
   - Domicile certificate
   - Date of birth certificate (Matriculation certificate)
   - Marks certificate of qualifying examination
   - Category certificate, if applicable

iv. **The NRI/NRI Sponsored/OCI candidates shall have to submit proof of NRI/OCI status/ sponsorship certificate at the time of counselling.**

Any of the following documents shall be considered as a proof of NRI status:

a) NRI /OCI candidates

- Attested copy of Resident Card/Green Card/Employment Card issued by competent authority of the country of residence/the employer.
- Attested copy of immigration/employment visa entry on the passport along with details of passport
- Certificate of residence attested 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 filled in the status of Non Resident Indian.

b) NRI Sponsored candidates:

- Attested copy of Resident Card/Green Card/Employment Card issued by the employer of sponsorer.
- Attested copy of immigration/employment visa entry on the passport along with details of passport of sponsorer.
- Certificate of residence attested by the Indian Embassy/High Commission in that country where sponsorer NRI is residing.
- Attested photocopy of the latest income tax assessment either in India or the country of employment filed in the status of sponsor Non Resident Indian.

c) The NRI sponsored candidates shall have to produce a Certificate of sponsorship for the academic year 2025-26 in original from sponsor NRI on the prescribed format only duly attested by solicitor/legal authority in the country of NRIs residence on or before the date of counselling, failing which the candidate will forfeit the claim for admission. Photocopy or scanned copy or the certificates received through e-mail will not be considered (Prescribed format given as Annexure-A at the end of Information Brochure). Certificate of sponsorship of the previous academic year(s), if any, shall not be considered.

d) In addition to a, b & c above, the NRI/NRI Sponsored /OCI candidates shall have to also submit the following documents in original at the time of counselling:

- Date of birth certificate (Matriculation certificate)
- Marks certificate of qualifying examination
- Migration Certificate
- Character Certificate

Note: No under process certificate shall be entertained at the time of counselling

i. After payment of prescribed admission fee, the candidates are advised for registration on scheduled date, failing which admission shall get automatically cancelled and fees deposited shall be forfeited.
ii. The candidate who has deposited the counselling fee once, need not to deposit fee in the succeeding counselling(s), in case such situation is warranted. However, candidate has to produce receipt of the same at the time of subsequent counselling.

iii. The candidates must appear in-person for counselling. However, in case of unavoidable reason a candidate is not able to appear in-person, he/she may send his/her authorized representative with authority letter duly signed by the candidate in original, admit card, admission fee and all other documents required for admission (refer item no. iii & iv)

iv. If a candidate or his/her representative fails to appear for counselling on the specified date but intends to appear on next date or any date during subsequent notified counselling schedule, he/she will be allowed for such counselling after depositing Rs. 1500/-(non-refundable) as counselling fee. Further, the candidate shall be considered for seat in a course available at that point of time. Such candidates cannot stake any claim whatsoever on any other seat already allotted despite their merit.

v. Candidates shall have to join the course after allotment of discipline within the specified time period. Where a candidate fails to join the course within the stipulated time period, his/her selection shall be cancelled and the seat so vacated shall be allotted to the next candidate in merit.

vi. In case some seats remain vacant even after last round of counselling, the University shall call all candidates who have appeared in SKUAST-J CET for walk-in counselling and the selection shall be made on the merit of SKUAST-J CET among the candidates appearing in the walk-in counselling.

vii. If a candidate or his authorized representative fails to appear for counselling during the entire notified period of counselling schedule, he/she will forfeit all claims for admission.

(Q) FEE STRUCTURE FOR UNDERGRADUATE/POSTGRADUATE PROGRAMMES

(a) At the time of 1st admission

Sl. No	Particulars	Year wise fee (Rs.)	Semester wise fee (Rs.)	
		B.V.Sc. & A.H.	Undergraduate Programmes Other than B.V.Sc. & A.H. Rs.	Postgraduate Programmes Rs.
A.				
1.	Admission fee	14000	6875	8250
2.	University Registration fee	8500	4125	6875
3.	Caution/Security Money for Library (refundable)	4200	4125	4125
4.	College Laboratory Development charges	1600	688	1375
5.	Semester Registration fee	1500	688	1100
6.	Tuition fee	6000	2750	5500
7.	Examination fee	2950	1375	1375
8.	Extra-Curricular Activities fee	1500	688	688
9.	Medical Examination fee	300	275	275
10.	Magazine fund (per annum)	600	275	275
11.	Identity card	300	138	138
12.	Placement and counselling fund	200	138	0
13.	Educational Tour/Study tour	10000	10000	0
14.	Alumni Fee	550	550	550
Total (A)		**52200**	**32690**	**30526**
B. Hostel Charges				
1.	Hostel Charges (Room rent) **Per Semester**			
i.	Single Seater	4813	4813	4813
ii.	Dormitory	3438	3438	3438
iii.	NRI Rooms	6875	6875	6875
2.	Hostel Security (refundable) for fresh admission	5500	5500	5500
3.	Mess security in case of Hostel inmates for fresh admission (refundable)	5500	5500	5500
4.	Hostel maintenance fund per Semester	688	688	688
5.	Utensils crockery breakage fund	209	209	209
6.	Common Room Fund (Hostellers)	413	413	413
7.	Electricity charges Per semester	2750	2750	2750
8.	Generator charges Per Semester per Students	4125	4125	4125
9.	Mess cum Canteen Charges	13750	13750	13750
(Total 02-09)				
Total B		**32935**	**32935**	**32935**
i.	Single Seater	**37748**	**37748**	**37748**
ii.	Dormitory	**36373**	**36373**	**36373**
iii.	NRI Rooms	**39810**	**39810**	**39810**
Grand Total (A + B)				
i.	Single Seater	**89948**	**70438**	**68274**
ii.	Dormitory	**88573**	**69063**	**66899**
iii.	NRI Rooms	**92010**	**72500**	**70336**

(b) Recurring Semester Fee (per semester).

S.No	Particulars	Undergraduate Programmes other than B.V.Sc. & A.H Rs.	Postgraduate Programmes Rs.
(A.)			
1.	Semester Registration fee	688	1100
2.	Tuition fee	4125	8250
3.	Examination fee	1375	1375
4.	Extra-Curricular Activities fee	1375	1650
5.	Medical Examination fund/fee	275	275
6.	Magazine fund (per semester)	138	138
7.	Amalgamated fund	825	825
8.	Library Fee	413	413
9.	Infrastructure development fund	688	688
10.	Student Welfare Fee	688	688
11.	Water Charges	138	138
	Total (A)	**10728**	**15540**
(B.)	Hostel Charges (Room rent)		
i.	Single Seater	4813	4813
ii.	Dormitory	3438	3438
iii.	NRI Rooms	6875	6875
2.	Hostel maintenance fund	688	688
3.	Utensils crockery breakage fund	209	209
4.	Common Room Fund	413	413
5.	Electricity charges	2750	2750
6.	Generator charges	4125	4125
7.	Mess cum Canteen Charges	13750	13750
	(Total 02-09)		
	Total (B.)	**21935**	**21934**
i.	Single Seater	**26748**	**26747**
ii.	Dormitory	**25373**	**25372**
iii.	NRI Rooms	**28810**	**28809**
	G. Total (A + B)		
i.	Single Seater	**37476**	**42288**
ii.	Dormitory	**36101**	**40912**
iii.	NRI Rooms	**39538**	**44350**

*The *University shall not provide any of the above-mentioned appliances.*

(c) Recurring fee in Rs. (Year-wise) for B.V.Sc. & A.H. Programme (Excluding hostel charges)

S.No.	Particular	2nd year	3rd Year	4th Year	5th Year
1.	Semester Registration fee	1375	1375	2063	1375
2.	Tuition fee	31800	31800	47700	31800
3.	Examination fee	2750	2750	4125	2750
4.	Extra-Curricular Activities fee	2750	2750	4125	2750
5.	Medical Examination fund/fee	550	550	825	550
6.	Magazine fund (per semester)	275	275	413	275
7.	Amalgamated fund	1650	1650	2475	1650
8.	Library Fee	825	825	1238	825
9.	Infrastructure development fund	1375	1375	2063	1375
10.	Student Welfare Fee	1375	1375	2063	1375
11.	Water Charges	275	275	413	275
	Total	45000	45000	67503	45000

Hostel Accommodation:

Limited hostel facilities are available. The University will provide accommodation to the extent possible. Students cannot claim hostel accommodation as a matter of right on their admission o PG programme. The University reserves the right to provide/deny hostel accommodation to the student.

(R) Fee structure for self-financing/NRI/NRI-sponsored / OCT seats in addition to normal fees

a) Fee structure for self-financing seats in addition to normal fees other than B.V.Sc. & A.H. (per semester): Other than Hostel charges

Sl. No.	Programme	Category	Fees (Rs.)
1.	B.Sc. (Hons) Ag. / B.Sc. (Hons) Horti.	NRI/NRI Sponsored /OCI	50,000
		Self-Financing (UT of J&K and Ladakh domicile seats)/ Ward of serving employee of SKUAST-J	29700
2.	B. Tech. Agri. Engineering/ /B. Tech. Dairy Technology	NRI/NRI Sponsored /OCI/ Self Financing (UT of J&K and Ladakh domicile seats)	55,000
3.	B.Tech. Biotechnology	Self-financing	55,000
4.	M.Sc./M.Sc. (Ag) /M.Sc. (Horti.) M.Sc. (Forestry)/ M.F.Sc./ M.V.Sc./M.Tech.	Self-financing	55,000
5.	M.Sc. Molecular Biology & Biotechnology.	Self-financing	55,000
6.	M.Tech. Biotechnology	Self-financing	55,000

b) Fee structure for self-financing/NRI/NRI-sponsored/OCI seats in addition to normal fees for B.V.Sc. & A.H. (per year), excluding hostel charges

S.No.	Programme	Category	Fees (Rs.)
1.	B.V.Sc. & A.H.	NRI/NRI Sponsored /OCI	Rs. 5,00,000/-
		Self-Financing (UT of J&K and Ladakh domicile seats)/ Ward of a serving employee of SKUAST-J	Rs. 3,00,000/-

(S.) Medical & Accidental Insurance (Tentative)

Sl. No.		Undergraduate	Postgraduate
1.	Medical & Accidental Insurance on an annual basis during the degree programme	Rs. 1050/- (Tentative)	Rs. 1050/- (Tentative)

Note: **The candidates have to deposit the prescribed amount in full at the time of admission and subsequently at each academic year.**

Refund of Fee: The fee deposited by the student shall be refunded after deducting Rs. 1000/- (One Thousand only) as processing fee, if a candidate withdraws from the programme/cancels his admission before the date of last counselling excluding Mop—Up Round of counselling.

(T) GENERAL INSTRUCTIONS FOR TEST

- Entrance Examinations will start at 10:00 A M sharp and will be for 3hrs. duration for selection to 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 AM

- Candidates arriving late by more than half an hour will not be permitted to appear in the test.
- Calculator, log tables, pager, mobile phone, notebook 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.
- Use of correcting fluid / eraser/ ink remover including use of blade on 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.
- The candidates are expected to 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 during the test, criminal proceedings shall be initiated under rules.
- Any candidate who creates disturbance of any sort during the test or otherwise misbehaves in or around the Examination Centre or exchanges 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.
- Disabled students shall be granted an extra time @ 20 minutes per hour in entrance tests.

(U) INSTRUCTIONS FOR ATTEMPTING PAPER

- Read the given instructions on the question paper carefully.
- 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 while 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.

(V) CANDIDATES MUST BRING

- Two ball point pens (blue/ black ink).
- Admit card issued by the University.
- Valid Identity such as Aadhar/Election Card

(W) TEST STRUCTURE

(a) Undergraduate Programmes:

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 Test-2025, shall be as under:

i. Physics
ii. Chemistry
iii. Biology/or Mathematics/or Agriculture

Common Entrance

i. 60 (compulsory for all courses)
ii. 60 (compulsory for all courses)
iii. 60 (students have to appear in any of the three subjects as the case may be: Refer page 19(i) for details of eligibility qualifications)

Model Questions

PHYSICS

1. A particle starts with initial velocity for 10m $SP^{-1}P$. It covers a distance of 20 cm along a straight line in two seconds. What is the acceleration of particle?
   (A) Zero (B) $1m/SP^2P$ (C) $10m/SP^2P$ (D) $20m/SP^2$
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

(b) Postgraduate Programmes:

Examination Schedule

Duration: 2½ hours. Time 10:00 am 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/Horticultural Sciences		02
Statistics		03
Forestry		04
Sericulture		05
Agricultural Engineering		06
Biotechnology		07
Fisheries		08

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 major subject group, 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 deducted.

SYLLABUS FOR SKUAST-J ENTRANCE TEST FOR ADMISSION TO UNDER GRADUATE PROGRAMMES

Notes:

A. Candidates applying for admission to B.V.Sc. & A.H. Programme have to select Physics, Chemistry, and Biology sections, respectively, in the Entrance Test.

B. Candidates seeking admission to B.Sc. (Hons.) Agriculture, B.Sc. (Hons.) Horticulture, B. Tech. Biotechnology and B. Tech. Dairy Technology can select one from Biology/ Mathematics/Agriculture section besides Physics and Chemistry Sections in the Entrance Test.

C. Candidates seeking admission to B. Tech. Agricultural Engineering have to select either Mathematics or Agriculture section besides Physics and Chemistry Sections in the Entrance Test.

PHYSICS

UNIT 1: PHYSICS AND MEASUREMENT

Units of measurements, System of Units, SI Units, fundamental and derived units, least count, significant figures, Errors in measurements, Dimensions of Physics quantities, dimensional analysis and its applications.

UNIT 2: KINEMATICS

The frame of reference, motion in a straight line. Position- time graph, speed and velocity; Uniform and non-uniform motion, average speed and instantaneous velocity, uniformly accelerated motion, velocity-time, position-time graph, relations for uniformly accelerated motion, Scalars and Vectors, Vector. Addition and subtraction, scalar and vector products, Unit Vector. Resolution of a Vector, Relative Velocity, Motion in a plane, Projectile Motion, Uniform Circular Motion.

UNIT 3: LAWS OF MOTION

Force and inertia, Newton's First Law of motion; Momentum, Newton's Second Law of motion, Impulses; Newton's Third Law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces.

Static and Kinetic friction, laws of friction, rolling friction.

Dynamics of uniform circular motion; centripetal force and its applications; vehicle on a level circular road, vehicle on a banked road.

UNIT 4: WORK, ENERGY AND POWER

Work done by a constant force and a variable force; kinetic and potential energies, work-energy theorem, power.

The potential energy of spring conservation of mechanical energy, conservative and non-conservative forces; motion in a vertical circle; Elastic and inelastic collisions in one and two dimensions.

UNIT 5: ROTATIONAL MOTION

Centre of the mass of a two-particle system, Centre of the mass of a rigid body; Basic concepts of rotational motion; moment of a force; torque, angular momentum, conservation of angular momentum and its applications.

The moment of inertia, the radius of gyration, values of moments of inertia for simple geometrical objects, parallel and perpendicular axes theorems and their applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions.

UNIT 6: GRAVITATION

The universal Law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Kepler's Law of planetary motion. Gravitational potential energy; gravitational potential. Escape velocity Motion of a satellite, orbital velocity, time period and energy of satellite.

UNIT 7: PROPERTIES OF SOLIDS AND LIQUIDS

Elastic behavior, Stress-strain relationship, Hooke's Law. Young's modulus, bulk modulus, modulus of rigidity. Pressure due to a fluid column; Pascal's Law and its applications. Effect of gravity on fluid pressure.

Viscosity, Stokes' Law, terminal velocity, streamline and turbulent flow. critical velocity, Bernoulli's principle and its applications.

Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension-drops, bubbles and capillary rise. Heat, temperature, thermal expansion; specific heat capacity, calorimetry; change of state, latent heat, Heat transfer-conduction, convection and radiation.

UNIT 8: THERMODYNAMICS

Thermal equilibrium, Zeroth Law of thermodynamics, the concept of temperature. Heat, work and internal energy. The first law of thermodynamics, isothermal and adiabatic processes.

The second law of thermodynamics; reversible and irreversible processes.

UNIT 9: KINETIC THEORY OF GASES

Equation of state of a perfect gas, work done on compressing a gas, Kinetic theory of gases - assumptions, the concept of pressure. Kinetic interpretation of temperature; RMS speed of gas molecules; Degrees of freedom. Law of equipartition of energy and applications to specific heat capacities of gases; Mean free path. Avogadro's number.

UNIT 10: OSCILLATIONS AND WAVES

Oscillations and periodic motion - time 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;

Wave motion. Longitudinal and transverse waves, speed of travelling 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.

UN IT 11: ELECTROSTATICS

Electric charges: Conservation of charge, Coulomb's 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 a uniform electric field.

Electric flux. Gauss's Law and its applications to find field due to infinitely long uniformly charged straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell. Electric potential and its calculation for a point charge, electric dipole and system of charges; potential difference, Equipotential 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, capacitors and capacitances, the combination of capacitors in series and parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates. Energy stored in a capacitor.

UNIT 12: CURRENT ELECTRICITY

Electric current. Drift velocity, mobility and their relation with electric current, Ohm's Law. Electrical resistance. V-1 characteristics of ohmic and non-ohmic conductors. Electrical energy and power. Electrical resistivity and conductivity. Series and parallel combinations of resistors; Temperature dependence of resistance.

Internal resistance, potential difference and e.m.f of a cell, a combination of cells in series and parallel. Kirchhoff' s Laws and their applications. Wheatstone bridge, Metre Bridge.

UNIT 13: MAGNETIC EFFECTS OF CURRENT AND MAGNETISM

Biot-Savart Law and its application to current carrying circular loop, Ampere's Law and its applications to infinitely long current carrying straight wire and solenoid, Force on a moving charge in uniform magnetic and electric fields.

Force on a current-carrying conductor in a uniform magnetic field. The force between two parallel currents carrying conductors-definition of ampere. Torque experienced by a current loop in a uniform magnetic field; Moving coil galvanometer, its sensitivity and conversion to ammeter and voltmeter.

Current loop as a magnetic dipole and its magnetic dipole moment. Bar magnet as an equivalent solenoid, magnetic field lines; Magnetic field due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole in a uniform magnetic field. Para- dia- and ferromagnetic substances with examples, effect of temperature on magnetic properties.

UNIT 14: ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENTS

Electromagnetic induction: Faraday's Law, Induced emf and current; Lenz's Law, Eddy currents. Self and mutual inductance. Alternating currents, peak and RMS value of alternating current/ voltage; reactance and impedance; LCR series circuit, resonance; power in AC circuits, watt less current, AC generator and transformer.

UNIT 15: ELECTROMAGNETIC WAVES

Displacement current, Electromagnetic waves and their characteristics, Transverse nature of electromagnetic waves, Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, Gamma rays), Applications of e.m. waves.

UNIT 16: OPTICS

Reflection of light, spherical mirrors, mirror formula. Refraction of light at plane and spherical surfaces, thin lens formula and lens maker formula. Total internal reflection and its applications. Magnification, Power of a Lens, Combination of thin lenses in contact, Refraction of light through a prism, Microscope and Astronomical Telescope (reflecting and refracting) and their magnifying powers.

Wave optics: wave front and Huygens' Principle, Laws of reflection and refraction using Huygens principle. Interference, Young's double-slit experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Polarization, plane-polarized light; Brewster's Law, uses of plane-polarized light and Polaroid.

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, Matter waves-wave nature of particle, de Broglie relation.

UNIT 18: ATOMS AND NUCLEI

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum. Composition and size of nucleus, atomic masses, 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; 1-V characteristics in forward and reverse bias; diode as a rectifier; 1-V characteristics of LED, the photodiode, solar cell and Zener diode; Zener diode as a voltage regulator. Logic gates (OR. AND. NOT. NAND and NOR).

UNIT 20: EXPERIMENTAL SKILLS

Familiarity with the basic approach and observations of the experiments and activities;

1. Vernier calipers-its use to measure the internal and external diameter and depth of a vessel.
2. Screw gauge-its use to determine thickness/ diameter of thin sheet/wire.
3. Simple Pendulum-dissipation of energy by plotting a graph between the square of amplitude and time.
4. Metre Scale - the mass of a given object by the principle of moments.
5. Young's modulus of elasticity of the material of a metallic wire.
6. Surface tension of water by capillary rise and effect of detergents.
7. Co-efficient of Viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
8. Speed of sound in air at room temperature using a resonance tube.
9. Specific heat capacity of a given (i) solid and (ii) liquid by method of mixtures.
10. The resistivity of the material of a given wire using a metre bridge.
11. The resistance of a given wire using Ohm's Law.
12. Resistance and figure of merit of a galvanometer by half deflection method.
13. The focal length of;
    i. Convex mirror
    ii. Concave mirror and
    iii. Convex lens, using the parallax method.
14. The plot of the angle of deviation v/s angle of incidence for a triangular prism.
15. Refractive index of a glass slab using a travelling microscope.
16. Characteristic curves of a p-n junction diode in forward and reverse bias.
17. Characteristic curves of a Zener diode and finding reverse breakdown voltage.
18. Identification of Diode. LED. Resistor. A capacitor from a mixed collection of such items.

CHEMISTRY

UNIT 1: SOME BASIC CONCEPTS IN CHEMISTRY

Matter and its nature, Dalton's atomic theory; Concept of atom, molecule, element and compound; Laws of chemical combination; Atomic and molecular masses, mole concept, molar mass, percentage composition, empirical and molecular formulae; Chemical equations and stoichiometry.

UNIT 2: ATOMIC STRUCTURE

Nature of electromagnetic radiation, photoelectric effect; Spectrum of the hydrogen atom. Bohr model of a hydrogen atom-its postulates, derivation of the relations for the energy of the electron and radii of the different orbits, limitations of Bohr's model; Dual nature of matter, de Broglie's relationship. Heisenberg uncertainty principle. Elementary ideas of quantum mechanics, quantum mechanics, the quantum mechanical model of the atom, its important features. Concept of atomic orbitals as one-electron wave functions; Variation of ψ and ψ^2 with r for 1s and 2s orbitals; various

Quantum numbers (principal, angular momentum and magnetic quantum numbers) and their significance; shapes of s.p and d-orbitals, electron spin and spin quantum number; Rules for filling electrons in orbitals–Aufbau principle. Pauli's exclusion principle and Hund's rule, electronic configuration of elements, extra stability of half-filled and completely filled orbitals.

UNIT 3: CHEMICAL BONDING AND MOLECULAR STRUCTURE

Kossel-Lewis approach to chemical bond formation, the concept of ionic and covalent bonds. Ionic Bonding; Formation of ionic bonds, factors affecting the formation of ionic bonds; calculation of lattice enthalpy.

Covalent Bonding: Concept of electronegativity. Fajan's rule, dipole moment; Valence Shell Electron Pair Repulsion (VSEPR) theory and shapes of simple molecules.

Quantum mechanical approach to covalent bonding: Valence bond theory-its important features. The concept of hybridization involving s, p and d orbitals; Resonance.

Molecular Orbital Theory-Its important features. LCAOs, types of molecular orbitals (bonding, anti-bonding), sigma and pi-bonds, molecular orbital electronic configurations of homo nuclear di atomic molecules, the concept of bond order, bond length and bond energy. Elementary idea of metallic bonding. Hydrogen bonding and its applications.

UNIT 4: CHEMICAL THERMODYNAMICS

Fundamentals of thermodynamics: System and surroundings, extensive and intensive properties, state functions, types of processes.

The first Law of thermodynamics: Concept of work, heat internal energy and enthalpy, heat capacity, molar heat capacity; Hess's Law of constant heat summation; Enthalpies of bond dissociation, combustion, formation, atomization, sublimation, phase transition, hydration, ionization and solution.

The second law of thermodynamics: Spontaneity of processes; ΔS of the universe and ΔG of the system as criteria for spontaneity. ΔG^0 (Standard Gibbs energy change) and equilibrium constant.

UNIT 5: SOLUTIONS

Different methods for expressing the concentration of solution-molality, molarity, mole fraction. Percentage (by volume and mass both), the vapour pressure of solutions and Raoult's Law-Ideal and non-ideal solutions, vapour pressure-composition, plots for ideal and non-ideal solutions; Colligative properties of dilute solutions-a relative lowering of vapour pressure, depression of freezing point, the elevation of boiling point and osmotic pressure; Determination of molecular mass using colligative properties; Abnormal value of molar mass, van't Hoff factor and its significance.

UNIT 6: EQUILIBRIUM

Meaning of equilibrium, the concept of dynamic equilibrium.

Equilibria involving physical processes; Solid-liquid, liquid-gas and solid-gas equilibria, Henry's Law. General characteristics of equilibrium involving physical processes.

Equilibrium involving chemical processes: Law of chemical equilibrium, equilibrium constants (K_p and K_c) and their significance, the significance of ΔG and ΔG^0 in chemical equilibrium, factors affecting equilibrium concentration, pressure, temperature, the effect of catalyst; Le Chatelier's principle.

Ionic equilibrium: Weak and strong electrolytes, ionization of electrolytes, various concepts of acids and bases (Arrhenius. Bronsted -Lowry and Lewis) and their ionization, acid-base equilibria (including multistage ionization) and ionization constants, ionization of water. pH scale, common ion effect, hydrolysis of salts and pH of their solutions, the solubility of sparingly soluble salts and solubility products, buffer solutions.

UNIT 7: REDOX REACTIONS AND ELECTROCHEMISTRY

Electronic concepts of oxidation and reduction, redox reactions oxidation number, rules for assigning oxidation number, balancing of redox reactions.

Electrolytic and metallic conduction, conductance in electrolytic solutions, molar conductivities and their variation with concentration; Kohlrausch's Law and its applications.

Electrochemical cells - Electrolytic and Galvanic cells, different types of electrodes, electrode potentials including standard electrode potential. Half –cell and cell reactions, emf of a Galvanic cell and its measurement; Nernst equation and its applications; Relationship between cell potential and Gibbs' energy change; Dry cell and lead accumulator; Fuel cells.

UNIT 8: CHEMICAL KINETICS

Rate of a chemical reaction, factors affecting the rate of reactions; concentration, temperature, pressure and catalyst; elementary and complex reactions, order and molecularity of reactions, rate law, rate constant and its units, differential and integral forms of zero and first-order reactions, their characteristics and half - lives, the effect of temperature on the rate of reactions. Arrhenius theory, activation energy and its calculation, collision theory of bimolecular gaseous reactions (no derivation).

INORGANIC CHEMISTRY

UNIT 9: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES

Modem periodic law and present form of the periodic table, s,p.d and f block elements, periodic trends in properties of elements atomic and ionic radii. Ionization enthalpy, electron gain enthalpy. valence, oxidation states and chemical reactivity.

UNIT 10: P-BLOCK ELEMENTS

Group-13 to Group 18 Elements

General Introduction: Electronic configuration and general trends in physical and chemical properties of elements across the periods and down the groups; unique behavior of the first element in each group.

UNIT 11: d-and f- BLOCK ELEMENTS

Transition Elements

General introduction, electronic configuration, occurrence and characteristics, general trends in properties of the first – row transition elements – physical properties, ionization enthalpy, oxidation states. Atomic radii, colour, catalytic behaviour, magnetic properties, complex formation, inter stitial compounds, alloy formation; Preparation, properties and uses of K_2 Cr_2 O_7 and KM_nO_4.

Inner Transition Elements

Lanthanoids- Electronic configuration, oxidation states and lanthanoid contraction.

Actinoids- Electronic configuration and oxidation states.

UNIT 12: CO-ORDINATION COMPOUNDS

Introduction to coordination compounds. Werner's theory; ligands, coordination number, denticity. chelation; IUPAC nomenclature of mononuclear co-ordination compounds, isomerism; Bonding-Valence bond approach and basic ideas of Crystal field theory, colour and magnetic properties; Importance of co-ordination compounds (in qualitative analysis, extraction of metals and in biological systems).

ORGANIC CHEMISTRY

UNIT 13: PURIFICATION AND CHARACTERIZATION OF ORGANIC COMPOUNDS

Purification- Crystallization, sublimation, distillation, differential extraction and chromatography – principles and their applications.

Qualitative analysis – Detection of nitrogen, sulphur, phosphorus and halogens.

Quantitative analysis (basic principles only) –Estimation of carbon, hydrogen, nitrogen, halogens, sulphur, phosphorus.

Calculations of empirical formulae and molecular formulae; numerical problems inorganic quantitative analysis,

UNIT 14: SOME BASIC PRINCIPLES OF ORGANIC CHEMISTRY

Tetravalency of carbon: Shapes of simple molecules –hybridization (s and p); Classification of organic compounds based on functional groups; and those containing halogens, oxygen, nitrogen and sulphur; Homologous series; Isomerism – structural and stereoisomerism.

Nomenclature (Trivial and IUPAC)
Covalent bond fission- Homolytic and heterolytic; free radicals, carbocations, and carbanions; stability of carbocations and free radicals, electrophiles and nucleophiles.
Electronic displacement in a covalent bond
Inductive effect, electrometric effect, resonance and hyper conjugation.
Common types of organic reactions - Substitution, addition, elimi nation and rearrangement.

UNITS 15: HYDROCARBONS
Classification. isomerism, IUPAC nomenclature, general methods of preparation, properties and reactions.
Alkanes - Conformations; Sawhorse and Newman projections (of ethane); Mechanism of halogen nation of alkanes.
Alkenes-Geometrical isomerism; Mechanism of electro philic addition; addition of hydrogen, halogens, water, hydrogen halides (Markownikoffs and peroxide effect); Ozonolysis and polymerization.
Alkynes - Acidic character; Addition of hydrogen, halogens, water and hydrogen halides; Polymerization.
Aromatic hydrocarbons- Nomenclature, benzene –structure and aromaticity; Mechanism of electrophilic substitution; halogenation, nitration.
Friedel - Craft's alkylation and acylation, directive influence of the functional group in mono - substituted benzene.

UNIT 16: ORGANIC COMPOUNDS CONTAINING HALOGENS
General methods of preparation, properties and reactions; Nature of C-X bond; Mechanisms of substitution reactions.
Uses; Environmental effects of chloroform, iodoform freons and DDT.

UNIT 17: ORGANIC COMPOUNDS CONTAINING OXYGEN
General methods of preparation, properties, reactions and uses.
ALCOHOLS, PHENOLS AND ETHERS
Alcohols: Identification of primary, secondary and tertiary alcohols; mechanism of dehydration.
Phenols: Acidic nature, electrophilic substitution reactions; halogenation. nitration and sulphonation. Reimer –Tiemann reaction.
Ethers: Structure.
Aldehyde and Ketones: Nature of carbonyl group; Nucleophilic addition to >C=O group, relative reactivates of aldehydes and ketones; Important reactions such as –Nucleophilic addition reactions (addition of HCN. NH_3 and its derivatives), Grignard reagent; oxidation; reduction (Wolf Kishner and Clemmensen); the acidity of α -hydrogen, aldol condensation, Cannizzaro reaction. Haloform reaction, Chemical tests to distinguish between aldehydes and Ketones. Carboxylic Acids
Acidic strength and factors affecting it

UNIT 18: ORGANIC COMPOUNDS CONTAINING NITROGEN
General methods of preparation. Properties, reactions and uses.
Amines: Nomenclature, classification structure, basic character and identification of primary, secondary and tertiary amines and their basic character.
Diazonium Salts: Importance in synthetic organic chemistry.

UNIT 19: BIOMOLECULES
General introduction and importance of biomolecules.
CARBOHYDRATES - Classification; aldoses and ketoses; monosaccharides (glucose and fructose) and constituent monosaccharides of oligosaccharides (sucrose, lactose and maltose).
PROTEINS- Elementary Idea of α -amino acids, peptide bond, polypeptides. Proteins; primary, secondary, tertiary and quaternary structure (qualitative idea only), denaturation of

proteins, enzymes.
VITAMINS- Classification and functions.
NUCLEIC ACIDS-Chemical constitution of DNA and RNA.
Biological functions of nucleic acids.
Hormones (General introduction)

UNIT 20: PRINCIPLES RELATED TO PRACTICAL CHEMISTRY

- Detection of extra elements (Nitrogen, Sulphur, halogens) in organic compounds; Detection of the following functional groups; hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketones) carboxyl and amino groups inorganic compounds.
- The chemistry involved in the preparation of the following;
  Inorganic compounds: Mohr's salt, potash alum.
  Organic compounds: Acetanilide, p-nitro acetanilide aniline yellow, iodoform.
- The chemistry involved in the titrimetric exercises- Acids, bases and the use of indicators, oxalic-acid vs $KMnO_4$.Mohr's salt vs $KMnO_4$
- Chemical principles involved in the qualitative salt analysis;
  Cations-Pb^{2+} Cu^{2+}, Al^{3+}, Fe^{3+}, Zn^{2+}, Ni^{2+}, Ca^{2+}, Ba^{2+}, Mg^{2+}, NH^{+}_{4}
  Anions-CO^{2-}_{3} S^{2-}, SO^{2-}_{4}, $^{N03-}$, NO^{2-}Cl, B^{r-} 1^{-}(In soluble salts excluded).
  Chemical principles involved in the following experiments;
  1. Enthalpy of solution of $CuSO_4$
  2. Enthalpy of neutralization of strong acid and strong base.
  3. Preparation of lyophilic and lyophobic sols.
  4. Kinetic study of the reaction of iodide ions with hydrogen peroxide at room temperature.

BIOLOGY

UNIT 1: DIVERSITY IN LIVING WORLD

- What is living?; Biodiversity; Need for classification; Taxonomy & Systematics; Concept of species and taxonomical hierarchy; Binomial nomenclature.
- Five kingdom classification; salient features and classification of Monera; Protista and Fungi into major groups; Lichens; Viruses and Viroids.
- Salient features and classification of plants into major groups- Algae, Bryophytes, Pteridophytes, Gymnosperms (three to five salient and distinguishing features and at least two examples of each category);
- Salient features and classification of animals-nonchordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples).

UNIT 2: STRUCTURAL ORGANISATION IN ANIMALS AND PLANTS

- Morphology and modifications; Tissues; Anatomy and functions of different parts of flowering plants; Root, stem, leaf, inflorescence- cymose and recemose, flower, fruit and seed (To be dealt along with the relevant practical of the Practical Syllabus) Family (malvaceae, Cruciferae, leguminoceae, compositae, graminae).
- Animal tissues; Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect (Frog). (Brief account only)

UNIT 3: CELL STRUCTURE AND FUNCTION

- Cell theory and cell as the basic unit of life; Structure of prokaryotic and eukaryotic cell; Plant cell and anima) cell; Cell envelope, cell membrane, cell wall; Cell organelles- structure and function; Endomembrane system-endoplasmic reticulum, Golgi bodies, lysosomes, vacuoles; mitochondria, ribosomes, plastids, micro bodies; Cytoskeleton. cilia, flagella, centrioles (ultrastructure and function); Nucleus-nuclear membrane, chromatin, nucleolus.

- Chemical constituents of living cells; Biomolecules-structure and function of proteins, carbodydrates. lipids, nucleic acids; Enzymes-types, properties, enzyme action, classification and nomenclature of anzymes.
- B Cell division: Cell cycle, mitosis, meiosis and their significance.

UNIT 4: PLANT PHYSIOLOGY

- Photosynthesis: Photosynthesis as a means of Autotrophic nutrition; Site of photosynthesis take place; pigments involved in Photosynthesis (Elementary idea); Photochemical and biosynthetic phases of photosynthesis; Cyclic and non-cyclic and photophosphorylation; Chemiosmotic hypothesis; Photorespiration C3 and C4 pathways; Factors affecting photosynthesis.
- Respiration: Exchange gases; Cellular respiration-glycolysis. fermentation (anaerobic), TCA cycle and electron transport system (aerobic); Energy relations- Number of ATP molecules generated; Amphibolic pathways; Respiratory quotient.
- Plant growth and development: Seed germination; Phases of Plant growth and plant growth rate; Conditions of growth; Differentiation, dedifferentiation and redifferentiation. Sequence of developmental process in a plant cell; Growth regulators- auxin, gibberellin, cytokinin, ethylene, ABA.

UNIT 5: HUMAN PHYSIOLOGY

- Breathing and Respiration: Respiratory organs in animals (recall only); Respiratory system in humans; Mechanism of breathing and its regulation in humans- Exchange of gases, transport of gases and regulation of respiration Respiratory volumes; Disorders related to respiration-Asthma, Emphysema, Occupational respiratory disorders.
- Body fluids and circulation: Composition of blood. blood groups, coagulation of blood; Composition of lymph and its function; Human circulatory system-Structure of human heart and blood vessels; Cardiac cycle, cardiac output. ECG. Double circulation; Regulation of cardiac activity; Disorders of circulatory system-Hypertension. Coronary artery disease, Angina pectoris, Heart failure.
- Excretory products and their elimination: Modes of excretion- Ammonotelism, ureotelism, uricotelism; Human excretory system-structure and faction; Urine formation, Osmoregulation; Regulation of kidney function-Renin-angiotensin, Atrial Natriuretic Factor, ADH and Diabetes insipidus; Role of other organs in excretion; Disorders; Uraemia, Renal failure, Renal calculi, Nephritis; Dialysis and artificial kidney.
- Locomotion and Movement: Types of movement- ciliary, fiagellar, muscular; Skeletal muscle-contractile proteins and muscle contraction; Skeletal system and its functions (To be dealt with the relevant practical of Practical syllabus); Joints; Disorders of muscular and skeletal system-Myasthenia gravis. Tetany, Muscular dystrophy. Arthritis, Osteoporosis, Gout.
- Neural control and coordination: Neuron and nerves; Nervous system in humanscentral nervous system, peripheral nervous system and visceral nervous system; Generation and conduction of nerve impulse.
- Chemical coordination and regulation: Endocrine glands and hormones; Human endocrine system-Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary Idea); Role of hormones as messengers and regulators. Hypo-and hyperactivity and related disorders (Common disorders e.g. Dwarfism, Acromegaly, Cretinism, goiter. exophthalmic goiter. diabetes, Addison's disease).

  (Imp. Diseases and disorders mentioned above to be dealt in brief.)

UNIT 6: REPRODUCTION

- Sexual reproduction in flowering plants: Flower structure; Development of male and female gametophytes; Pollination-types, agencies and examples; Outbreeding devices; Pollen-Pistil

interaction; Double fertilization; Post fertilization events- Development o1 endosperm and embryo. Development of seed and formation of fruit. Special modes- apomixis. parthenocarpy. polyembryony. Significance of seed and fruit formation.

- Human Reproduction: Male and female reproductive systems: Microscopic anatomy of testis and ovary; Gametogenesis-spermatogenesis & oogenesis; Menstrual cycle. Fertilisation. embryo development upto blastocyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementary idea).
- Reproductive health: Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control-Need and Methods. Contraception and Medical Termination of Pregnancy(MTP); Amniocentesis; Infertility and assisted reproductive technologies — IVF, ZI FT, GIFT (Elementary idea for general awareness).

UNIT 7: GENETICS AND EVOLUTION

Heredity and variation; Mendelian Inheritance: Deviations from Mendelism- Incomplete dominance. Co-dominance. Multiple alleles and Inheritance of blood groups. Pleiotropy. Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination-In humans, birds. honey bee; Linkage and crossing over; Sex linked inheritance-Haemophilia, Colour blindness; Mendelian disorders in humans-Thalassemia; Chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

Molecular basis of Inheritance; Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication. Central dogma; Transcription. genetic code. translation; Gene expression and regulation- Lac Operon; Genome and human genome project; DNA finger printing, protein biosynthesis.

Evolution: Origin of life; Biological evolution and evidences for biological evolution mom Paleontology, comparative anatomy, embryology and molecular evidence; Darwin's contribution. Modem Synthetic theory' of Evolution; Mechanism of evolution- Variation (Mutation and Recombination) and Natural Selection with examples, types of natural selection; Gene flow and genetic drift; Hardy-Weinberg's principle; Adaptive Radiation; Human evolution.

UNIT 8: BIOLOGY AND HUMAN WELFARE

Health and Disease; Pathogens; parasites causing human diseases (Malaria. Filariasis. Ascariasis. Typhoid. Pneumonia. common cold. amoebiasis. ring worm. dengue. chikungunya); Basic concepts o1 immunology-vaccines; Cancer, HIV and AIDS; Adolescence. drug and alcohol abuse, Tobacco abuse

Microbes in human welfare; In household food processing, industrial production, sewage treatment, energy generation and as bio control agents and bio fertilizers.

UNIT 9: BIOTECHNOLOGY AND ITS APPLICATIONS

Principles and process of Biotechnology - Genetic engineering (Recombinant DNA technology)

Application of *B*iotechnology in health and agriculture; Human insulin and vaccine production. gene therapy; Genetically modified organisms-Bt crops; Transgenic Animals; Biosafety issues-Biopiracy and patents.

UNIT 10: ECOLOGY AND ENVIRONMENT

Organisms and environment Population interactions- mutualism, competition, predation. parasitism; Population attributes-growth, birth rate and death rate, age distribution.

- Ecosystem; Pattern, components. productivity and decomposition; Energy flow; Pyramids of number, biomass, energy
- Biodiversity and its conservation; Concept of biodiversity; Patterns of Biodiversity; Importance of Biodiversity; Loss of Biodiversity; Biodiversity conservation; Hotspots, endangered organisms. extinction, Red Data Book. biosphere reserves, National parks and sanctuaries, Sacred Groves.

AGRICULTURE

UNIT-1. 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.

UNIT-2. 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.

UNIT-3. 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, intercultural, equipment for intercultural.

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.

UNIT-4. 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.

UNIT-5. 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

UNIT 1: SETS, RELATIONS AND FUNCTIONS:

Sets and their representation: Union, intersection and complement of sets and their algebraic properties; Power set; Relation, Type of relations, equivalence relations, functions; one-one, into and onto functions, the composition of functions.

UNIT 2: COMPLEX NUMBERS AND QUADRATIC EQUATIONS:

Complex numbers as ordered pairs of reals, Representation of complex numbers in the form a + ib and their representation in a plane, Argand diagram, algebra of complex number, modulus and argument (or amplitude) of a complex number, square root of a complex number, triangle inequality, Quadratic equations in real and complex number system and their solutions Relations between roots and co-efficient, nature of roots, the formation of quadratic equations with given roots.

UNIT 3: MATRICES AND DETERMINANTS:

Matrices, algebra of matrices, type of matrices, determinants and matrices of order two and three, properties of determinants, evaluation of determinants, area of triangles using determinants, Adjoint and evaluation of inverse of a square matrix using determinants and elementary transformations, Test of consistency and solution of simultaneous linear equations in two or three variables using determinants and matrices.

UNIT 4: PERMUTATIONS AND COMBINATIONS:

The fundamental principle of counting, permutation as an arrangement and combination as Section, Meaning of P (n,r) and C (n,r), simple applications.

UNIT 5: MATHEMATICAL INDUCTIONS:

Principle of Mathematical Induction and its simple applications.

UNIT 6: BINOMIAL THEOREM AND ITS SIMPLE APPLICATIONS:

Binomial theorem for a positive integral index, general term and middle term, properties of Binomial coefficients and simple applications.

UNIT 7: SEQUENCE AND SERIES:

Arithmetic and Geometric progressions, insertion of arithmetic, geometric means between two given numbers, Relation between A.M and G.M sum up to n terms of special series; Sn, Sn2, Sn3. Arithmetico-Geometric progression.

UNIT 8: LIMIT, CONTINUITY AND DIFFERENTIABILITY:

Real–valued functions, algebra of functions, polynomials, rational, trigonometric, logarithmic and exponential functions, inverse function. Graphs of simple functions. Limits, continuity and differentiability. Differentiation of the sum, difference, product and quotient of two functions. Differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite and implicit functions; derivatives of order up to two, Rolle's and Lagrange's Mean b value Theorems, Applications of derivatives; Rate of change of quantities, monotonic- Increasing and decreasing functions, Maxima and minima of functions of one variable, tangents and normal.

UNIT 9: INTEGRAL CALCULAS:

Integral as an anti-derivative, Fundamental Integrals involving algebraic, trigonometric, exponential and logarithms functions. Integrations by substitution, by parts and by partial Functions. Integration using trigonometric identities.

Evaluation of simple integrals of the type

$\int \frac{dx}{x^2+a^2}$, $\int \frac{dx}{\sqrt{x^2\pm a^2}}$, $\int \frac{dx}{a^2-x^2}$, $\int \frac{dx}{\sqrt{a^2-x^2}}$, $\int \frac{dx}{ax^2+bx+c}$, $\int \frac{dx}{\sqrt{ax^2+bx+c}}$, $\int \frac{(px+q)dx}{ax^2+bx+c}$, $\int \frac{(px+q)dx}{\sqrt{ax^2+bx+c}}$,

$\int \sqrt{a^2 \pm x^2}\, dx$, $\int \sqrt{x^2 - a^2}\, dx$

Integral as limit of a sum. The fundamental theorem of calculus, properties of definite integrals. Evaluation of definite integrals, determining areas of the regions bounded by simple curves in standard form.

UNIT 10: DIFFERENTIAL EQUATIONS:

Ordinary differential equations, their order and degree, the formation of differential equations, solution of differential equation by the method of separation of variables, solution of a homogeneous and linear differential equation of the type

$\frac{dy}{dx}$ +p(x)y=q(x)

UNIT 11: CO-ORDINATE GEOMETRY:

Cartesian system of rectangular coordinates in a plane, distance formula, sections formula, locus and its equation, translation of axes, the slope of a line, parallel and perpendicular lines, intercepts of a line on the co-ordinate axis.

Straight line

Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, the distance of a point form a line, equations of internal and external by sectors of angles between two lines co-ordinate of the centroid, ortho centre and circum centre of a triangle, equation of the family of lines passing through the point of intersection of two lines.

Circle, conic sections

A standard form of equations of a circle, the general form of the equation of a circle, its radius and central, equation of a circle when the endpoints of a diameter are given, points of intersection of a line and a circle with the centre at the origin and condition for a line to be tangent to a circle, equation of the tangent, sections of conics, equations of conic sections (parabola, ellipse and hyperbola) in standard forms, condition for Y = mx +c to be a tangent and point (s) of tangency.

UNIT 12: THREE DIMENSIONAL GEOMETRY:

Coordinates of a point in space, the distance between two points, section formula, directions ratios and direction cosines, the angle between two intersecting lines. Skew lines, the shortest distance between them and its equation. Equations of a line and a plane in different forms, the intersection of a line and a plane, coplanar lines.

UNIT 13: VECTOR ALGEBRA:

Vectors and scalars, the addition of vectors, components of a vector in two dimensions and three-dimensional space, scalar and vector products, scalar and vector triple product.

UNIT 14: STATISTICS AND PROBABILITY:

Measures of discretion; calculation of mean, median, mode of grouped and ungrouped data Calculation of standard deviation, variance and mean deviation for grouped and ungrouped data.

Probability: Probability of an event, addition and multiplication theorems of probability, Baye's theorem, probability distribution of a random variant, Bernoulli trials and binomial Distribution.

UNIT 15: TRIGONOMETRY:

Trigonometrical identities and equations, trigonometrical functions, inverse trigonometrical functions and their properties, heights and distance.

UNIT 16: MATHEMATICAL REASONING:

Statement logical operations and or implies, implied by if and only if, understanding of tautology, contradiction, converse and contrapositive.

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**

Unit -II: 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 and Horticultural 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 — 10 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 **10 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 **10 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 **10 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 postharvest 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 **10 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), Cucurbita ceous 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 **10 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 **10 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; Kochs, 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 **10 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; entomo pathogenic 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 **10 marks**

UNIT-I: Elementary principles of economics importance of Agriculture/Forestry/ livestock in national economy. Theory of consumer behaviour, 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 **10 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 independenceera, 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.

Genetics & Plant Breeding **10 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.

Biotechnology **10 marks**

Nature, structure and replication of genetic material. Chromatin and chromosome structure. Cell division. Concepts and history of Plant Biotechnology, Various aspects of plant tissue culture, somatic embryogenesis, meristem culture, micropropagation, somaclonal variation, anther and pollen culture, embryo/ovule/ovary and endosperm culture, protoplast culture and somatic hybridization, cryopreservation of germplasm, recombinant DNA technology, gene cloning approaches, methods of genetic transformation, genetic engineering, southern, northern and western hybridization, polymerase chain reaction and its variants, hybridization and PCR based DNA markers, gene and QTL mapping, marker assisted selection for precision plant breeding, application of marker assisted selection in commercial agriculture, bioinformatics tools and techniques.

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. Inte gralcalculus; 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 toexact 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 menstruation, 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; Kochs' 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; entomo pathogenic 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; entomo pathogenic nematodes, pest surveillance and sampling; basic principles of insect pest management-cultural, mechanical, physical, biological control (bio control agents, techniques in bio control, bio pesticides, 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- Agricultural Engineering

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.

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**.** *Electric* motors: Types, performance, selection, Installation and maintenance, measuring instruments, fundamentals of computers, power distribution. Thermodynamic principles; fluid mechanics, theory of machines **(10 marks)**

UNIT-II: Soil mechanics, soil classification, compaction & shear strength of soils, engineering mechanics, strength of materials, 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-III: 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, costanalysis & food processing plants layout, feasibility reports **(30 marks)**

UNIT-IV: 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)**

Code 07: Major Subject Group- Biotechnology (MSc Molecular Biology & Biotechnology and MTech Biotechnology)

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.

UNIT-I: Characteristics of prokaryotic and eukaryotic organisms; differences between fungi, bacteria, my coplasms and viruses. Physical and chemical basis of heredity; chromosome structure. DNA replication, transcription and translation; genetic code; operon concept. Genetic engineering; restriction enzymes; vectors; gene cloning; gene transfer. Plant cell and tissue culture; micro-propagation; somaclonal variation. Transformation; recombination; General application of biotechnology. Molecular and immunological techniques. Concept of bioinformatics, genomics and proteomics. **(40 marks)**

UNIT-II: Organelle DNA mitochondria!, chloroplast; DNA sequencing principles and translation to large scale projects; Recognition of coding and non-coding sequences and gene annotation; Molecular Tools and Their Applications, Restriction enzymes, modification enzymes, DNA and RNA markers; Conventional cytogenetics, Physical mapping by restriction hybridization analysis, FISH and related techniques, Role of antisense and RNAi in crop improvement, regulated and tissue specific expression of transgenes for crop improvement, Terminator gene technology, Environmental issues associated with transgenic crops, food safety issues and risk assessment of transgenic food crops. **(40 marks)**

UNIT-III: Plant physiology– importance in agriculture. Seed germination, viability and vigour. Photosynthesis- significance of C-3, C-4 and CAM pathway; photorespiration and its implications. Translocation of assimilates; dry matter partitioning; Harvest index of crops. Growth and development; growth analysis; crop-water relationship. Plant nutrients and their functions. Phytohormones and their physiological role. Photo-periodism and vernalisation; in flowering plants. 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: structure, nomenclature, mechanism of action; vitamins and minerals as coenzymes and cofactors. Metabolic pathways: glycolysis, TCA cycle, fatty acid oxidation, triglyceride biosynthesis. Electron transport chain; ATP formation. **(40 marks)**

Code 08: Major Subject Group- Fisheries: (150)

Unit-I: Classification and taxonomical characteristics of cultivable fisheries. crustaceans and molluscs. Fresh water, brackish water and marine fishery resources of India, marine fisheries of the world. Estuarine, lacustrine. brackish water and pond ecosystem. Population dynamics, fish stock, abundance methods and analysis. Conservation and management of fishery resources. Fisheries legislations and law of the water bodies. Impact of over exploitation and climate change on fisheries resources.

UNIT-II: Reproduction and breeding behaviour in fishes and shellfishes, brood stock improvement, maturity and fecundity studies. Induced spawning methods and seed production, natural fish seed

collection and rearing methods. Types of eggs and development of larval stages of fin fishes and shellfishes. Preparation and management of fresh water and brackish water fishponds. Cultivable species identification, introduction of exotic fishes in India. Culture methods: Pen and cage culture practices, crap and shrimp hatchery management, basic aspects of biotechnology in relation to fisheries.

UNIT-III: Important limnological, oceano graphical and biological parameters in relation to fisheries of lotic and lentic waters, biological productivity and its impact on fisheries. Environmental impact assessment on fisheries in lentic and lotic waters. Biological, parameters including energy flow, community ecology and aquatic association, biodiversity and its conservation, aquatic pollution and its management.

UNIT-IV: Common crafts and gears used for fish capture. Boat building material and demerits of wood, steel, aluminum, Ferro cement and FRP. Different types of fibres and netting materials and their characteristics, preservation of netting. parts of a trammel net, purse-scene, gill net and tuna long line.

UNIT-V: Food chemistry, fundamentals of microbiology. General methods of fish preservation and fishery by products. Canning and packaging techniques, processing and product development techniques.

UNIT-VI: Introduction to fishery economics and concepts of cooperative, marketing and banking management. Supply v/s demand economics of hatchery management and fish culture operations. Profit maximization. Problems in estimating costs and returns in fisheries. WTO agreements in Fisheries sector, intellectual property rights (1PR) and international fish trade. Basics of statistics in fisheries and computer science.

UNIT-VII: Fisheries extension methods. Training and education needs in fisheries. Communication concepts, Modern tools of fishery extension education, participatory rural appraisal (PRA), Rapid rural appraisal (12RA). Role of women in fisheries.

(Annexure –A)

Affidavit to Certify Sponsorship by NRI/ OCI

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 UG/PG COUNSELLING

Counselling Date: _____/_____/2025 _____ S.No.

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

DISCIPLINE ALLOTMENT PREFERENCE FORMAT FOR SKUAST-J CET COUNSELLING-2025

Roll No:		Name:			
Category:		Marks :		Rank:	
Telephone /Mobile No.		Email ID:			

OPTIONS/PREFERENCE FORMAT FOR ALLOTMENT OF DISCIPLINE

S.No.	Name of the Discipline where you desire admission (in order of preference)
1.	
2.	
3.	
4.	
5.	

I have deposited non-refundable counselling fee of Rs. 1000.00 / Rs. 1500.00

Signature of the Candidate

Recommended provisionally for admission in Discipline

_____

Signature of Counselling Committee Members.

Undergraduate Professional Programmes

- B.V.Sc.&A.H.
- B.Sc. (Hons) Agriculture
- B.Sc. (Hons) Horticulture
- B.Tech. Dairy Technology
- B.Tech. Biotechnology
- B.Tech. Agricultural Engineering

Postgraduate (Masters) Programmes

- Agriculture & Allied Sciences
- Horticulture Sciences
- Basic Sciences
- Forestry
- Fisheries
- Agricultural Engineering
- Biotechnology
- Agri-Business Management

HOLISTIC AND MULTIDISCIPLINARY EDUCATION INLINE WITH NEP-2020

- Design your undergraduate degree
- Multi-entry & exit options
- Dual degree programmes with WSU Australia
- Sandwhich / Bilateral postgraduate programmes
- Professors of Practice from Industry
- Industry sponsored postgraduate research
- Industry internships
- Student READY / Internships
- NCC Air and Army wings for UG students

Published by:
Directorate of Education
SKUAST Jammu
Chatha, Jammu-180009

Online submission of applications:
From May 2, 2025 to May 31, 2025

For other details and downloading the information brochure
vist University website https://skuast.org

Scan this QR CODE
for UG & PG
Admissions