

**26<sup>th</sup>**

**MEETING**

**OF**

**ACADEMIC COUNCIL**

**MINUTES**



**Sher-e-Kashmir**

**University of Agricultural Sciences & Technology of Jammu**  
**Osama, Jammu-180009 (J&K)**



# 26<sup>th</sup>

## ACADEMIC COUNCIL MEETING

# MINUTES



*Shor-e-Kashmir*  
University of Agricultural Sciences & Technology of Jammu  
Chatha, Jammu - 180009

## **Minutes of 20<sup>th</sup> Academic Council Meeting**

The 20<sup>th</sup> meeting of the Academic Council of IISI-Jammu was held on January 29, 2025, under the chairmanship of Hon'ble Vice-Chancellor, Prof. B.U. Tripathi. The meeting was attended by statutory officers of the University, Heads of Divisions, designated members, and ex-officio member. A detailed list of participants is provided in Annexure-1.

In his opening remarks, Prof. Tripathi emphasized the pivotal role of subject delivery system in teaching, research, and extension, highlighting their direct impact on educational quality and the University's overall ranking. He underscored the necessity of adopting innovative teaching methodologies and integrating modern pedagogical approaches to address contemporary educational challenges. By combining these advancements with traditional strengths, he asserted, the University could significantly enhance the overall quality of education. Following his address, Dr. Avinash, Member Secretary and Registrar, IISI-Jammu presented the agenda items for discussion.

### **Agenda Item No. AC (20) 01**

#### **i. Confirmation of minutes of 20<sup>th</sup> Meeting of Academic Council**

The Member Secretary informed the house that the minutes of the 20<sup>th</sup> Academic Council meeting, held on May 1, 2024, had been circulated to all members via AUAcad/2024/207-002501-WL, dated July 5, 2024. As no comments or objections were received from any members, the following resolution was adopted:

**"Resolved that the minutes of the 20<sup>th</sup> meeting of the Academic Council, as circulated via: AUAcad/2024/207-002501-WL, dated July 5, 2024, were confirmed (Amen)."**

### **Agenda Item No. AC (20) 02**

#### **ii. Appointment of Professor of Practice and Adjunct Faculty.**

The Member Secretary informed the house that a committee had been constituted under Order No. AUAcad/F-2023-24/1289-257, dated March 27, 2024. Based on the committee's recommendations and with the approval of the competent authority, guidelines for the appointment of "Professor of Practice" and the selection of "Adjunct Faculty" were ratified via Order No. AU/Brt/5/2024/2587/84427, dated October 27, 2024.

The National Education Policy 2020 (NEP-2020) seeks to transform higher education by emphasizing skill-based learning aligned with the evolving demands of society and the economy. The Hon'ble Vice-Chancellor informed the house that the University had recently repositioned the Professor of Practice under the Industry-Focused Category to strengthen industry-academic collaboration and provide students with exposure to an industrial environment. The appointed faculty members are:

- 1. Dr. Sabreen Singh Rawat - Head of Market Development Unit, Government, Local Commercial Capacity & Community, Bayer Crop Sciences.
- 2. Mr. Sandeep Singh Mendis - Vice-President, Technical & Supply Chain, Rambha Beverages Pte Ltd., Jammu.

This initiative aims to bridge the gap between academic learning and industry practice, enhancing student practical knowledge and employability.

The Hon'ble members of the Academic Council unanimously adopted the following resolution:

"Resolved that

- The action taken regarding the engagement of Professors of Practice and Adjunct Faculty, as per guidelines enclosed via Order No. AIA/IE/2024-25/0148-9527 dated October 31, 2024, is hereby ratified.
- The engagement of two Professors of Practice in the University, namely Dr. Ranjith Singh Rao and Mr. Rishabh Singh Naikra, is authorized and recommended to the Board of Management (BoM) for approval (Annexure-B).

Agenda Item No. 02 (B) 03

: Admissions to UG and PG programmes for academic session 2024-25

The Member Secretary informed the members that the University conducted admissions for various undergraduate and postgraduate programs for the academic session 2024-25 through SAMASTI-J-CET-2024, as per Notification No. AIA/Resd. 101/2024, dated May 8, 2024. The admissions under the CBT quota were conducted through J-CET counseling, while the NC quota was filled through non-counseling via NC counseling. Besides this, three foreign students were also admitted to the supplementary seats under the CCR following counseling.

The Hon'ble members of the Academic Council unanimously adopted the following resolution:

"Resolved that the admissions granted in various UG and PG programs for the first semester of the academic session 2024-25 are hereby approved."

Agenda Item No. A0 G0 04

: Inclusion of B.Sc. (Hons.) Horticulture/Faculty B.Tech. Biotechnology as an Eligibility Qualification for M.Sc. in Genetics and Plant Breeding

The Dean, Faculty of Agriculture proposed revising the eligibility criteria for admission to the PG program in Genetics and Plant Breeding to align with ICMR guidelines. In response, the Director of Research suggested implementing similar revisions to the disciplines of Biotechnology and Plant Pathology.

The Hon'ble members of the Academic Council unanimously adopted the following resolution:

"Resolved that the revised eligibility criteria for admission to the B.Sc. (Ag.) programs in Genetics and Plant Breeding, Biotechnology, and Plant Pathology are hereby adopted as follows:

- B.Sc. Ag./Hort. / Forestry or B.Sc. (Hons.) Agriculture / Mycotechnology / Forestry / B.Tech. (Biotechnology)."

**Agenda Item No. AC 129-03****i Accreditation of Teachers' Qualifications to Faculty**

The Honorable Governor invited the Board to consider the faculty grants to the Master's Institute under Order-in-Council A.L.2003-02324P-HR057-2003, dated October 21, 2003.

St No.	Name of Person	Position/Sector
1	D. Farid Khan, Associate Professor	Director of the Cultural Management University of Regina
2	D. P. Jay Pillai, Associate Professor	Chair of Indigenous Studies

The Honorable members of the Academic Council voted to amend the following resolution:

"Resolved" that the appointment of faculty members, as granted with Memorandum A.L.2003-02324P-HR057-2003, dated October 21, 2003, is hereby ratified.

**Agenda Item No. AC 129-05****i Permanence for engaging M. Jow, et al. of contracts  
Teaching faculty on academic arrangement basis in the  
discipline of Agricultural Economics**

The Head of Agricultural Economics requested the Board to grant permission for the engagement of one (1) contractual faculty member on an academic arrangement basis in view of the teaching requirements in the discipline of Agricultural Economics. The Honorable members of the Academic Council unanimously adopted the following resolution:

"Resolved" that permission is granted for the engagement of one (1) contractual faculty member on an academic arrangement basis in the discipline of Agricultural Economics.

**Agenda Item No. AC 129-07****i Renaming of Diploma course in Agriculture to be  
renamed as DIPLOMA IN AGRICULTURE (ONE YEAR)**

The Dean, Faculty of Agriculture, presented changes to the Diploma in Agriculture titled in the Policy to Diploma in Agriculture (One Year). The rationale behind the proposal is to review diploma standardly by the Ministry prior to 2006 or a two-year diploma program for students writing the test years from the B.Sc. (Hons.) Agriculture program under HEP 2006.

The Honorable members of the Academic Council approved against the following resolution:

**Rejected**

\* Resumption of Diploma course in Agriculture to renamed as  
DIPLOMA IN AGRICULTURE (ONE YEAR);

- + Minorisation of Diploma course in Horticulture be renamed as DIPLOMA IN HORTICULTURE (ONE YEAR)

Agenda item No. AC/26/08

: Permission to appear in the final minor examination during ensuing year (Diploma course in Agriculture) and postpone duration of the course to be extended upto three years.

The Director, Faculty of Agriculture proposed that the permission be granted to the students of diploma courses in agriculture to appear in the final minor examination during ensuing year and postpone duration of the course to be extended up to three years.

The Honorable Members of the Academic Council has adopted the following resolution:

"Resolved that the permission to appear in the final minor examination during ensuing year (Diploma course in Agriculture) and postpone duration of the course is extended upto two years".

Agenda item No. AC/26/09

: Revision of Educational Tuition Fee from ₹1025/- to ₹1800/-

The Member Secretary informed the Council that the Educational Tuition fee would be increased to ₹. 10,000/- and charged in split instalments before the commencement of the 7th semester; in addition to the regular semesters. Mr. Sugunan Prasath, the student representative suggested that the revised fee structure should apply only to students entering from the academic session 2020-21 onwards.

The Honorable members of the Academic Council unanimously adopted the following resolution:

"Resolved that the Educational Tuition fee for undergraduate students will be enhanced to ₹. 10,000/- effective from the academic session 2020-21."

Agenda item No. AC/28/08

: Functioning of AMS (Academic Management System) in hybrid mode for B.Tech & A.I. degree programmes.

The Director of Education informed the Council that registration costs for PG and Ph.D. students would be halved initially. After reviewing the functioning of the Academic Management System (AMS), the Honorable Pro-Chancellor directed that One Computer programme has to be installed with the Joint Registration Office to enhance and user friendly AMS for administration.

Agenda Item No. AC (20)11	Implementation of Veterinary Council of India, Regulations in totality including Annexure-I of Chapter VI.
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The Member Secretary informed the house that the DGP (veterinary) Faculty of Veterinary Sciences & Animal Husbandry had recommended implementation of VPI in favour of teaching staff of FVAS, & AII, SHUADT, Jammu.

The Honorable Members of the Academic Council has adopted the following resolution:

**"Resolved that implementation of VPI in favour of teaching staff of FVAS & A.I.I. SHUADT, Jammu was approved and further recommended to BoM for deliberation and approval."**

Agenda Item No. AC (20)12	Veterinary Teaching Assistantship
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The Member Secretary informed the house that the Board of Studies, Faculty of Agriculture, in its DGP meeting recommended that Ph.D. students upon completion of their course work should be allowed voluntary teaching assignments, with a certificate of teaching to be provided to these students.

The Honorable Members of the Academic Council has adopted the following resolution:

**"Resolved that Ph.D. students after completion of their course work be allowed for voluntary teaching assignments and certificate of teaching shall be given to such students by Dean of Concerned Faculty."**

Agenda Item No. AC (20)13	Modified courses for Diploma in Agriculture (One Year)
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The Member Secretary informed the house that the DGP (veterinary) Faculty of Veterinary Sciences & Animal Husbandry recommended the modification in courses for One year Diploma in Agriculture as:

Modified courses for two terms:

1st term or academic Block Courses (74 credit)

Introductory Anatomy

Soil and Pedology

Insect pests and Diseases of Agricultural Crops

Mulch crop cultivation and Organic production

2nd term or Block Courses (15 credit hrs.)

Seed Production

Enterprise Approach in Agriculture

## **Agenda 9**

### **Geocodes of Organic and Natural Farming**

### **Marketing and Value addition in Agriculture**

### **Industrial Farm Machinery**

The Honorable Members of the Academic Council has adopted the following resolution:

**"Resolved that the modified criteria for the Diploma in Agriculture (One-Year) as outlined above, are approved for implementation."**

## **Agenda Item No. AC (26)(12)**

### **Eligibility Criteria for Admission to Master's Degree Programmes in Agriculture**

Deva FOA proposed that the eligibility criteria for admission to Master's degree programmes in Agriculture through the SKUNST-JUDET/FOA needs to be revised. As such;

- A 4-year (12+2+3) or 6-year (12+6) undergraduate degree in Agriculture as essential requirement for admission to the Master's degree programme in Agriculture.
- Candidates who have completed a 3-year Bachelor's degree programme are not eligible to admissions.

The Honorable Members of the Academic Council has adopted the following resolution:

**"Resolved that**

- a 4-year (12+2+3) or 6-year (12+6) undergraduate degree in Agriculture shall be the essential requirement for admission to Master's degree programmes in Agriculture. However, candidates who have completed a 3-year Bachelor's degree programme are eligible for admission only in **Sustainable discipline in Faculty of Agriculture**"

## **Agenda Item No. AC (26)(13)**

### **Introduction of French and German Courses as per IIMP 2020 (Compulsory Non Credit courses)**

The Member Secretary proposed the introduction of French and German as compulsory non credit courses for students at the university. The courses will be conducted as follows:

#### **1. French Language Courses:**

- French Proficiency Course-I FPC-507 (1+0)
- French Proficiency Course-II FPC-508 (1+0)

#### **2. German Language Courses:**

- German Proficiency Course-I DPC-509 (1+0)
- German Proficiency Course-II DPC-510 (1+0)

The Honorable Members of the Academic Council has adopted the following resolution:

"Resolved that Research and Sandhik courses (Disciplinary-courses) as outlined above, be introduced in the university curriculum as per NEP 2020, with the duration cycles provided in Annexure IV."

**Agenda Item No. AC (2015)**

- i. Revision of the Guidelines for Masters and Ph.D. Sandhik/Bilateral programmes and students nominated for Research work by other Universities/Institutions.

The Member Secretary informed the house that the "Guidelines for Masters and Ph.D. Sandhik/Bilateral Programs and Students Nominated for Research Work by Other Universities/Institutions" were issued with Reference No. AJU/T/524/257/258/275/88, dated July 25, 2021.

The Hon'ble members of the Academic Council unanimously adopted the following resolution:

"Resolved that the "Guidelines for Masters and Ph.D. Sandhik/Bilateral Programs and Students Nominated for Research Work by Other Universities/Institutions" as issued in the aforementioned reference was ratified (Annexure- I)."

**Agenda Item No. AC (2015)**

- i. Online Thesis Visa-Voce of Masters and Ph.D. Theses and online oral Comprehensive Examinations of Ph.D. students.

The Member Secretary informed the house that the online Visa-Voce examination for PG and Ph.D. students of the University will commence in the second semester of the academic year 2024-25 (i.e., February 7, 2025). The Hon'ble Vice-Chancellor directed that the modalities and guidelines for conducting the online Visa-Voce examinations be formulated.

The Hon'ble members of the Academic Council unanimously adopted the following resolution:

**Resolved that:**

- Thesis Visa-Voce for Master's and Ph.D. students shall be conducted through online mode.
- The Oral Comprehensive Examination for Ph.D. students shall also be conducted through online mode.
- The Director of Education shall frame the modalities and guidelines for conducting online Visa-Voce examinations for PG/Ph.D. students."
- The same shall be come into effect from 2<sup>nd</sup> semester of Academic year 2024-25, i.e., 01-02-2025."

The Director, Institute of Biotechnology proposed the introduction of a postgraduate degree program, M.Tech. (Biotechnology), starting from the academic session 2025-26. Recognizing the growing need to redefine postgraduate education to meet emerging market demand and specialized job opportunities at both national and international levels, the introduction of the M.Tech. (Biotechnology) programme has become a necessity. The Institute proposes academic resources (Rs. 1000000/-) infrastructural to support the requirements of the new degree programme.

The detailed Course Catalogue is provided in Annexure-#.

The Hon'ble Members of the Academic Council has adopted the following resolution:

**Resolved that:**

- The M.Tech. Biotechnology degree shall be offered by the Institute of Biotechnology from academic session 2025-26 with Minimum Duration of 4 Semesters (2 Years).
- Proposed Max Capacity: 10 Students per academic year (Self-financed, PFR 1,00,000/- per year).
- Eligibility: The candidates must hold a minimum 4-year undergraduate degree in one of the following disciplines: B.Tech. (Biotechnology)(B.Sc. Biotechnology)(B.Sc. (Micro) Biotechnology)(B.Sc. (Micro) Agriculture)(B.Sc. Horticulture)(B.Sc. (Micro) Botany).
- Admission Procedure: Admissions to the M.Tech. (Biotechnology) programmes will be based on Merit in the entrance exam conducted by the University (SKUST-J CET).

The Member Committee informed the House that the University has already adopted the recommendations in implementing the ICAR Soil Health Committee Report during the academic years 2024-25, as per Minutes of the A.U.D.G.B.I.C.P. dated October 10, 2024. The Director, Institute of Biotechnology proposed that the eligibility criteria for admission to the M.Tech. Biotechnology program should be revised in its said ICAR former/prior greater inclusivity and opportunities for students.

The Hon'ble Members of the Academic Council has adopted the following resolution:

**Minutes of the**

- i. The adoption of the ICAR Shik Darbar's Committee Report for restructuring of undergraduate programmes offered by the university except B.Sc. & A.Y.U. as modified with Memorandum No. AGM/2024/25/2024/048 dated 10/03/2024, effective from the academic year 2024-25, is hereby ratified.
- ii. The eligibility and mode of admissions for entry into the PG programmes shall be as per SKULAST-J norms.

Sl. No.	Programme	Eligibility
01.	B.Sc. (Hons.) Agriculture	10+2 with PCB (Biology or Agriculture) (P, C, B and A in Physics, Chemistry, Mathematics and Agriculture, respectively).
02.	B.Sc. (Hons.) Horticulture	
03.	B.Tech. Biotechnology	
04.	B.Tech. Dairy Technology	
05.	B.Tech. Agricultural Engineering	10+2 with PCB or A (P, C, Matc (Physics, Chemistry, Mathematics or Agriculture))

**Agenda Item No. AC/2025**

| Inclusion of Horticulture as Major Subject Group in SKULAST-J norms Examination (SET-PG) for admissions to various under degree programmes.

The Chair, Horticulture & Forestry proposed that the University conduct a Common Entrance Test (CET) for admissions to postgraduate programme under the following eight Major Subject Groups. With the first batch of B.Sc. (Hons.) Horticulture graduating in the academic session 2024-25, there is a need to include Horticulture as a Major Subject Group in the CET starting from the academic session 2025-26. The House directed that this matter be deliberated in the PG Board of Studies before being presented to the Academic Council.

**Agenda Item No. AC/2025**

| Inclusion of B.Sc. (Hons.) Horticulture degree in eligibility for admissions to various PG courses.

The Chairman directed that this matter must be deliberated in PG board of Studies before presenting it to the Academic Council. The agenda shall be discussed with concerned Heads of Divisions, Dean and Director M.C.ation in case of any backlog.

**Agenda Item No. AC (2022)**

To note the synopsis of Ph. D degree programme for external evaluation through concerned Dean of the faculty.

The Hon'ble Members of the Academic Council has adopted the following resolution:

"Resolved that the synopsis of Ph. D degree programme for external evaluation be noted through concerned Dean of the faculty to Director (Academics)"

**Agenda Item No. AC (2022)**

**Syllabus for Course No. IPE- 613 Research Methodology and Publication Ethics in IPE-2022-23**

The Hon'ble Members of the Academic Council has adopted the following resolution:

"Resolved that Syllabus for Course No. IPE- 613 Research Methodology and Publication Ethics in IPE-2022-23 were approved."

**Agenda Item No. AC (2022)**

**Rules / regulations for University Convocation**

Ministry of Education proposed that the following Rules / regulations for University Convocation:

No.	Designation/Faculty	Description	Watermark Colour	Multi-Site Colour
1	Chair, Guest; Chancellor, Pro-Chancellor, Vice-Chancellor, VVIPs, Hon'ble Guests Registration date	Water mark: Name, Katz and Pajama, Katz with Name, color (Multi)	Watermark: green Watermark: black (Statutory year)	Maroon with golden border and University logo and watermark text (Logo style for front row on the Date)
2	University Convocation Board & Management Members	Water mark: Name, Katz and Pajama, Katz with Name, color	Watermark: green Watermark: black (Statutory year)	Yellow with green border and University logo
3	Academic Members	Water mark: Name, Katz and Pajama, Katz with Name, color	Watermark: green Watermark: black (Statutory year)	Red with green border and University logo

	<b>Academic dress</b>	White shirt, white knee-length white skirt or trousers White blouse and skirt or trousers	<ul style="list-style-type: none"> <li>&gt; Light blue with University logo with one stripe for LL.B.</li> <li>&gt; Navy blue with University logo and two stripes for P.G.</li> <li>&gt; Royal blue with University logo and three stripes for P.D.</li> </ul>
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The Hon'ble Members of the Academic Council has accepted the following resolution:

"Resolved that the proposed Photo i規ule for University Commencement for degree recipients/students are approved".

Agenda item No. AC (20)08

► Dress code for students of the University

The Hon'ble Members of the Academic Council has accepted the following resolution:

"Resolved that the dress code for all the students admitted in the university shall be Blue or Navy Blue colour with university logo during the University Functions".

Agenda item No. AC (20)08

► Initiation of Students in Under Graduation

Dear, Hon'ble Chair and Hon'ble proposed Initiation of Students in Under Graduation. The Committee checked that the matter must be deliberated in PG Board of Studies before presenting in the Academic Council.

Agenda item No. AC (20)21

► File In Recognition of Contractual Teachers  
(Assistant Professor engaged in SGUAST) on  
Academics Arrangement basis

This matter has been debated for making the initial CFR and Financial implication will cover University by concerned Dean in consultation with the Controller, SGUAST-Jaipur.

**Agenda Item No. AC (36) 28**

**i. Creation of two posts of Assistant Professors one each in the disciplines of Mathematics and Nano-Technology.**

The Director, Institute of Biotechnology proposed the creation of two Assistant Professor positions, one in Nano-Technology and the other in Solid State, to support undergraduate and postgraduate teaching as well as associated research activities.

The Hon'ble members of the Academic Council unanimously adopted the following resolution:

"Resolved that:

- Two Assistant Professor positions (one in Nano-Technology and one in Mathematics) be created in the Institute of Biotechnology.
- The matter shall be placed before the Board of Management (BoM) for approval of the said postures."

**Agenda Item No. AC (36) 29**

**i. Holding of 3rd Convocation of BHUAST-Jamia and award of Degrees.**

The Hon'ble Members of the Academic Council has adopted the following resolution:

"Resolved that the degrees be awarded to the pass-outs in various programmes of the University as specified in Annexure-VII at the 3<sup>rd</sup> Convocation of the University and subsequently be presented during the upcoming Board of Management Meeting."

**Agenda Item No. AC (36) 30**

**i. Award of Certificates of Merit & Gold Medals during the 3rd Convocation.**

The Hon'ble Members of the Academic Council has adopted the following resolution:

**Resolved that:**

- Award the certificates of Merit to the deserving pass-outs in PG programmes M.Sc.(Agg)/Basic Sciences/Mathematics and Forestry/ Agril. Engineering/ B.T.B. & Ph.D. (Final Year) in Basic Sciences/ Mathematics and Forestry/ Agril. Engineering having secured an CGPA of 8.3 and above on the MAO scale in the 3<sup>rd</sup> Convocation of the University, as detailed in Annexure-VII.

- ii. Resolved that award Gold Medals to postgraduate students achieving the highest CGPA in M.Sc. (Ag), Basic Sciences, Horticulture and Forestry, Agricultural Engineering, and M.Sc.Ed. programs, as outlined in Annexure-II.
- iii. Resolve that award the Professor Arun Gupta Memorial Gold Medal to keeper of the M.Sc. Programme in the discipline of Vegetable Science, for outstanding achievement in the field of Vegetable Science as detailed in Annexure-II.
- iv. Award Gold Medals to the students having demonstrated exceptional merit and met all the requirements in accordance with Chapter 7, Clause 7.2.1 (a) of APE, 2008 of SRINUST-Jammu, in B.Sc.(Agri) Agriculture(B.T.Sc.), B.A.M., and B.Sc. (Hons.) Botanyology programmes as detailed in Annexure-II.

Agenda Item No. A2 (20) 19 : Inclusion of Mathematics course for students having Biology (PCB) at 11+2.

The Hon'ble Members of the Academic Council has adopted the following resolution:

"Resolved that the Basic Mathematics course (MATHE-112, As a core course, Annexure-II) be included as a compulsory course for students admitted to the B.Tech. (Dairy Technology) program with a PCB background at the 11+2 level."

Agenda Item No. A2 (20) 20 : Upgradation of Faculty of Basic Sciences into Faculty of Basic Sciences & Humanities.

The Dean, Faculty of Basic Sciences has submitted a proposal to strengthen and re-designate the Faculty as the 'Faculty of Basic Sciences and Humanities.' The National Education Policy (NEP-2020) envisions establishing departments in disciplines such as Languages, Mathematics, Statistics, Pure and Applied Science, Sociology, and other related subjects to foster a multidisciplinary and stimulating educational environment in higher education institutions.

The Hon'ble Members of the Academic Council has adopted the following resolution:

"Resolved that the upgradation of the existing Faculty of Basic Sciences to the Faculty of Basic Sciences and Humanities has been approved as detailed in Annexure-II and recommended to the Board of Management (BoM) for further deliberation."

Agenda Item No. AC (2003)

Registration of students to SY/Si & A/H degree programmes by a Polytechnic College through a centralized counselling system.

The matter has been dropped.

Agenda Item No. AC (20) 24

Modification of course No. RAVES AA-421 and RAVES AA-423 (Agro-Industrial Attachment MPOs Activities) in order to fulfill the minimum requirement of one month course duration of RAVES AA-423.

Head Division of Agricultural Extension Education proposed the modification of course No. RAVES AA-421 and RAVES AA-423 (Agro-Industrial Attachment MPOs Activities) in order to fulfill the minimum requirement of one month course duration of RAVES AA-423.

The Honorable Members of the Assembly Council has adopted the following resolution:

"Resolved that

- that the credit hours of course No. RAVES AA-421 and AA-423 are decreased from 6-10 to 6-5; hence, the credit hours of the subject in State/College/HQ Research Project Attachment is increased from 0-2 to 0-3;
- that credit hours of RAVES AA-423 (Agro-Industrial Attachment MPOs) shall be increased from 0-3 to 0-5 in order to fulfill the minimum requirement of one month course duration of Industrial Attachment of RAVES AA-423 in RAVES;
- "Score recognition in the credit hours of non-matriculated courses shall be applicable only to the undergraduate students who are studying syllabus of 9<sup>th</sup> Doctor's Committee Report."

Supplementary agenda item No. 40 (B)  
Initiative of RCC Countries to develop  
Habitat, Agriculture, Agroforestry, Biodiversity and  
Dove Trial Areas.

The 2017 Management Academy: Creating a Sustainable Future for Our Children

“WHAT YOU THINK”

- iii. Introduce a 3-credit-hour NCC course in the second and third years prior to switching to the B.Sc. program in Biotechnology, Microbiology, Agriculture, Agriculture/Engineering and Dairy Technology.
  - iv. Introduce a 3-credit-hour NCC course as an option during the first four years of the B.Sc. & A.Rt. degree program.
  - v. Students may choose between NCC and MCC based on their interests and career goals.

#### The relationship with the old "order"

decker  
Rechner  
Wörter des Worts

Pawpaw  
Spurred  
Anthonia spicata

# **Annexure-I**

**Shri-e-Kashmir**  
**University of Agricultural Sciences & Technology of**  
**Jammu**



**LIST OF PARTICIPANTS-20<sup>TH</sup> MEETING OF  
ACADEMIC COUNCIL**

1.	Prof. B.N. Tripathi Vice Vice Chancellor	Ex-Officio Chairman
2.	Dr. Anil Kumar Rector and Dean P.A.	Member Secretary
3.	Dr. Balwinder Singh Deputy Secretary and Director of Administration	Member
4.	Dr. Sushil Kumar Gupta Director Research	Member
5.	Dr. Anuradha Saini Director Extension	Member
6.	Dr. Neeraj Khar Director Planning & Monitoring	Member
7.	Mr. Madan Lal Clerical Officer	Member
8.	Dr. Ravinder Kumar Dean, F.V.S. & A.H., R.S.P.W.	Member
9.	Dr. S.L. Jaiswal Dean FSSC	Member
10.	Dr. Vilas Tarkar Dean FSSM	Member
11.	Dr. Sudhakar Dwivedi Dean Faculty of Natural	Member
12.	Dr. J.S. Sehgal Dean, FaPT	Member
13.	Dr. Sudesh Kumar Dean, FAPP	Member
14.	Prof. B.E. Samra, Ex-University Librarian	Member
15.	Dr. R.K. Salgotra, Director, Institute of Biotechnology	Member
16.	Dr. Sandeep Kumar Srivastava, Sod Bureau, JKHAUST-Katra	Ex-Officio Member
17.	Dr. A.P. Singh Prof & Head, Division of Agronomy	Member
18.	Dr. Parvez K. Sharma Prof & Head, Division of Agro-Biofertilizers and AIM	Member

29.	Dr. Vinod Oberoi Prof & Head, Division of Agricultural Economics Education	Member
30.	Dr. Pankaj Dayal Prof & Head, Division of Plant Breeding and Genetics	Member
31.	Dr. Vinay Gupta Prof & Head, Division of Plant Pathology	Member
32.	Dr. Kanchan Jain Prof & Head, Division of Soil Science	Member
33.	Dr. R.K. Gupta Prof & Head, Division of Taximetry	Member
34.	Dr. Ashok Kumar Prof & Head, Division of Veterinary Clinical Sciences	Member
35.	Dr. Anuradha Kaur Prof & Head, Division of Livestock Production Management	Member
36.	Dr. Kavita Sharma Prof & Head, Division of Veterinary Anatomy	Member
37.	Dr. Vinod Dayal Prof & Head, Division of Veterinary Physiology and Biochemistry	Member
38.	Dr. R.K. Sharma Prof & Head, Division of Animal Nutrition	Member
39.	Dr. S.C. Upadhyay Prof & Head, Division of Veterinary Animal Husbandry Extension Education	Member
40.	Dr. Arvind Kumar Prof & Head, Division of Livestock Products Technology	Member
41.	Dr. Usha Sharma Prof & Head, Division of Veterinary Gynaecology and Obstetrics	Member
42.	Dr. H.R. Shekhar Prof & Head, Division of Veterinary Surgery and Pathology	Member
43.	Dr. Nadeem Shaikh Prof & Head, Division of Veterinary Medicine	Member

34	Dr. N.K. Pandey Prof & Head, Division of Pharmacology and Toxicology	Member
35	Dr. Anil Kumar Yatole Prof & Head, Division of Veterinary Parasitology	Member
36	Dr. Parvez Qureshi Prof & Head, Division of Veterinary Pathology	Member
37	Dr. B.M. Shukla Prof & Head, Division of Veterinary Public Health and Epidemiology	Member
38	Dr. D.P. Joshi Prof & Head, Division of Animal Genetics and Breeding	Member
39	Dr. Ashok Kumar Prof & Head, Division of Livestock Farm Economics	Member
40	Dr. Suresh Verma Prof & Head, Division of Fisheries	Member
41	Dr. Manoj Gupta Prof & Head, Division of Biotechnology	Member
42	Dr. Rajendra Singh Prof & Head, Division of Microbiology	Member
43	Dr. Gurdev Singh Prof & Head, Division of Plant Physiology	Member
44	Dr. I.P. Singh Prof & Head, Division of Power Machinery and Power Engineering	Member
45	Dr. R.K. Srivastava Prof & Head, Division of Soil and Water Engineering	Member
46	Dr. Prashant Bhakat Prof & Head, Div. of Food Science and Control for Organic & Natural Farming	Member
47	Dr. Sudheep Chandra Prof & Head, Division of Vegetable Science	Member
48	Dr. Jagdish Chandra Prof & Head, Division of Pest-Harm & Management	Member

49.	Dr R.K. Pandey Prof & Head, Division of Environment and Landscaping	Member
50.	Dr Sandeep Singh Prof & Head, Division of Silviculture and Agroforestry	Member
51.	Dr L.M. Gupta Prof & Head, Division of Forest Products and Utilisation	Member
52.	Dr Sanjukta Kumar Prof. & Head, Division of Dairy Technology	Member
53.	Dr. Vilas Shinde, Sr. Scientist, Research, IARS, Raigarh	Member
54.	Dr. Vijay Kumar, Chief Scientist IERSSS, Raigarh	Member
55.	Dr. Hemant Singh, NIPS, Udaipur	Member
56.	Dr. Suresh Chandra Professor & Head, Div. of Biochemistry	Member
57.	Dr. K.K. Sood (Professor) Agronomy	Member
58.	Dr. Sudha Gupta (Professor) Plant Pathology	Member
59.	Dr. Nandan Sati (Professor) Vegetation Nutrition	Member
60.	Dr. Venkatesh Gupta (Professor) Agronomy	Member
61.	Dr. Davender Sharma (Professor) Entomology	Supervisor
62.	Dr. Rajendra Bhushan (Professor) Agronomy	Supervisor
63.	Mrs. Sugandha Choudhary (S-22-D-511-A) Soil Science	Member

## **Annexure-II**

**25<sup>th</sup>**  
**MEETING**  
**OF**  
**ACADEMIC COUNCIL**

**MINUTES**



Shri E. Raghavendra  
University of Agricultural Sciences & Technology of Jammu  
Chatto, Jammu-180008 (J&K)

# 25<sup>th</sup>

## ACADEMIC COUNCIL MEETING

# MINUTES



*Shor-e-Kashmir*  
University of Agricultural Sciences & Technology of Jammu  
Chatha, Jammu - 180009

**Minutes of 204 meeting of Academic Council**

The 20<sup>th</sup> meeting of the Academic Council was convened under the chairmanship of Dr. S.S. Tripathi, Hon'ble Vice-Chancellor, KIIST-Jamuna, on the 17<sup>th</sup> May 2024, in the Conference Hall, KIIST-J, Dhaka. The list of participants is enclosed in Annexure C. The meeting commenced with a warm welcome by Prof. Sudal Kumar Gupta, Registrar, KIIST-Jamuna and Member Secretary, who extended greetings to the Chairman, Committee, Convener, and all members present in his opening remarks. Dr. S.S. Tripathi, Hon'ble Vice-Chancellor, said that the Academic Council plays an important role in formulation of regulations for governing the conduct of the university. He emphasized that the academic curriculum, faculty and students are the important determinants threatening the excellence of an institute. Dr. Tripathi said that enhancing quality of human resources is a prerequisite for implementing and upgrading academic programmes, developing technologies, entering international arrangements to face challenges and harness opportunities in the agriculture sector. He stressed the need for improvement in academic performance of the University, for nurturing competency in the students to face multifarious challenges of life. The need for student exchange programme at the national and international level for promoting intersectoral education system was also emphasized. The education system should be tailored so as to equip the new graduates with subject competency, self-motivation, positive attitude, agribusiness skills, knowledge of computers and information technology, and communication skills. He encouraged a shift towards a more engaging and participatory learning environment, fostering a culture of continual improvement. He conveyed confidence to the faculty of KIIST-Jamuna, expressing belief in their ability to achieve successful changes for making students to compete with them become trend-setters of the University.

The Registrar presented the agenda after seeking permission from the Chairman. The following agenda items were addressed upon:

**Agenda Item No. AC (20) 1 : Confirmation of minutes of 24<sup>th</sup> Meeting of Academic Council**

The Member Secretary approved the hours that the minutes of the 24<sup>th</sup> meeting of the Academic Council held on 04-12-2023 were circulated among the members via letter no. AC/J/Decd/ 2023-24/7-08/3773-6123, dated 03-12-2023 (refer to Annexure D). All members unanimously agreed to confirm the minutes of the

24<sup>th</sup> Academic Council meeting. Consequently, the House adopted the following resolution:

'Resolved to the session of the 24<sup>th</sup> Academic Council meeting, witnessed via video conference 2023-24/05/2023-0423, dated 08-12-2023, where confirmed.'

**Agenda item A0(16)3      Dual Degree Programmes with Western Sydney University – Australia**

Shri/Smtm. University of Agricultural Sciences & Technology of Jammu (University of Jammu & Kathua) has entered in to MoU with Western Sydney University – Australia for offering an opportunity of Dual Degrees for the Undergraduate and Postgraduate students in the following programmes:

- B.Sc. (Hons) Agriculture
- B.Sc. (Hons) Horticulture
- B.Sc. (Hons) Biochemistry

The number one enhancement in length and thickness resolution was adopted.

'Resolved the Institutionalisation of the Dual Degree Programmes with Western Sydney University – Australia from academic session 2024-25, with following modalities:

**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 regarding the student BEATY programme (Boreal Entrepreneurship Awareness Development Project) offered in final year of degree programme in State Agriculture Universities (SAUs) with project students attachment in Western Sydney University. Two graduating students under this arrangement will be awarded two undergraduate degrees: one from Shri/Smtm. University of Agricultural Sciences & Technology of Jammu and another from Western Sydney University, Sydney, Australia. The students obtaining degree from Shri/Smtm. 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 leading world universities, organizations / regions where the NWU is recognized for further studies.

The dual degrees offered will be as per the following specifications:

Phase	Degree Authorization
First Degree from Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu	Second Degree from NWU Bachelor (Honours)
Agriculture	B.Sc. (Hons) Agriculture B.Sc. (Agri)-Food
Entomology	B.Sc. (Hons) Entomology B.Sc. (Agri)-Food
Biotechnology	B.Tech. Biotechnology B.Sc. (Honours)

The students opting for this dual degree arrangement will be attached to Western Sydney University, NSW to their campus at Sydney International for complete duration of first year of their degree programme (70% and 30% 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 of their own, however, work permit as per the rules of the Western Sydney University will be provided to the students for partially covering their living costs. Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu has formulated a Committee for International Study programmes which will provide all the details and documents to the willing students by the respective Deans, wherein these programmes are proposed to be taken up in the first instance. A representative from Western Sydney University will provide all the logistic supports for furnishing application forms and completing other due formalities.

This dual degree (D.V.T) will make students eligible for direct admission into the M.Sc. programmes (3+1+1) of Western Sydney University with waiver

ity of first year enrolling 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 at M.Sc. (Master in Research) and PhD (Ph.D) level of Mysoregion with Western Sydney University – Australia

#### 1. M. Sc. (Master in Research)

Shri Chikkaudur University of Agricultural Sciences & Technology of Jammal shall offering the option of dual degree for the post graduate students as per the following details of the M. Sc. (Master in Research) programme:

The students under this programme will get two degrees, one Master of Science (M.Sc.) and equivalent Registered discipline (SCSIST-Jammal) and second Master of Research (M. Res.) at WSU-Western Sydney University. The opting students shall have to complete course work at SCSIST-Jammal and the research work will be carried out in Western Sydney University. Mytrey shall require prior approval of confirmation of Shrikrishna (2005). There will be two advisors, one from SCSIST-Jammal (India) and second from WSU-Sydney (Australia). The maximum duration at WSU will be for one year. The student will have to submit thesis by October month (maximum 8000 words) and send to the WSU-Sydney (Australia).

Following provision for tuition fee waiver during attachment with Western Sydney University is also available.

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.

79% to 78% 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 CGPA) and stay of Western Sydney University during their dual

degree programmes. However, merit 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 SARDUs 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 global leading universities/ organisations/ regions where the WDU is recognised including PhD admissions in WDU-Sydney (Australia).

### 3. PhD ( Doctor of Philosophy)

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu shall be 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 SARDUST-Jammu and second PhD at WDU-Western Sydney University. The opting students have to complete course work at SARDUST-Jammu and the research work will be carried out in Western Sydney University, Sydney (Australia). There will be two advisors, one from SARDUST-Jammu (India) and second from WDU-Sydney (Australia). The student will have to submit two PhD theses one to SARDUST-Jammu (India) and second to the WDU-Sydney Australia.

Pertaining provision for tuition fee waiver during attachment with Western Sydney University is also available.

DMAA of 8.00 or higher or higher will lead to 100% tuition fee waiver for 12 months.

DMAA of 5.00-8.00 will lead to 75% tuition fee waiver

DMAA of 5.00-3.00 will lead to 50% tuition fee waiver

The students seeking degree from Shrikrishna University of Agricultural Sciences & Technology of Jammu under this arrangement will have eligibility for placements/job chances for all B.Sc's in India including Shrikrishna University of Agricultural Sciences & Technology of Jammu. The degree offered by the Western Sydney University, Australia will have equivalency in all leading universities/ organizations/ regions for placements/job chances where the WSU (Australia) is recognized.

The interested students have to pay for their study (tuition fee) for selected duration per year partially (30%) and rest of Western Sydney University during their dual degree programme. However, work permit as per the rules of the Western Sydney University will be provided to the student for partially funding their living costs. Shrikrishna University of Agricultural Sciences & Technology of Jammu has formulated a Committee for International Study programmes which will provide all the details and assistance to the willing students. A representative from Western Sydney University will provide all the logistic supports for submission of application forms and other documents.

Note: Tuition fee waiver shall be applicable as per the terms and conditions of the western Sydney University.

Agenda Item No. A2 [24] 2 : Ratification of the Amendments in sub clause 4.3.6.4 (b) and 6.10 of RRI 2020 and Amendments to be incorporated under Clauses 6.13.1 (a) and 6.13.2 (a)

Director Education had issued memo no AII/DE/2023/F-371/2423-22 dated 5/2/2024, AII/DE/2023-24/F-37/2426-46 dated 5/2/2024 and No AII/DE/2024-25/F-38/2427-26 dated 13-01-2024 for the amendments in sub clauses 4.3.6.4 (b) and Clause 6.13 of RRI 2020, respectively and proposed amendments were incorporated under Clauses 6.13.1 (a) and 6.13.2 (a) of RRI of 2020 at SOCIART-Jammu. The matter was discussed in detail in house and following resolutions were adopted:

\*Decided to:

\*The action taken vide order number AII/DE/2023/F-371/2423-22 dated 5/2/2024, AII/DE/2023-24/F-37/2426-46 dated 5/2/2024 and

ANU/2008/2024-25/F-08/197-18 ISSUE 15-04-2009 for the amendments in Clause 4.2.6.4 (b) p to q) and clauses 4.12.47 RMC 2000, respectively has been confirmed.

Approved the amendments were incorporated under Clauses 4.12.1 (m) and 4.12.2 (p)

(c) Master Programme:

A soft copy of the thesis may journey which be submitted to Director Education for external evaluation.

A hardcopy copy of the approved synopsis of the student shall also be submitted along with the soft copy of the thesis.

The soft copy of the thesis submitted by a student shall be sent to one External Examiner for evaluation who shall be appointed by the Director Education from a panel of at least 3 names recommended by the Dean and of 10-12 recommended by Head of the Division concerned, in consultation with major advisor (PG Form 10).

(d) Ph.D. programme:

A soft copy of the thesis may journey which be submitted to Director Education for reading it for external evaluation.

A hardcopy copy of the approved synopsis of the student shall also be submitted along with the soft copy of the thesis.

The soft copy of the thesis submitted by a student shall be sent to two External Examiners for evaluation who shall be appointed by the Director Education from a panel of at least 3 names recommended by the Dean and of 10-12 recommended by Head of the Division concerned, in consultation with major advisor (PG Form 10).

Agenda Item No. A0 (20) 4 : Amendments Clauses 5.18(b) Publication of one research paper by Ph.D. scholar and Clause 5.2. Guidelines for Ph.D. Synopsis, respectively

Chairman Examination vide w.e.f. 2004-05/F-48/12 dated 19-04-2013 proposed the following amendment in Clauses 5.18(b) regarding the publication of one research paper by Ph.D. scholars and Clause 5.2 of Chapter 5 of the RMC 2000 regarding guidelines for Ph.D. Synopsis:

- [ii] Amendments in Clause 8.1B]] regarding the publication of one research paper by Ph.D. scholars

Clause 8.1B of JNU makes it mandatory for Ph.D. students to publish one research paper before submission of thesis. Clause 8.1B]] is reproduced as under:-

"A Ph.D. scholar must publish at least one research paper in refereed journal and make two paper presentations in conferences/seminars before submission of the dissertation/thesis for adjudication, and produce evidence for the same in the form of presentation certificates and/or reports."

Ph.D. students publishing the research paper from their thesis before submission has resulted in the publishing papers in journals of low repute. It has also been observed that the students submit paper to predatory journal. This is defeating the purpose for which the rule was created by the UGC and implemented in the University. To correct this unethical practice, the proposed amendment is made in Clause 8.1B ]] as under:

"A Ph.D. student must have published/examined one research paper (from his/her thesis work) in listed/reviewed/UGC listed/Impact Factor journal (Clarivate Database), before the submission of thesis for external evaluation, and produce evidence of published/accepted/under review of the research paper submitted. The journal should be preferably with IF/AF rating > 6.0 and not be in the UGC list of predatory journals. Besides, students should have made two paper presentations in conferences/seminars before submission of the dissertation/thesis for adjudication, and produce evidence for the same in the form of presentation certificates."

- [iii] Amendments in Clause 8.2 of Chapter 8 of the NIRI 2020 regarding guidelines for Ph.D. Synopsis

- i) Ph.D. student shall submit the synopsis of his/her research [FO Form 21] after informing synopsis committee in his/her Division. The synopsis committee of Ph.D. students shall not be organised later than four weeks of the research committee.
- ii) The student shall submit the synopsis (hard and soft copy) along with certificate of synopsis committee through Major Advisor & Head of the Division to the Director Education for external evaluation of the synopsis by the external expert, not below the rank of Professor with minimum 5 years as Professor or equivalent.
- iii) After receiving the comments from external expert, the student shall receive interpretation of the suggestions/comments after due deliberations in the advisory committee of the student.
- iv) Thereafter, the student shall submit the final synopsis to Director Education for approval. A checklist of changes incorporated or suggested by the external expert or referee shall be submitted with final synopsis through Major Advisor and Head of the Division to Director Education.

Date of submission of synopsis by the Major Advisor to the Head, shall be considered date of synopsis submission. The student shall not submit Major thesis earlier than one year of the synopsis submission date.

Note - Proposed: An honorarium of Rs. 1000/- synopsis to external expert for synopsis evaluation.

The minor was submitted in form to home and following modifications were done:

**Amendments made to**

A) Clause 4.18 (b) regarding the publication of one research paper by Ph.D student as:

"A Ph.D student must have published/unpublished one research paper from either their work in M.A/M.Sc/PG/PGC/other degree received (except PGDM journal/Chennai Angels) before the submission of thesis for external evaluation, and produce evidence of published/accepted/under review of the research paper submitted. The journal should be preference with ISSN rating > 8.0 and not be in the list of predatory journals. Besides, students should have made two paper presentations in conferences/journals before submission of the dissertation/thesis for adjudication, and produce evidence for the same in the form of presentation certificates."

(ii) Clause 8.2 regarding guidelines for Ph.D. Synopsis and are adopted:

Ph.D. student shall submit the synopsis of his/her research (PG) formally after offering synopsis seminar in major advisor. The synopsis seminar of Ph.D. however shall not be organized more than four weeks of the second semester.

The student shall submit the synopsis (finalized copy) along with certificate of synopsis seminar through Major Advisor & Head of the Department to the Director Education for external evaluation of the synopsis by the external expert, but below the rank of professor with minimum 8 years as professor or equivalent.

After receiving the comments from external expert, the student shall ensure incorporation of the suggestions/Comments after due deliberation in the advisory committee of the student.

Thereafter, the student shall submit the final synopsis to Director Education for approval. A check list of changes incorporated or suggested by the external expert or rehalal shall be submitted with final synopsis through Major Advisor and Head of the Institution to Director Education.

Date of submission of synopsis by the Major Advisor to the Head, shall be considered date of synopsis submission. The student shall not submit synopsis later than one year of the synopsis submission date.

**Note- Proposed:** An amendment of Rs. 1000/- synopsis to external expert for synopsis evaluation.

These amendments will come into effect from academic Session 2004-05."

#### **Agenda Item No. AC (20) 5 : Admissions to UG, PG, Ph.D programs for academic session 2003-04.**

The Member Secretary informed the house that the University conducted admissions for various UG, PG, and Ph.D. programs for the academic session 2003-04 through BHUAT-I CBT-2003. Subsequently, the University granted admissions to students recommended by VCU/CCAU for various programs. After detailed discussion, the following resolution was adopted:

"Resolved that the admissions granted to different UG, PG, and Ph.D. programs through BHUAT-I CBT for the academic session 2003-04 are approved."

#### **Agenda Item No. AC (20) 6 : Enhancement of fee and intake capacity for admissions to Undergraduate, Postgraduate, and Doctoral Programs for academic session 2004-05.**

The Director of Education proposed the enhancement of intake capacity for admissions to Undergraduate, Postgraduate, and Doctoral Programs, along with fee structure for the academic session 2004-05. To improve teaching and facilities within the Faculty of Veterinary Sciences and Animal Husbandry, the University plans to increase the number of seats under the F.V.Sc. B.A.Sc. sponsored quota by twelve (12) for the B.V.Sc. B.A.Sc. programs. This expansion can be made financially feasible and strengthen the University's financial position through the revenue generated from these additional seats.

The Director of Education also recommended a 10 percent increase in fee. Additionally, amendments have been made to the Jamsena and Jamuna Reservation Rules, 2003, as per S.O. 176 dated 13-03-2004. In accordance with the regulations enclosed in S.O. 176, the details of seats in each category were calculated.

The Committee recommended that the University should prepare a mechanism for the enrollment of Foreign Adjunct Faculty.

After detailed deliberations, the following resolution was adopted:

**Resolved to:**

- i. The University adopted the revised fee structure for the academic session 2024-25 or per GRR/2024-25.
- ii. The University adopted S.O. 175 dated 25-02-2024 in JNTU and Kasturirangan Rules, 2006, and consequently the fees matrix for academic session 2024-25 was modified as Annexure II.
- iii. 20% increase in Institute capacity of no subject to availability of candidates and availability of teaching faculty.
- iv. University to develop guidelines for Foreign Adjunct Faculty.

**Agenda Item No. AG [20] 7 : Amendment of sub-clause (j) under clause 6.2 for Make-up examinations . Under clause 6.2.L.1 of RRE 2020 (sub-clauses a-g) sub-clause (j) for Supplementary examinations, clauses 6.14.2.1 (g) of RRE 2020 of JNTUAC of JNTUA regarding allotment of major subjects for Masters and Doctoral students and others**

Dear Prof. w/o no. AII/J/Demo/Fel/24-25/P-128/326 dated 18/6/2024 submitted the following agenda items for discussion:

4. Amendment to sub clause (j) under clause 6.2 as mentioned in point number ii regarding Make-up examinations

**For PG students:**

Finally, no make-up examinations shall be allowed in lieu of the missed examinations. However, One may consider to allow make-up examination only for missed like term examinations under the following circumstances, i.e. Student's true hospitalisation in course of studies.

If you resolved thus:

"A student shall be allowed to appear in the mid-term examinations within 15 days of the conduct of the examination or course of study illness subject to production of medical certificates issued by fitness from Medical officer of the University (REGD/AST-J Medical Officer of the Govt. Hospital countermanded by Block Medical officer/Cheif Medical Officer).

- B. Permission to appear in the end term examination for missed and term examination for PG students in line with the provision of make-up examination of PG students notified in the notification no. 37 (Acad.) of 2024 dated 16/01/2024.

"Resolved that PG students may be allowed to appear in the end term examinations for missed and term examinations in line with the provision of make-up examination of PG students notified in the notification no. 37 (Acad.) of 2024 dated 16/01/2024.

"Resolved to the provision of make-up examination of PG students notified in the notification no. 37 (Acad.) of 2024 dated 16/01/2024 was adopted"

- C. Display of marks obtained in the failed course.

"Resolved that marks obtained in the failed course should be reflected in the semester report of the student."

- D. Marks released after rechecking of the end term examination answer sheet.

"Resolved to the word rechecking as written under clauses 4.21 c & b of RAI 2020 should be replaced with revoicing and marks obtained by a student shall be given and after revoicing of the end-term answer sheets shall be communicated to the student in person and columns reflecting the changes may be incorporated in the revised result proforma"

- E. Increase in the time duration of mid-term examination of UG courses from 1 hour to 1.50 hours.

"Resolved to the duration of the mid-term examination for undergraduate courses be extended from 1 hour to 1 hour and 30 minutes."

- F. Consideration of PG End term Examination.

"Resolved to the Deans of respective faculties shall issue date sheet with information to Controller of Examinations. The exams shall be conducted by the respective examinors"

- G. Issues of ID card to UG students

"Resolved to the Dean of the Faculty concerned shall issue ID cards to the students of the respective faculty"

- H. Permission to engage min (5) number of contractual teachers for teaching UG level courses with funds allocated to concerned Deans.

"Resolved to the teaching contracts be engaged as per ESSUA regulations for ranking purpose and resources Deans of the different faculties be allotted the budget for the same."

- I. Allocation of faculty teachers as course instructors from concerned units offering the course where subject specific specialists are available.

"Resolved to the course GPRR 311 (Fundamentals of Plant Breeding) will be taught by the Faculty of Agriculture and the Institute of Biotechnology and will be offered in the same semester. Furthermore, the course GAAB 312 (Breeding Field crops) offered by the Institute of Biotechnology, will be taught by instructors from both the Plant Breeding and Genetics (PBG) and the Institute of Biotechnology."

- J. Inclusion of UG courses of Hematology in the catalogue of Division of Plant Pathology in the minor pattern of PG courses as per ESSUA

"Resolved to include UG courses of Hematology in the course catalogue of Division of Plant Pathology however courses from Hematology division will continue to teach the courses of Hematology"

- K. Ceiling of the number of failed subjects should be waived off for undertaking supplementary examination

"Resolved to number of subjects for taking up supplementary examination should be kept as four per subject, but the ceiling of the number of failed subjects should be waived off"

- L. Approval of clause 2.3B.1.2(b) of ERI 2000 of ESSUA of Deans regarding allocation of major advisors for Masters and Doctoral students.

"Resolved to increase all the faculty members of the subject concerned irrespective of their place of posting (IITMPC/ Network Institutes/ Deemed constituents units) in the roster for allotment of PG students and allocation of major advisors for PG/PhD be made accordingly, rest of the clause for allotment of major advisors will remain same"

Agenda Item No. AG [20] 3 : Modification in the pre-requisites for taking up Experiential Learning Programme (ELP), modification in rule no 4.3.3.16 b 3 of R21, Engagement of Ph.D. students as teaching Assistant, Credit sharing in Experiential Learning Units and others

- a. Modification in the prerequisites for taking up Experiential Learning Programme (ELP).

Dear, Faculty of Horticulture and Forestry proposed that the students of B.Sc. (Hons.) Horticulture undergoing ELP may be allowed to register for maximum two courses in which they have failed but must have completed requisite percentage of attendance in those courses.

Discussed that a student for taking up Experiential Learning Programme (ELP) shall be allowed to register for a maximum two courses in which may have failed but must have completed requisite percentage of attendance in these courses and same be followed in other streams/courses."

- b. Revision of extra course irrespective of credit hours for consideration in rule no 4.3.3.16 b 3 of R21.

Mentioned to

- The student on good standing i.e. CGPA 5.0 may be allowed to register extra course over and above the maximum prescribed limit for a semester on the recommendation of advisor and approved by Dean concerned. Further Director Education is empowered to allow one more extra course irrespective of credit hours beyond Decree allotment and extraordinary cases may be forwarded to Vice Chancellor for consideration, if any.
- Increase the maximum credit limit in a semester from 26 to 27 for under graduate programme."

- c. Taking of Experiential Learning Programme (ELP) from 7th to 10th Semester and Rural Horticulture Work Experience (RHWE) from 7th to 8th semester for B.Sc. (Hons.) Horticulture.

"Database note for B.Sc. (Hons.) Horticulture degree programme, Experiential Learning Programme (ELP) and Rural Horticulture Work Experience (RHWE) be offered in 7th Semester and 8th semester, respectively."

#### **4. Profit sharing in Experimental Learning Units:**

"Resolved that the profit sharing model, similar to that of the Faculty of Agriculture (FAC) or KEGGART-II, will be adopted. The profit generated by Horticulture students will be deposited into the account of Dean, Faculty of Horticulture and Forestry (FolHAF). Additionally, existing Horticulture students may continue under the Faculty of Agriculture for their profit sharing."

#### **4. Engagement of Ph.D. students in teaching Assessment:**

"Resolved that the Ph.D. students may be allowed to work as Teaching Assistant for UG courses but without any financial assistance except MHRD scholarship. At the time of award of degree to the Ph.D. student, HOD will give experience certificate endorsed by Dean to add to his teaching experience."

#### **Agenda Item No. AC (20) 5 : Revision of qualification at graduate level for M.Sc. in Agriculture (Agril. Statistics) degree Programme**

The Dean, Basic Sciences proposed to revise the requisite qualification at graduate level for M.Sc. in Agriculture (Agril. Statistics) degree Programme.

"Resolved to revised qualification at graduate level for admission in M.Sc. Agriculture (Agril. Statistics) degree Programme as proposed as one of the subject i.e., 8.00 with proficiency Mathematics (Computer application) 7.00, M.Sc. Agriculture 7.00, M.Tech. Horticulture 7.00, (Forestry) G.Tech. Biotechnology and adopted."

#### **Agenda Item No. AC (20) 10 : Proposal for amendment in the MSc (AGM) Programme Curriculum**

A proposal was received from Head, Division of AGM, and endorsed by the Dean, Tech and Distance Education, wherein it has been submitted that under JNTUH, for B.Tech Branches (AGM), 70 credits have been allocated for the MSc (AGM) program, as given hereunder:

- Major Courses: 22 credits
- Minor Courses: 22 credits

1. Supporting Courses: 06 credits
4. Common Courses: 03 credits
2. Seminar: 01 credit
5. Thesis/ Research: 30 credits consisting of
  - a. **Practical Internship:** 10 credits [6 credits for preparatory courses + 4 credits for summer internship]
  - b. **Research:** 20 credits [12 credits for preparatory courses + 12 credits for project work]

According to the need of the concerned stream, it has been found that the research component of 30 credits consisted of 10 credits for preparatory courses, 14 credits for summer internship, and only 12 credits for project work as mentioned above at 3(a). It has assessed the practical viability to meet research under research components as credits or non-credit courses. Because of this condition it has been proposed by the Head ABM to adopt the procedure of grading the courses under research component in line of T.S. Former University of Horticulture and Forestry, Dharwad (T.S.P.).

More so, the Head ABM has also proposed that one-time exemption on similar lines for the previous batches of ABM (ABM) 2020-21 and 2020-24 may be granted for previous two batches which has been recommended by the Dean, Tel. After detailed deliberations, it was resolved:

- i. "Resolved to the procedure of grading the courses under research components in line of T.S. Former University of Horticulture and Forestry, Dharwad (T.S.P.) Measure to be adopted."
- ii. One-time exemption on similar lines for the previous batches of ABM (ABM) 2020-21 and 2020-24 be granted."

**Agenda Item No. AC (20) 11 : Aggressive practical training for undergraduates, Intensive research exposure and Establishment of collaborative learning space in the university**

1/a Convener & Resource Cell no. 2111/Resource cell: 24-05-2021 dated 25-05-2020 submitted the following areas for deliberation and discussion:

- a) Aggressive practical training for undergraduates
- b) Intensive research exposure to undergraduate students
- c) Establishment of collaborative learning spaces in the university

"Resolved to:

Conduct aggressive practical training for  
undergraduates.

Give intensive research exposure to  
undergraduate students.

Establish collaborative learning space in the  
university area approved."

**Agenda Item No. AC (20) 12 : Revision of Academic Rules/Academic  
Regulations of Convocation, JNTUABT-Jammal.**

Regulators discussed the issue that the university has recently introduced new undergraduate, postgraduate, and doctoral programs. As the four books of progresses from these programs is set to be conferred degrees in the forthcoming convocation, it becomes imperative for JNTUABT-Jammal to review and revise its academic rules and regulations. After detailed deliberations, it was decided:

"Resolved to form a committee for finalising the  
Academic Rules/Regulations for the Convocation."

**Agenda Item No. AC (20) 13 : Any other agenda with the  
permission of Chair**

- a. Modification of the course content of EGRG 511 (Elementary Statistics & Computer Education) offered to students of B.Sc. (Hons.) Mathematics degree programme.

"Resolved that the changes as suggested by Professor A. Reed, Director of Statistics and Computer Education may be adopted the modified course content is enclosed at Annexure A.

The meeting ended with vote of Thanks.



Regisseur  
Member Secretary



Prof. Md. Wasim Choudhury



## Annexure-I

Minutes-2

## ACADEMIC COUNCIL

Date: 2<sup>nd</sup> May, 2004

Venue: Conference Hall,

VELAST-Jaipur, Chhattisgarh

### Participants Record

1.	Prof. S.H. Tatyoti HOD/Mech-Coordinator	Ex-Officio Chairman
2.	Dr. Rajendra Paliwal Guru Nanak Dev Univ., Jalandhar	Member
3.	Dr. Anil Kumar Singh Regional Director Research	Secretary, Member
4.	Prof. Anand Vaid Sikkim Manipal	Member
5.	Dr. Savitri Kher Summer Planning and Monitoring, UGC, New Delhi	Member
6.	Dr. Amit Kumar Stat. PAI, Orissa	Member
7.	Dr. Rajesh Khodli Dean, P.V.D. A.A.R., R.J. Puri	Member
8.	Dr. Sudhakar Devvadani Dean, Student Welfare	Member
9.	Dr. P.K. Joshi Dean, P.G.T.	Member
10.	Dr. Sandeep Bhambhani Dean, Faculty	Member
11.	Dr. Vinay Tewari Dean, PGDF	Member
12.	Dr. L.N. Rao Dean, P.G.P.	Member
13.	Dr. K.K. Jain Deputy University Librarian	Member
14.	Dr. M.S. Bhatnagar Controller of Examination	Member
15.	Dr. K.K. Jayaram Director, Institute of Biotechnology	Member
16.	Dr. Jayati Laxmi, Professor Head, Division of Applied Economics and A&M	Member
17.	Dr. Yashoda Ray, Professor Head, Division of Plant Breeding and Genetics	Member
18.	Dr. Nitin Dhamija, Professor Head, Division of Soil Science and Agri. Chemistry	Member
19.	Prof. S.K. Singh Head, Division of Plant Pathology	Member

21.	<b>Dr. Nandini Sharma</b> Head, Division of Veterinary Microbiology and Immunology	Member
22.	<b>Dr. Anju Dua</b> Head, Division of Livestock Production Management	Member
23.	<b>Dr. Shalini Jain</b> Head, Division of Veterinary Anatomy	Member
24.	<b>Dr. Neetu Datta</b> Head, Division of Veterinary Physiology and Biochemistry	Member
25.	<b>Dr. Arvita Rani</b> Head, Division of Animal Nutrition	Member
26.	<b>Dr. Kavita Kumar</b> Head, Division of Veterinary Animal Husbandry Education & Extension	Member
27.	<b>Dr. Sandeep Kumar</b> Head, Division of Livestock Parasite Technology	Member
28.	<b>Dr. Urmila Sharma</b> Head, Division of Veterinary Gynaecology and Obstetrics	Member
29.	<b>Dr. U.T. Srivastava</b> Head, Division of Veterinary Surgery	Member
30.	<b>Dr. Rakesh Singh</b> Head, Division of Veterinary Pathology	Member
31.	<b>Dr. Nitin Joshi</b> Head, Division of Pharmacology and Toxicology	Member
32.	<b>Dr. Ranjyit Oberoi</b> Head, Division of Veterinary Pathology	Member
33.	<b>Dr. Anup Malhotra</b> Head, Division of Public Health & Epidemiology	Member
34.	<b>Dr. Anusha Verma</b> Head, Division of Animal Nutrition and Breeding	Member
35.	<b>Dr. Hemant Kumar Sharma</b> Head, Division of Statistics and Computer Science	Member
36.	<b>Dr. Suman Kaur</b> Head, Division of Fisheries	Member
37.	<b>Dr. Savita Galwani</b> Head, Division of Biochemistry	Member
38.	<b>Dr. Brijendra Singh</b> Head, Division of Immunobiology	Member
39.	<b>Dr. Gurjeet Chand</b> Head, Division of Plant Physiology	Member
40.	<b>Dr. R.K. Jaiswal</b> Head, Division of Soil and Water Engineering	Member
41.	<b>Dr. T.P. Negi</b> Head, Division of Processing and Food Engineering	Member
42.	<b>Dr. Prakash Talukdar</b> Head, Division of Food Science	Member

41.	Dr. Jayashree Singh Head, Division of Post-Bachelors Management	Member
42.	Dr. P.K. Pandey Head, Division of Technology and Law Faculty	Member
43.	Dr. Savitri Singh Head, Division of Education and Applicances	Member
44.	Dr. Leila Mehta Singh Head, Division of Future Directions and Initiatives	Member
45.	Dr. A.P. Singh In-charge, CCR & Disease	Member
46.	Dr. Neetu Kaur Lecturer, MBBBS, Nursing	Member
47.	Dr. Gurpreet Singh Professor, MBBBS, Dentist	Member
48.	Dr. Ravinder Singh Sohal MD, UHampur	Member
49.	Dr. Anil Kumar Singh Professor, Institute of Knowerology	Member
50.	Dr. Arun Kumar Professor, Division of Civil Services	Examiner Panel
51.	Dr. Manish Kapurwadi Professor, Division of Veterinary Pathology	Member
52.	Dr. Sunita Sharma Ph.D. Plant Pathology ( Student Representative)	Member



## Annexure-II

## Annexure T

**FEES STRUCTURE  
FOR  
UNDERGRADUATE POSTGRADUATE PROGRAMMES**

(a) All the fees of I<sup>st</sup> semester for Undergraduate / Postgraduate / M.Sc. Programme

S.No.	Particulars	Amount (in Ru.)		
		Undergraduate Programmes	Postgraduate Programmes	B.Sc. Programme
<b>A. Tuition Fees</b>				
1.	Admission Fee	412	100	1100
2.	University Registration Fee	412	67	220
3.	Student Activity Fund Fee	412	42	412
4.	Library Maintenance			
5.	College Library Maintenance charges	66	125	125
6.	Journal Registration Fee	25	1125	125
7.	Teaching Fee	175	325	325
8.	Examination Fee	125	125	125
9.	Extra-Curricular Activities Fee	25	25	25
10.	Medical Examination Fee	25	25	25
11.	Supplementary Examination	25	25	25
12.	Academic Tax	25	125	125
13.	Placement and Consulting Fee	25	25	25
14.	Laboratory Tax	412	5	5
15.	Alumni Tax	25	25	125
Total A		3825	3025	3025
<b>B. Room Charges</b>				
1.	Hostel Charge (Guest and Day Guests)			
1.	Single Room	412	412	412
2.	Double	345	345	345
3.	Triple Room	275	275	275
4.	Hostel Security (Inclusive of Security and utilities)	225	225	225
5.	Food Allowance			
6.	Guest宿泊 charges (inclusive of Guest charges for food allowance and utilities)	100	100	100
7.	Guest宿泊 Food per Person	25	25	25
8.	Guest宿泊 laundry fee	25	25	25
9.	Common Room Tax (Non-Dorm)	42	42	42
10.	Guest宿泊 charges (in clusive of room charges)	250	250	250
11.	Guest宿泊 charges for Students per Student	412	412	412
12.	Guest宿泊 Common Charge	175	175	175
(Total B)		12525	10250	10250
	Total E			

1.	High Power	37740	37740	37740
2.	Medium	34975	34975	34975
3.	Low Power	28612	28612	28612
<b>Grand Total (A+B)</b>				
1.	High Power	62715	62715	62715
2.	Medium	62500	62500	62500
3.	Low Power	60227	60227	60227

## (a) Learning Services Fee (per semester)

S.	Particulars	Undergraduate Programmes	Postgraduate Programmes	P.D. Programme
<b>(i) Tuition Fee</b>				
1.	Academic Year	125	125	125
2.	Tuition Fee	423	125	125
3.	Assessment Fee	125	125	125
4.	Non-Academic Services Fee	125	125	125
5.	Miscellaneous Fund Fee	25	25	25
6.	Deposits (per semester)	15	15	15
7.	Management Fund	33	33	33
8.	Lecture Fee	6.1	6.1	6.1
9.	Infrastructure & Support Fund	33	33	33
10.	Leave Waiver Fee	6.1	6.1	6.1
11.	Other Charges	15	15	15
Total (A)	86728	12645	12645	
<b>(ii) Non-Tuition Fees (per semester)</b>				
1.	High Power	41.1	41.1	41.1
2.	Medium	36.8	36.8	36.8
3.	Low Power	32.1	32.1	32.1
4.	Student Maintenance Fund	65	65	65
5.	University Activity, Welfare Fund	35	35	35
6.	Communal Room Fund	4.2	4.2	4.2
7.	Library Charge	2.9	2.9	2.9
8.	Computer Charge	4.2	4.2	4.2
9.	Other non-Curriculum Charges	27.5	27.5	27.5
Total (B)	290.6	290.6	290.6	
1.	High Power	367.8	367.8	367.8
2.	Medium	325.5	325.5	325.5
3.	Low Power	282.8	282.8	282.8
<b>C. Total (A+B)</b>				
1.	High Power	57715	41355	41355
2.	Medium	57500	40512	40512
3.	Low Power	56227	40642	40642

## (ii) Programmes for which funding rates to addressees exceed their Standard:

Programme	Category	Fees (Rs.)
1. B.Sc. (Hons) Ag-B.Sc. (Hons) Ag-Agric.	100% of approved OSC 10% financing (LT of ₹45,000/- and LST of ₹60,000/-) minimum amount ₹10,000/- per year beginning of ₹10,000/-)	26,660/- 39700/-
2. B.Tech. Agri. Engineering 3. Tech. Data. Technology	100% of approved OSC Subject to: LT of ₹45,000/- and LST of ₹60,000/- minimum amount ₹10,000/- per year	22,660/-
4. B.Tech. Biotechnology Bio-Technology Bio-Technology & Bio-Process Business Management M.Tech. (Agri) & M.Tech.	100% financing	31,660/- 22,660/-
5. B.Sc. Microbiology & Microbiology	100% financing	22,660/-
6. P.D. Microbiology Microbiology Agri-Business Management	100% financing	22,660/-

## BT3: AAI:

(a) Allocation of I<sup>st</sup> instalment for I<sup>st</sup> year BT3 & AAI Programs:

Item No.	Description	One Way Total (Rs.)
A.		
1.	Admission fee	1000
2.	University Registration fee	420
3.	Custom Security Money for Library (refundable)	4000
4.	College Examination Examination charges	100
5.	Student Registration fee	100
6.	Tuition fee	6000
7.	Accommodation fee	2100
8.	Term-Cessation Activity fee	100
9.	Medical Examination fee	400
10.	Capitation fund (per annum)	200
11.	Study cost	500
12.	Transport and travelling fund	200
13.	Student Tax	700
14.	Others Fee	50
Total - A)		20800
B. Recent Changes		
	1. New Charges Standard for Tuition	
	1. Single License	412
	2. Commute	1000
	3. GST License	412
	4. Bond Security (refundable) for Bank account	1000
	5. Non-residency in case of 4 month courses for first semester (non-resident)	500
	6. Bond maintenance fund per Semester	400
	7. Commute standard, residence fund	400
	8. Common Room Fund (Non-refundable)	814
	9. Electricity charges Per semester	2750
	10. Gymnasium charges	413
	11. Laundry per Student	1000
	12. Maintenance Cost of Classes	12700
(Total 21,449)		

## Total-B

I.	Single Income	1774		1774
II.	Domestic	1073		1073
III.	10% Income	1000		1000
Grand Total (A+B)				
I.	Single Income	1774		1774
II.	Domestic	1073		1073
III.	10% Income	1000		1000

## (b) Reporting Statement For All right type meter for EV (b), A &amp; B Programs:

#/No.	Description	Std. Rate	Std. Rate	Std. Rate	Std. Rate
I.	Domestic Expenses (a)	115	115	200	115
I.	Customer	1100	1100	4700	1100
II.	Transmission fee	275	275	422	275
III.	Anti-Consumer Services (a)	250	250	422	250
I.	United Transmission Std. rate	220	220	322	220
I.	Imports from (per meter)	25	25	40	25
I.	Amendment Std	120	120	192	120
I.	Lease Fee	25	25	224	25
II.	Information Management Std	177	177	299	177
III.	Interest Rate Std	175	175	288	175
II.	Power Charge	27	27	42	27
Total -A		4900	4900	4762	4900

## (B) Meter Charge Basis rate:

I.	I. Single Income	102	102	1400	102
I.	II. Domestic	87	87	1214	87
II.	III. 10% Income	175	175	2500	175
I.	Wind generation Std	177	177	259	177
I.	Uttaranchal Electricity Board Std	43	43	62	43
II.	Common Service Fee	120	120	192	120
II.	Electricity charges	200	200	320	200
II.	Domestic charges	420	420	630	420
II.	Mission Bhutan Charges	2700	2700	4020	2700
(Total-11,499)					
Total - (B)		4878	4878	8226	4878
I.	Single Income	248	248	3604	248
II.	Domestic	204	204	2928	204
III.	10% Income	418	418	6268	418
Grand Total (A+B)					
I.	Single Income	1046	1046	14747	1046
II.	Domestic	874	874	12622	874
III.	10% Income	1920	1920	28800	1920

For reference: 2010 Tuition Fees in Addition to Standard Fees for B.Tech & A.I.B. (per credit)

Category	Fee (Rs.)
1. I.T. & A.I.B.	Rs. 10000
2. Tuitioning (IT & CSE) and Lecture delivery fees (Total of existing employees of SOI/ASTU)	Rs. 100000

#### Other Charges

Particulars	Revised Total after 10% Deductions (Rs.)
1. Registration fee for students enrolling in B.Tech & A.I.B.	100
2. Inter University Application Fee	100
3. Supplementary Examination fees for go paper	100
4. Re-Checking	200 per annum
5. Registration with fee for overall students twice for maximum of 7 working days from the date of registration	200 per
6. Course addition - additional fee (per annum)	200 per annum
7. Special award fee	200 per annum
8. Thesis submission fee (B.Tech & M.Tech)	1000
9. Thesis Submission fee Ph.D.	2000
10. Post-poned Degree Committee	100
11. Duplicate Degree Certificate	100
12. Duplicate Diploma Certificate	100
13. Duplicate Lesson Card	50
14. Duplicate Revivalized Degree Certificate	100
15. Duplicate Transfer Sheet / Index Sheet	100
16. Duplicate photo Certificate	100
17. Transcript of academic records	200
18. Duplicate stamp	1000
19. Copy in absence with stamp	100
20. Copy in absence without stamp	100
21. Re-admission	1000
22. Fee for cancellation of scholarship that has changed from the student at the time of first admission	100
23. Document Verification fee shall be charged towards Unacademy fees for marking signatures except from the Govt. Departments. Such fee maximum is Rs. 100/- per	100
24. Registration fee for B.Tech & A.I.B students for Undergraduate Internship Programs	500

**Application Fees for MCA/AST – Various Categories Under The Plan- refundable**

<b>Undergraduate Programs</b>	<b>Application Fee</b>	<b>Application fee with late fee</b>
OU Business Skill Training "Friends of JGUAST" Employee In-Servicer Govt. Sector categories	Rs. 200/-	Rs. 300/-
MCA/AST Students OCU waiver	Rs. 200/-	Rs. 300/-
Post graduate Programs	Rs. 250/-	Rs. 350/-

OU= Osmania University

OCU= Osmania College of Law



## Annexure-III

Locality

THE HISTORY OF THE CHURCH AT HATFIELD AND IN THE ROYAL FOREST DURING THE SIXTEENTH CENTURY

To receive any additional information, please contact: UTEC's Executive Director, David S. Baca, at

THE JOURNAL OF CLIMATE

Table 1. Summary of Estimated and Projected Future Returns for Wal-Mart Stores (in %)

St.	Program	EPS	EPS (\$/Unit)	ET (\$/Unit)	EBIT (\$/Unit)	EBIT (\$/Unit)	CFPS (\$/Unit)	CFPS (\$/Unit)	EVPS (\$/Unit)	EVPS (\$/Unit)	CFPS (\$/Unit)	CFPS (\$/Unit)	EVPS (\$/Unit)	EVPS (\$/Unit)
1.	EPS (\$/Unit) Benchmarking	-	-	10 0.8750	100 10750	-	-	-	-	-	-	-	-	-
Total														

Table 2. Summary of Actual and Estimated Future Returns for Wal-Mart Stores (in %)

St.	Program	EPS	EPS (\$/Unit)	ET (\$/Unit)	EBIT (\$/Unit)	CFPS (\$/Unit)	CFPS (\$/Unit)	EVPS (\$/Unit)	EVPS (\$/Unit)	CFPS (\$/Unit)	CFPS (\$/Unit)	EVPS (\$/Unit)	EVPS (\$/Unit)	
1.	EPS (\$/Unit) Midpoint	10	10	10	100	100	100	100	100	100	100	100	100	100
2.	EPS (\$/Unit) High Forecast	10	10	10	100	100	100	100	100	100	100	100	100	100
3.	EPS (\$/Unit) Mid Forecast	10	10	10	100	100	100	100	100	100	100	100	100	100
4.	EPS (\$/Unit) Low Forecast	10	10	10	100	100	100	100	100	100	100	100	100	100
5.	EPS (\$/Unit) High Forecast Midpoint	10	10	10	100	100	100	100	100	100	100	100	100	100

### Sustainability Initiatives at Dugout Programs & Off Track (Aggregation Report?)

Initiative	Program	Year	2010 (\$) (\$M)	2011 (\$) (\$M)	2012 (\$) (\$M)	2013 (\$) (\$M)	2014 (\$) (\$M)	2015 (\$) (\$M)	2016 (\$) (\$M)	2017 (\$) (\$M)	2018 (\$) (\$M)	2019 (\$) (\$M)
1. Off Track Initiated Report	Off Track	Y	-	Y	-	-	-	-	-	-	-	Y
2. Off Track Reporting	Off Track	N	-	N	-	-	-	-	-	-	-	N
3. Off Track Assessment Program	Off Track	N	-	N	-	-	-	-	-	-	-	N
Total			450	341	27	100	470	327	308	33	100	470

### Sustainable Initiatives Integrated Programs & Plateau Solutions

Program	Year	2010 (\$) (\$M)	2011 (\$) (\$M)	2012 (\$) (\$M)	2013 (\$) (\$M)	2014 (\$) (\$M)	2015 (\$) (\$M)	2016 (\$) (\$M)	2017 (\$) (\$M)	2018 (\$) (\$M)	2019 (\$) (\$M)	
1. Off Track Assessment Program	Off Track	10	8	11	10	10	10	10	10	10	10	10

Statistical Outcomes of Postgraduate Degree Programmes in the Basic Sciences

No.	Programme	Statistical Outcomes of Postgraduate Degree Programmes in the Basic Sciences									
		4001 Mathematics	801 Physics	802 Chemistry	803 Biology	804 Geology	805 Physics (Electronics)	806 Physics (Optics)	807 Physics (Nanoscience)	808 Physics (Astrophysics)	809 Physics (Computational Physics)
1.	Ph.D. Mathematics	10	14	—	—	—	—	—	—	—	—
2.	Ph.D. Physics (Electronics)	11	—	11	10	—	—	—	—	—	—
3.	Ph.D. Physics (Optics)	—	—	—	—	—	—	—	—	—	—
4.	Ph.D. Physics (Nanoscience)	10	—	—	—	—	—	—	—	—	—
5.	Ph.D. Physics (Astrophysics)	—	—	—	—	—	—	—	—	—	—
6.	Ph.D. Physics (Computational Physics)	—	—	—	—	—	—	—	—	—	—
7.	Ph.D. Physics (Computational Nanoscience)	—	—	—	—	—	—	—	—	—	—
8.	Ph.D. Chemistry	10	10	10	10	10	10	10	10	10	10
9.	Ph.D. Biology	—	—	—	—	—	—	—	—	—	—
10.	Ph.D. Geology	—	—	—	—	—	—	—	—	—	—



## Annexure-IV



December 2009

**Amendments in the MBA (AEM) Program Curriculum**

MBA (AEM) Programmatic Requirements	Credits Req.
Research Thematic Intensify - Research Project	26 (15-28)
AEM 545 Summer Internship: Industrial Attachment	11.0
<b>Basic Courses from Intensity for Summer Internship</b>	
AEM 538 Communication for Management and Agri Business	1+0
AEM 540 Research Methodology for Agri Business Management	1+0
Research Design	1.0
Basic courses Intensity for Research Project	1.0
AEM 541 Computer Applications for Agri Business	1+0
AEM 542 Project Management and Agri Business Entrepreneurship	1.0
AEM 543 Agri Business Environment & Policy	1+0
AEM 544 Agri-Business Laws and Ethics	1+0
AEM 545 Project Work	8+1.0

**Proposed**  
**B.Sc. (Hons.) Economics**

Course Name: Elementary Statistics and Computer Applications  
 Credit Hours: 10(+0)

Code: 212-211

**Data**

Inroduction to statistics, limitations of statistics. Basic concepts: Variable, statistics, types and sources of data, classification and tabulation of data, construction of frequency distribution, table, graphic representation of data, single, multiple, composite and percentage bar diagram, pie diagram, histogram, Frequency polygons and Frequency curve, Average and measures of dispersion, mean, median and mode for raw and grouped data. Measures of Dispersion: Range, standard deviation, variance, coefficient of variation for raw and grouped data. Probability: Basic concepts, addition and multiplication rule, Normal distribution, Sampling: basic concepts, sampling vs complete enumeration, parameters and statistic, sampling methods, simple random sampling, Type of Distributions: Basic concepts used for equality of means and integrations and paired tests, significance test for application of t-test and test for goodness of fit of binomial series. Correlation: Scatter diagram, correlation coefficient and its properties, regression, fitting of single linear equation. Experimental designs: Basic concepts, completely randomized design, randomized block design, Latin square design. Computer applications: Introduction to computers and personal computers, basic concepts, operating system, MS Word, function of word processing, creating document and tables and printing of documents, MS Excel- concept of electronic spreadsheet, creating, editing, and saving of spreadsheets, basic statistical functions and formulae, MS Power point presentation, presentation of data and tables, calculation in excel.

**Statistical Methods**

Construction of Frequency distribution table and its graphical representation, histogram, Frequency polygons, Frequency curve, Bar chart, simple multiple, composite and percentage bar charts, pie chart, mean, median and mode for raw and grouped data, coefficient of variation, V test for independent will equal and unequal variances, paired t test, chi-square test for independence of two variables, correlation and linear regression, MS Office, Excel, Power Point.



## **Annexure-III**



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

University Order No. 300 (March 2013)

增加 2021-01-21

Web Engagement as Preference of Practice at SUSTAIN 2016

With Letter of Cllr of appointment as "Professor of Practice" issued vide No. ADL/8400/124-28/2-1986 dated 28.11.2004

Consequently, upon the acceptance of the offer of appointment communicated through email dated 15<sup>th</sup> November 2024, Mr. Gulshan Singh Bawa, Head of Market Development and Commercial Capability, Land Commercial Capability & Geospatial, Bayer Crop Science, is hereby engaged as Professor of Practice under the "Industry-Punjab University" at Panjab University of Agricultural Sciences and Technology (PUAST), Jalandhar.

The initial term of engagement shall be for a period of one year, with options up to a maximum of three years, subject to a performance evaluation in accordance with the University's assessment procedures. The extension will be determined based on the expert contributions and the requirements of the institution.

The duties, responsibilities, and other general conditions for the position of Professor of Practice shall be as outlined in the University Appointments No. AUL/Edu./D-087/2023/0745-0827 dated 31.10.2024. The above post engagement shall be without any financial compensation from the University.

Mr. Sams is requested to make the assignment within 21 days from the date of issuance of this order otherwise the order shall stand canceled ab initio.

By Order

### Sec. I.

### The platoons

Rev. ADD./Secty./24-25/W-366/384G-76  
Dated: 20.11.2023

Copy for later versions for

- All Officers of the University of JKSU&KT-Jammu.
  - All Deans of Faculties/Director, School of Homeopathy.
  - Dr. Sangeet Sharma, The Counseling and Placement Cell for Information Co-ordinator.
  - All I/c Stations/Offices/Offices/Divisions/ACROPs etc. JKUJKT-Jammu.
  - All Staff Registrars/Deputy Registrars/Deputy Comptrollers, JKUJKT-Jammu.
  - All JKUJKT- Registrars/Administrative Officers/Financial Comptrollers /Account Officers, JKUJKT-Jammu.
  - BMO for kind information of the Head of the Vice-Chancellor, JKUJKT-Jammu.

(Devinder Singh)  
Assistant Registrar (Hegy.)

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University Order No 2022 March 1st 2024

Report 11-15-2024

100. Registration as Professor of Practice at MUSCAT-Japan.

Ref: Letter of Offer of appointment as "Trustee of Practice" issued vide no. AEL-Serr-124-28/3-1993-04 dated 11.12.2004.

Consequent upon the acceptance of the offer of appointment communicated through email dated 24 December 2024, Mr. Satinder Singh Nanda, Vice President, Technical & Supply Chain, Hindustan Beverage Pvt. Ltd., Jamshed, is hereby engaged as Professor of Practice under the "Industry-Funded Category" at IISER-Kharagpur University of Agricultural Sciences and Technology (IISER-K), Jamshed.

The initial term of engagement shall be for a period of one year, with extension up to a maximum of three years, subject to a performance evaluation in accordance with the University's assessment procedures. The extension shall be determined based on the current contributions and the requirements of the Institution.

The duties, expenses) etc., and other general conditions for the position of Professor of Practice shall be as recorded in the University Notification No. ACD/646/AN-687/24-25/9746-S27 dated 31.10.2024. The above said engagement shall be without any financial compensation from the University.

Mr. Basilio is required to take the assignment within 30 days from the date of issuance of this order; otherwise the city shall stand convicted of perjury.

Dr. Dutta

201

Revolutions

DOI:10.4236/jpm.2011.112154

Dated: 31-12-2024

Copy the following text for

- All Officers of the University of JKUAST-Jammu.
  - All Deans of Faculties/Director, School of Studies/Dept.
  - Dr. Savay Galera, I/c Computerized Personnel Cell & Information
  - Mr. Balbir Singh Narra, Vice President, Production & Supply Chain,  
Kashmir Beverages Pvt. Ltd, Jammu.
  - All I/tu Students/I/tu-Scholars/SDM/Asstt/Asstt Professors of JKUAST-Jammu.
  - All Joint Registrars/Deputy Registrars/Deputy Coordinators, JKUAST-Jammu.
  - All Admin. Registrars/Administrative Officers/AJKUAST Coordinators /Asstt Professors, JKUAST-Jammu.
  - JKUAST for kind information of the Hon'ble Vice-Chancellor, JKUAST-Jammu.

[Devonshire Shambles]  
Antelope, Buntingford (Dacry.)

## **Annexure-IV**

Syllabus  
Sanskrit Language  
Part I

**विषयानुक्रमणी**

प्रक्रिया:	पाठ:	प्राप्तिक्रिया:
<b>प्राप्ति: भागः</b>		
१. उपर्युक्ताः		प्रभव विभिन्नः
१.१ इति एव	प्राप्तिक्रिया एव	
१.२ विशेषं एव	प्रभवानुभिक्तुः एव	
१.३ द्वितीयं एव	प्राप्तिक्रियानुभिक्तुः एव	
१.४ चक्रं एव	प्राप्तिक्रिया एव	
१.५ सम्बन्धं एव	प्राप्तिक्रियानुभिक्तुः एव	
१.६ एवं एव	प्राप्तिक्रियानुभिक्तुः एव	
२. विभेदः भागः		
२.१ इति एव	प्राप्ति विभेदः	
२.२ विशेषं एव	स्थूल विभेदः	
२.३ द्वितीयं एव	चक्री विभेदः	
२.४ चक्रं एव	सम्बन्ध विभेदः	
२.५ सम्बन्धं एव	एवं विभेदः	
२.६ एवं एव	प्राप्ति विभेदः	
३. अप्रियः भागः		
३.१ इति एव	सामाजिकः	
३.२ विशेषं एव	आत्मी	
३.३ द्वितीयं एव	सम विभेदः	

**द्वितीयः भागः**

**४. प्रयुक्ति: समाचारः**

- |     |            |   |
|-----|------------|---|
| ४.१ | इम्हः यहः  | समन्वयित्वा अनुर लक्षणी ग्रन्थाः  |
| ४.२ | विशेषः यहः | समन्वयित्वा अनुर लक्षणी ग्रन्थाः  |
| ४.३ | एकम् यहः   | समन्वयित्वा अनुर लक्षणी ग्रन्थाः  |
| ४.४ | अनुर् यहः  | समन्वयित्वा अनुर लक्षणी ग्रन्थाः  |
| ४.५ | एकम् यहः   | समन्वयित्वा अनुर लक्षणी ग्रन्थाः<br>कठीयः उपेक्ष                        |
| ४.६ | एक् यहः    | उपासनायेत्  |
| ४.७ | साम् यहः   | स्वर्णि-वृद्धिः - कर्मण इत्यन्ते तद्<br>स्वर्णि युर्व एव<br>स्वर्णि देव |

**५. प्रश्नम्: समाचारः**

- |     |            |                      |
|-----|------------|----------------------|
| ५.१ | इम्हः यहः  | विशेषमन्वेषणात्      |
| ५.२ | विशेषः यहः | विश-स्व-प्रदोषः      |
| ५.३ | एकम् यहः   | लक्षणः               |
| ५.४ | अनुर् यहः  | प्राप्तात्मानां यहाः |

**६. प्रश्नः समाचारः**

- |     |            |  |
|-----|------------|--|
| ६.१ | इम्हः यहः  | अनुप्रयत्नानाम् यहाः ग्रन्थाः          |
| ६.२ | विशेषः यहः | अनुप्रयत्नानाम् विशेष-उपेक्ष           |
| ६.३ | एकम् यहः   | अनुप्रयत्नानाम् तुर्तिय-स्वेच्छ        |
| ६.४ | अनुर् यहः  | अनुप्रयत्नानाम् अनुर्व-उपेक्ष          |
| ६.५ | एकम् यहः   | अनुप्रयत्नानाम् उभयै-उपेक्ष            |
| ६.६ | यहः यहः    | अनुप्रयत्नानाम् यही-उपेक्ष             |
| ६.७ | साम् यहः   | अनुप्रयत्नानाम् सामी-उपेक्ष            |
| ६.८ | समाचः यहः  | अनुप्रयत्नानाम् यहांसु विशेषितु उपेक्ष |

सिंहासनकाननी

पदः	विवरः	संस. शब्दः
१. उत्तमः पदः	'वर् शुभ'	तुङ्ग / तुङ्ग / शुभः
२. द्वितीयः पदः	'उत्तमः शुभः'	तुङ्गेष्टो त्रियुग्म - त्रि / तुङ्ग / शुभे
३. तृतीयः पदः	'शुभं शिखं'	शुभं / शुभं / शुभं शुभं / शुभं / शुभं
४. चतुर्थः पदः	प्रथमो चतुर्थो	त्रि / त्रि
५. पंचमः पदः	'पंचमः'	शुभाम्
६. षष्ठीः पदः	'पूर्वाम्'	शुभं / शुभं / शुभं शुभं / शुभं / शुभं
७. अष्टमः पदः	'प्रस्तोत्राम्'	प्रस्तोत्राम्
८. नवमः पदः	'त्रा विकल्पी'	त्राम - त्रिविकल्पी
९. दशमः पदः	'त्रिविकल्पी विन्'	त्रि-शुभं त्रिविकल्पी
१०. इतमः पदः	'त्रा त्रात्रीका'	त्रि-शुभं त्रिविकल्पी त्रि शुभे
११. एवामः पदः	'त्रिका'	त्रिका
१२. द्वेष्टीः पदः	'प्रेतीं शुभीं'	शुभीं / शुभीं / शुभीं
१३. दर्शकाः पदः	'प्रतीकी शिखाः'	शुभीं / शुभीं
१४. चतुर्थः पदः	'प्रतीकं'	त्रि - शुभं-शुभे
१५. अमात्रः पदः	'प्रतीकं त्रिविकल्पी'	त्रि-शुभं, त्रुभाम्
१६. दोषकः पदः	'प्रतीकाम्'	त्रि-शुभं, शुभाम्
१७. लक्षणः पदः	'त्रोपादः'	शुभाम्-शुभाम्
१८. अवलक्षणः पदः	'त्राप्रतीकाम्'	त्रुभाम्-शुभं

संख्या	विषय	सामग्री क्रमांक
19.	एकोनेपरिक वाचः	'परिवृत्तुं वहि प्रवक्त'
20.	विषः वाचः	'पुण्यकृत'
21.	एकोनिक वाचः	'रन्तुशास्त'
22.	द्विप्रियं वाचः	'पर्वती'
23.	उच्चोदित वाचः	'ज्ञानम्'
24.	चतुर्विद्या वाच	'संस्कृतमध्यात्मा'
25.	पञ्चविद्या वाचः	'संस्कृतम्'

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### French Literature

COURSE NAME: French Proficiency Skill 1 COURSE CODE: FPL507 CREDIT HRS. 1.0

COMMUNIST INSTITUTE

Students will have the opportunity to practice skills acquired by translating to the French language and understanding the basic vocabularies.

### **COURSE OUTCOMES**

- 1. To be able to construct basic French sentences
  - 2. To have the ability to understand the basic French vocabulary
  - 3. To demonstrate a knowledge of French Culture
  - 4. To compare and contrast cultural practices related to French and other Countries
  - 5. To demonstrate critical thinking and collaborative problem solving through advanced task-based language activities.

UNIT 10 WORKS

**Conseil d'administration: Soyez assuré, que toutes les données de la présente liste sont exactes. Donnez des informations supplémentaires. Donnez le nom des administrateurs.**

Ovvero: Les adjectifs de nationalité, Les articles définis (le, la, l', les), Les prépositions devant les noms de personnes, Le suspense.

Vendredi : se pencher, les loisirs, les amitiés ou a ... Les pays et cultures à L'heure, un avenir (...) ...  
... il y a une nécessité simple. Les groupes humains peuvent échanger pour ...  
... où est le Collectif d'artistes Grimoiseau

UNIT 七

Communication : analysez les paroles des participants et placez-les en échelle.

Grossissement: Les articles défissons et indissous, les recherches en vue du pouvoir, l'assassinat, l'identification des corps, tout le travail dans le cadre de la profession.

#### Yield, 產量, 产量, 產出量, 產率

Tecolote e La Vida las ríos, los lagos... la naturaleza, la religión, la profesión, la cultura.

Pr. J.-M. L'Université normande de Rouen. La prononciation des verbes en -er au moyen âge. In: *Idem*.

**Succès! Objectif: Peut-Montréal deux villes à découvrir**

#### **UNIT: II. LES SENS**

**Communication:** Comparer, Donner des conseils d'assortiment, Peux-tu décrire.

conseiller au(e) client(e), tu es(e)

**Grammaire:** Le sujet et le pronom des actions, Les prépositions de lieu, La classe des adjectifs (participe + un peu de +, beaucoup de +), Le pronom en

Verbe: peut, aimer, faire, essayer

**Vocabulaire:** Les ingrédients, la nutrition, les nutriments et conservateurs, les rayons, les aliments, les quantités, les moyens de préparation, Au contraire tu aimes les plats, les boissons, le vin, la viande, les fruits, les légumes, les légumes

**Phonétique:** Les liaisons jumelles, les liaisons simples, La consonne finale ou plusieurs

**Succès! Objectif: Quel(s) (l')/tous(ses) que vous mangez?**

#### **UNIT: III. LES SENS, C'EST PARTIR**

**Communication:** Être au succès dans l'assortiment, Donner une appréciation sur un restaurant, Comparer les types pour s'adapter au(e) client(e), Parler de la saison, Demander à l'autre de faire la taille et la préparation, Discuter un objet avec quelqu'un, Désigner Lors un peu

**Grammaire:** Le passe et la couleur des adjectifs, La place des adjectifs, Le futur proche et la passerelle, L'adjectif démonstratif

Verbe: Venir

**Vocabulaire:** Les vêtements et accessoires, les matières, les couleurs, La saison et la transparence, Les objets technologiques, les objets du quotidien, les caractéristiques des vêtements (taille, couleur, mode)

**Phonétique:** L'apôrophe (j', c', T, n', d'), Les liaisons en [z] et en [s]

**Succès! Objectif: un vêtement à vendre**

#### **UNIT: IV. C'EST QUELQUE PROGRAMME?**

**Communication:** Parler de ses activités quotidiennes, Demander à l'autre l'heure, Proposer une activité pour un week-end, Accepter, Refuser un week-end, Répondre par téléphone

**Grammaire:** Les verbes présentants au présent (je programme, j'occupe), La question (Quand, Je ne... pas, toujours, souvent, tous les ... tout le temps, toujours), L'impératif (Où, avec, regarder), L'interrogation avec le pronom où

Verbe: Prendre, voir

**Vocabulaire:** L'heure, les activités quotidiennes, le temps managé, la température, les sorties, les activités culturelles

**Phonétique:** Les sons (tʃ, tʃɪ, ts, tsɪ)

**Succès! Objectif: Un programme d'heure**

1. Literary work – anything that is a French/English text (100 words) can be read.
2. Literature – any form of writing that is intended to have literary connotations  
activities of class is meant to a language literature
3. Other activities – role play and other formal games can be considered.

#### REFERENCE BOOKS:

- Nathalie, Odile Thévenaz : *Dictionnaire progressif du français*, Nouvelle édition Lotte éditions, 12, 2011.
- Enseignement Français, Victoria Iglesias et Frédéric Léonard : *Leçons d'anglais* en français BELIN EDUCATION, 2011.
- Sylvie pouzza quinton : *Conjugaison des verbes réguliers*, French & European Publications Inc, Cie internationale, 2011.
- Hugues Desnoes : *Les Fables de La Fontaine*, HACHETTE FLE, 2011.

#### PRESCRIBED BOOKS :

- Edito Nineen Al-Deyd Publication.
- Larousse 2012
- Larousse Anthologie Payard, 2013

#### E-Learning Resources:

1. <http://www.english-test.net/>
2. <http://www.esabau.com/>

**COURSE OBJECTIVES**

Students will have the opportunity to perfect the skills acquired in terms of grammar and sentence structure while increasing their vocabulary through role-plays and simulated communication.

**COURSE OUTCOMES**

1. To understand the main idea and some detailed aspects of complex or unfamiliar texts.
2. To show emerging awareness of aesthetic properties of language.
3. To recognise the role of cultural knowledge in understanding written texts.
4. To narrate and describe in past, present and future.
5. To show an emerging ability to understand complex discourses.

**UNIT 1: INTRODUCTIONS**

Communication: Comprendre un autre point de vue. Prendre la parole.

Famille: Famille, enfants et parents, le mariage et le caractère d'une personne.

Généalogie: Les relations possibles. Le passé commun entre deux personnes. C'est quoi? Cela est. Les indications de temps du passé et du futur.

Vocabulaire: La famille, l'étranger, la situation familiale, les événements de la vie, La description physique et la caractère.

Phraséologie: Les termes essentiels (E) (S), les verbes essentiels (E) (S)

Socioculturel: Les fêtes en France

**UNIT- II: CHINESE MDR**

Communication: Comprendre les idées des deux élèves, se renseigner sur un sujet, comprendre un règlement intérieur d'un bureau, exprimer son avis sur les règles de la maison, s'exprimer dans un mariage, expliquer ses problèmes concernant le mariage.

Généalogie: Les proches (P), la loi (L), les propriétaires de lais (C), l'obligation et l'interdiction (I), l'adultère, l'inceste, la peine et

Vocabulaire: Le langage: les paroles, les matières, l'échange, l'assassinat, les rapports, les professions

Phraséologie: Les termes (E) (S), Les verbes (E) (S)

Socioculturel: Chiffres, Professions, langues

## UNITÉ 10: BOUJOU VACANCES

**Communication:** Comprendre la voix de réservation en ligne, exprimer la préférence. Rester actif au sujet. Rester, après une tâche posée, exprimer des réactions, une action positive, exprimer la surprise.

**Grammaire:** Le comparatif (1) avec deux plus « subject + que». Les verbes au présent (cliquer, poster), le passé composé (2) avec être, l'impératif des verbes impersonnels (c'est, il y avait, il faut).

**Vocabulaire:** Les voyages (l'hébergement, le transport, les services, les vols, les restaurants, les options), à l'étranger.

**Phraséologie:** Les vols [vol] [vɔl], les vols [vɔlɔ]

**Socialisation:** Chiffres. Culture voyage. [ENCI](#).

## ET PAS DE CHANCE!

**Communication:** La plainte (plainte quelqu'un, donner une explication (pourquoi, parce que), exprimer une émotion négative, comprendre des règles de sécurité routière,

demander (de la part et le rôle, demander des renseignements ou se renseigner)

**Grammaire:** Le passé composé (2) (nouvelles prononciations, « connue »), l'interrogation et l'interjection (2) (hâtez-vous!, attention!), les personnes COI (on et leur), le conseil.

**Vocabulaire:** Les petits problèmes du quotidien, les exercices de sport, les sorties de corps, dans le métro, dans le phénomène.

**Phraséologie:** Les vols (vol) [vɔl], l'accompagnement (compagnie)

**Socialisation:** Chiffres et statistiques

## UNIT 1. BEAU TRAVAIL!

**Communication:** Comprendre un programme d'échange universitaire, décrire une expérience positive, exprimer la fierté, exprimer le plaisir, sa pro et ses succès, exprimer une surprise, une compréhension, comprendre un succès, professionnelles.

**Grammaire:** La condition (si + present), le passé, la continuation, les processus relatifs, qui et que, l'adjectif

**Vocabulaire:** l'entreprise, le travail, les personnes, les études, les disciplines.

L'entreprise, la vie professionnelle, les services, les personnes, les conditions de travail, les thèmes, les compétences.

**Phraserapport:** Pronominaliser les verbes  
Sous-titrage: Culturelle Université 1.3

## PEDAGOGY

- 1. - Exposition au langage en utilisant des mots et court descriptifs pour évoquer le journaliste.
  - ↳ Storytelling - simple mais efficace pour faire accéder l'élève (10 minutes pour le read).
  - 1. Calloutings = une heure à trois may être adossé à une longue préparation : activité d'écriture à caractère à language literary.
  - ↳ Group activities = rôle play and educational games may be considered.

## REFERENCE BOOKS :

- Marc Grégoire, Didier Thivierge - Dictionnaire des métiers du journalisme. Nouvelle édition. L'Universitaire, LP, 2017.
- Isabelle Denoix Barthes, Victoria Iglesias et Pauline Lévi et autres, [www.editions-enseignement.fr/ressources/EDUCATION](http://www.editions-enseignement.fr/ressources/EDUCATION), 2017.
- Sylvie Poulin-Guérin - Compréhension des médias / France & Espagne. Publications Sac, Châlons-en-Champagne, 2007.
- Eugène Decout - Les Médias. HACHETTE FLE, 2018.

## PRESCRIBED BOOKS :

- Edito Niveau A1, Goyal Publications.
- Larousse 2012
- Larousse Arithmea Fayard, 2013

## E-Learning Resources:

- 1. <https://www.cambridge.org/>
- 2. <https://www.ctj.com/>

## **Annexure-V**



Shri Omkar Singh  
University of Agricultural Sciences and Technology of Jammu  
Directorate of Education

Prof. Atishwar Singh  
Deputy Director  
Joint Academic Committee  
Joint Ph.D. Committee  
Ph.D. & M.Sc. Committee  
Joint & Interdisciplinary

**Memorandum**

**Subject: Guidelines for Masters & Ph.D. research bachelored programmes and students  
admitted for research work by other universities/centres.**

As recommended by the Committee constituted vide the AUL/2002/ACST/202/119/22 dated 04-07-2004, and approved by the Competent Authority, the guidelines for research bachelored programmes and students admitted for research work by other universities/centres are hereby notified.

**A. The guidelines for Masters & Ph.D. research bachelored programmes:**

1. Programme of study/research shall be drawn by the student advisory committee constituted by the parent university with a member from the partner university/centre. This Advisory Committee thus constituted shall be approved where student has registered for the degree programme.
  - (i) The joint advisory committee after its utilization will formulate the research programme/budget of each student.
  - (ii) The student shall have to spend a maximum of three years if he commences his study in case of both masters and Ph.D. programmes in the partner university/centre.
  - (iii) Residence period in IAU/AST Jammu shall include intense research work in both.
  - (iv) The student shall submit single thesis where he/she has registered for the degree programme.
  - (v) Presented fee shall have to be paid in the SKL/AST Jammu for the period of studies at IAU/AST or SKL/AST Jammu.
  - (vi) Both collaborating institutes shall issue separate transcripts for respective universities and where feasible the parent and it is to be reflected in the transcript by the institution/university where the student has registered for the degree programme.

**B. The guidelines proposed for allowing the mentioned students of Other University/  
other universities/centres for conducting research at SKL/AST Jammu**

1. Any student nominated by any institution or authority for conducting their research work for one semester in SKL/AST Jammu shall have to pay Rs. 20/- for that semester to the authority. Besides, there should be one supervisor from SKL/AST of IAU to oversee the research work.



Shane Kathir

University of Agricultural Sciences and Technology of Jammu  
Directorate of Education

Prof. Ashok Singh

Director Education

Department of Higher Education

State of Jammu & Kashmir

Panjab University

www.jkuniv.ac.in

- C. Additional guidelines proposed under A & B above, the students concerned have to adhere to:
- Students must follow the Regulations on Student Discipline (RSD) of JKUAST Jammu. This includes maintaining academic integrity, attending classes regularly, and fulfilling all residence requirements of the said RSD.
  - Students are expected to uphold the highest standards of discipline and conduct. This means abiding respect to peers, faculty, staff, and behavior in accordance with the policies positively in the University.
  - Fighting or any form of study prohibited. Any student found engaging in illegal will be subject to severe disciplinary action as per the University's own regulations.
  - Students must participate in all faculty academic programs throughout the programme.

The guidelines above will bear with immediate effect, and may be placed before next Academic Council Meeting for finalisation.

JKUAST Jammu  
23-07-2019

R. P. Dabir  
Rajender Dabir,  
23-07-2019

Copy to:

- All Deans JKUAST Jammu for information.
- All Deans of the Faculties of JKUAST Jammu for information.
- Registrar, JKUAST Jammu for placing the notice in the next Academic Council Meeting for confirmation.
- Comptroller, JKUAST Jammu for information.
- Controller of Examination, JKUAST Jammu for information.
- Director Institute of Biotechnology, JKUAST Jammu for information.
- SMC for final confirmation of the Note by Vice-Chancellor.

## **Annexure-VI**



Stephan Kühnert  
University of Agriculture/Göttingen and Technologie of Lower Saxony  
Institute of Biotechnology, D-3707 Göttingen

Dr. R.K. Bergmann  
Chairman

Inter-Departmental Academic  
Meeting of the University

No. 401/1993/IAZ/29/1044/0  
Date: 10.12.2004

Subject: Approval given by IAP Academic Council Meeting of SKG/AGT-Division  
B2:

Kathy Bell and Stephan Kühnert have drawn my attention to the following "Interim resolution of the Biochemical Programs at Institute of Biotechnology, SKG/AGT-Göttingen for resources and cooperation in IAP Meeting of Academic Council of the University.

The resolution has been adopted and recommended by an Interim committee of Institute of Biotechnology concerned with inter. No. 401/1993/IAZ/29/1044/2, dated 20.10.2004.

Responsible for further specific in the meeting place:

Thanking you,

Vinay Kumar

Copy:

1. E-mail: 1415451@Chandigarh.Indraprastha

## Shri-e-Kachir

### University of Agricultural Sciences and Technology of Jammu Institute of Biotechnology

Appendix I for XXXI<sup>st</sup> Meeting of Academic Council pertaining Education of Biotechnology

Appendix I:	Instrumentation of M.Tech. Biotechnology degree Programmes at Institute of Biotechnology.
1.	<b>Adoption of postgraduate degree programme:</b>  Adoption of postgraduate degree programme M.Tech. (Biotechnology) from the academic year 2005-06 has become a necessity keeping in view implementation of ICAR 'O'Donnell' Committee recommendation with respect to B.Tech. (Biotechnology) programme from Academic Session 2004-15. The vision is regularly demanding to start M.Tech. (Biotechnology) degree programme to match with UG degree i.e. B.Tech. (Biotechnology). Many of the maximum students prefer to join Masters degree in other institutes offering M.Tech. (Biotechnology). Therefore, to retain the talent and attract more students from outside, it is highly required that M.Tech. (Biotechnology) degree is instrumentalized at Institute of Biotechnology, JKUAST/Jammu Institute of Biotechnology, has sufficient academic and research facilities/administrative to come to the basic requirements of M.Tech. (Biotechnology) degree programme.  It is envisaged PG degree for pursuing market needs and for specialized jobs at national and international levels, the existing PG Degree Programmes, M.Sc. (Microbiology), M.Sc. (Botany), M.Sc. (Zoology) and M.Sc. (Microbiology) shall continue as such as ICAR B.I.B.A.C Committee recommendation already recognized by the University. The detailed Course Content is refer Annexure I.
2.	<b>Admission eligibility criteria:</b>  Adoption of ICAR B.I.B.C committee system as eligibility criteria for M.Tech. (Biotechnology). For admission in M.Tech. (Biotechnology), candidates must have undergraduate minimum 4-year degree in B.Tech. Biotechnology/B.Sc. Biotechnology/B.Sc. Microbiology/B.Sc. (Botany), Agriculture/B.Sc. (Horticulture)/B.Sc. (Botany), Biology, 4.5/4.0 credits in A or M.Tech. (Biotechnology) Programme shall be made on merit/bonus basis and marks of the entrance exam conducted by University/JKUAST.

## Course Curriculum

Post-Graduate Degree Programme  
(M.Tech. Biotechnology)



Institute of Biotechnology

Sher-e-Kashmir  
University of Agricultural Sciences & Technology,  
Faculty of Agriculture, Main Campus, Chatha,  
Jammu-180 009(J&K)

## **ABSTRACT OF PROPOSAL FOR M.TECH. (BIOTECHNOLOGY)**

<b>DEGREE PROGRAMME</b>	M.Tech. (Biotechnology)
<b>MINIMUM DURATION</b>	4 Semesters (2 Years)
<b>PROPOSED INTAKE CAPACITY</b>	30 Students per academic year (On roll basis base; INR 1,12,000/-per year)
<b>ELIGIBILITY</b>	Minimum 4-year degree in B.Tech. Biotechnology; B.Sc. Biotechnology; B. Sc. (Hons.) Biotechnology; B. Sc. (Hons.) Agriculture; B. Sc. (Hons.) Horticulture & Sc. (Hons.) Botany

### **BRIEF JUSTIFICATION:**

Adoption of postgraduate degree programme, M.Tech. (Biotechnology) from the academic year 2020-21 has become a necessity keeping in view implementation of ICAR 3<sup>rd</sup> Deemed Committee recommendations with respect to B.Tech. (Biotechnology) programme from Academic Session 2020-21. The Institute is already offering B.Tech. (Biotechnology) degree since 2013-14, when ICAR 3<sup>rd</sup> Deemed Committee Report was adopted by the University. Since then, students have been regularly requesting to start M.Tech. (Biotechnology) degree programme for keeping sync with IGC degrees i.e. B.Tech. (Biotechnology). Many of the academic students prefer to pursue higher degree in other institutes offering M.Tech. (Biotechnology). Therefore, to retain the talent and attract more students from outside, it is highly required that M.Tech. (Biotechnology) degree is normalized at Institute of Biotechnology, IITKAST-Jawahar Laloria of Biotechnology, has sufficient academic and research facilities infrastructure to meet to the basic requirements of M.Tech. (Biotechnology) degree programme.

**Proposed Course Curriculum for M.Tech (Bioscience) Degree Programmes**

Code	Name of Course	Credit (L+T)	Semester (II)
Major: 20 credits (12 credits of core + 8 credits of optional)			
MET701	Genetic Engineering and Synthetic Biology*	3+0	I
MET702	Engineering Geno Augmentation*	3+0	I
MET703	Electronics and Instrumentation in Biosciences*	3+0	II
MET704	Omics and Systems Biology*	3+0	II
MET705	Bioprocess and Biomanufacturing*	3+0	I
MET706	Plant Biotechnology	3+0	I
MET707	Computational Biology, Artificial Intelligence and Big Data Analysis	3+0	II
MET708	Microbial and Industrial Biotechnology	3+0	II
MET709	Vaccines Biotechnology	3+0	I
MET710	Ecotoxicology and Ecotoxic Engineering	3+0	II
MET711	Quality Assurance in Genetic Engineering and Biotechnology	3+0	II
MET712	Molecular Diagnostics	3+0	II
MET713	Environmental Biotechnology	3+0	I
MET714	Protozoa Biology and Parasitology	3+0	I
MET715	DMR, Bio safety & Bioethics	3+0	II
MET751	Biosafety Engineering	3+0	II

Note: Note based 2-3 credit courses/units shall be engaged for teaching specialized courses.

#### **Minor Courses - 08 Credits**

1. Microbiology
2. Biochemistry
3. Plant Physiology
4. Veterinary Biochemistry
5. Veterinary Microbiology
6. Animal Genetics & Breeding

#### **Supporting Courses - 08 Credits**

1. Microbiology
2. Biochemistry
3. Plant Physiology
4. Statistics

1. Genetics & Past Breeding
2. Ram Physiology
3. Endocrinology
4. Post-Market Management

Courses Offered = 07 Credits:

Seminar = 01 Credit:

Market Research = 03 Credits

Total Credits = 20

## Detailed Syllabus for M.Tech (Biotech) Degree Programme

### MITSU- Genetic Engineering and Synthetic Biology (2+8)

#### UNIT I

Understanding DNA, RNA, proteins, and their role in genetic engineering. Recombinant DNA Technology: Methods for gene cloning, DNA modifying enzymes, vectors, and applications in research. Genetic Circuits and Logic Gates: Introduction to synthetic biological systems and their design principles. Genome Editing Technologies: Tools in CRISPR-Cas9 tools and their applications in gene therapy and metabolic engineering.

#### UNIT II

Designing Genetic Pathways: Construction of synthetic pathways using modular components. BioBricks. Metabolic Engineering: Principles in optimizing metabolic pathways for industrial applications. Ethical and Bioethical in Biotechnology: Discourses on bioethics, bioterrorism, regulation, and intellectual property rights.

#### UNIT III

Current Trends in Synthetic Biology: Exploration of recent advancements such as gene drives and engineered living materials. Socio-economic Implications: Understanding the impact of synthetic biology in society and the environment. Career Opportunities in Biotechnology: Overview of career paths and entrepreneurial opportunities in the field.

#### Suggested Readings:

1. Watson, J. D., Baker, T. A., Bell, S. P.,居, A.,居, M., &居, K. (2014). Molecular Biology of the Gene, 7th edition. Cold Spring Harbor Laboratory Press, New York.
2. Sambrook, T. A. (2017). Gene Cloning and DNA Analysis: An Introduction, 9th edition. W.H. Blackwell.

### MITSU- Engineering Gene Regulation (2+2)

#### Theory

#### UNIT I

Transcriptional regulation - Regulatory proteins, Activation and Repression, Binding of RNA polymerase. Allosteric regulation, DNA looping, Cooperative binding, Anttermination, Coisubstitution control - Regulation of Operons: Gene regulation in Lambda phage - Lytic or lysogenic switch mechanism.

## UNIT I

Regulatory sequences - Promoter, Enhancer, Silencer, Inhibitor, Core Control Region. Activator proteins and their binding sites, DNA binding domain - Homeodomain, Zinc containing proteins: Leucine Zipper Motif, Maltx-Copoly-Motif, YD5 protein. Recruitment of RNA polymerase to promoter regions. Nucleosomes and their modifications: Signal integration. Signal transduction and transcriptional regulation: Gene silencing, Tyrosine gene regulation.

## UNIT II

Regulation by RNA: siRNA and antisense, RNA as defense agent, Ribozymes. Gene silencing by RNA - siRNA & miRNA - synthesis and function. MicroRNAs: their impact, categories and role in gene regulation, chromatin accessibility etc.

## UNIT IV

Negative gene regulation, Positive gene regulation: Translational and Post-translational control. Oscillating pattern of gene expression.

### Practical:

1. To study the role of enhancer and repressor in transcription regulation.
2. To investigate the binding of transcription factors to specific DNA regions.
3. To determine gene clustering using cDNA.
4. To study the function of RNA-interferes in gene regulation.
5. To predict and validate transcription factor binding site using bioinformatics tools.
6. To observe oscillating pattern of gene expression using synthetic biology techniques.

### Suggested Readings:

1. Nelson, D. L. and Cox, M. M. (2017) Lehninger's Principles of Biochemistry, 7<sup>th</sup> edition, W.H. Freeman Publishers, New York.
2. Kunkel, J. E., Goldstein, T. S., Kilpatrick, S. T., (2017) Lewis's Gene XLT 11<sup>th</sup> edition, Jones & Bartlett Learning publisher, Inc.
3. Watson, J. D., Baker, T. A., Bell, S. P.,居, A., Lewin, B., & Losick, R., (2014) Molecular Biology of the Cell, 6<sup>th</sup> Edition, Cold Spring Harbor Laboratory Press, New York.
4. Gerstein, E. J., Sommerville, M. J., & Bernstein, D. B. (2008). Principles of Genetics (2006) eighth Edition. Wiley.

## MBT901 : Electronic and Instrumentation in Biotechnology (3+1)

## UNIT 1

RFI practice tasks, code forward and reverse characterization; Code as a control element. Application of RFI practice tasks such as: half wave, full wave bridge rectifier, clapper trigger and using multiple circuits. Design of generalized instrumentation system.

Transtutors for the measurement of temperature using thermometer and thermocouple, linear displacement measurement using LVDT, Force measurement using the strain gauge.

#### Q3II

Principle and working of laboratory equipments: Titrator, refrigerated and ultracentrifuge, Laminar air flow, Autoclave, pH meter, Thermometer, Temperature control device, BOD diluter, Gel electrophoresis, 2-D gel electrophoresis, gel documentation, pH meter, ELISA reader, Freeze dries, lyophilizer, Lyophilization, Glass plate, Petrid dish, Plate growth chamber, Thermal cycler, Realtime PCR, DNA synthesizer, DNA sequencer, Microscope, Light, view, plane contrast and crossed.

#### Practical

To familiarize laboratory equipment and its equipment working; Forward and reverse UV. Characteristics of a PN junction diode. To study half wave, full wave and bridge rectifier using diodes; Principle of colorimetry and spectrophotometry; PCR using isolated DNA.

#### Suggested Reading:

1. Edward Wilkes Golding & Pratibha Chaitin-Witton. 1995. *Advanced Measurement and Mass Spectrometry*. Prentice.
2. Gupta TS. 2004. *Basic Electronics*. S. K. Kharra & Sons.
3. Mukund. 2007. *Electronics Principles*. Tata McGraw-Hill Education.
4. Mukund P & Thakur S. 2010. *Signal Processing*. S. K. Kharra & Sons.
5. Sharma Jagji. 2012. *Electronic Devices & Circuits*. S. K. Kharra & Sons.

#### MET 5M: Osmotic and Syntesis Biology (I+II)

#### Q3I

Different methods of genome sequencing, principle of genome sequencing (shotgun, physical and genetic maps). Comparative and evolutionary genomics. Organism genome, applications in phylogenetics, case studies of completed genomes, preliminary genome data analysis, basis of genome analysis, reference nations.

#### Q3II

Protein basic primary, secondary- and tertiary structure. Basis of X-ray crystallography and NMR. Principle and Applications of mass spectrometry, Proteomics: Gel-based and peptide, Basis of software used in proteomics, MASCOT, PD-Quest etc., Study of protein interactions, Peptidome and yeast-based expression system and proteomics.

## MBT 500

Metabolomics and its applications; Use of LC/LC NMR, and MS in metabolome analysis. Metabolite analysis and identification of metabolites in bioactive, Study of ionomes using industry coupled plasma – mass spectrometry (ICP-MS), X-Ray Fluorescence (XRF), X-ray diffraction analysis (XRD). Data integration using genomics, metabolomics, proteomics and ionomes with phenomics.

## MBT 501

Introductory Systems Biology - The biochemical models, genetic models and system model. Molecules in Biology, Equilibrium binding and cooperativity - Michaelis-Menten-Kelvin, Biological oscillators, Oscillations and Circuits, Quorum Sensing, Cell-cell communication, Drosophila Development, Pathogenetic Network, Gene regulation at a single cell level, transcription network, REGULATORY CIRCUITS, Negative and positive autoregulation, Alternative Stable States, Biennial Oscillations, Network building and analysis.

## Practical:

- 1 Isolation of Human DNA and brief overview of sequencing, Primary information in genome data analysis.
- 2 RNA Standard curve preparation, Extraction of protein and nucleic acids.
- 3 Quantification of proteins from different plant tissues using spectrophotometry.
- 4 2-D Gel Electrophoresis, 2-D Image analysis.
- 5 Experiments on protein-protein interaction (Biacore, Dot blot, Yeast Two-hybrid system).
- 6 Coimmunoprecipitation on MALDI-TOF.
- 7 Coimmunoprecipitation on ICP-MS, AAS, Strong interaction labeling various methods.

## Suggested Readings:

- 1 Prusov, S. B. and Tyynismaa, R. (2006) Principles of gene Manipulation 2<sup>nd</sup> edition, Wiley-Blackwell.
- 2 Wilson, E., and Wilcock, J. (2010) Principles and Techniques of Biochemistry and Molecular Biology 1<sup>st</sup> Edition, Cambridge University Press.

## MBT 505 : Biophysics and Biochemistry (1+1)

## MBT 511

Quantum mechanics; Electronic structure of atoms; The wave particle duality, wave length of de-Broglie waves, Phase and group velocity; Some basic concepts of quantum mechanics.

Schrödinger's wave equation; Particle in a box; Quantum mechanical tunneling; Fermi-Dirac law of thermodynamics; Entropy, Entropy, Statistical and thermodynamic definition of entropy; Helmholtz free energy; Equilibrium thermodynamics; Non-equilibrium thermodynamics; Gibbs free energy; Chemical potential; Thermodynamic analysis of molecular transport.

#### UNIT I

Hydrogen atom mechanics; Total of States; Diffusion; Diffraction; The cross-slope; Velocity, Scattered off-axis; Light scattering; Inelasticity; Energy transfer; Circular and visible spectroscopy; Circular dichroism(CD) and optical rotatory dispersion(ORD); Fluorescence spectroscopy; Infrared spectroscopy; Raman spectroscopy; Electron spin resonance; NMR spectroscopy; Light microscopy

#### UNIT II

Overview of Biosensor: Definition and classification of biosensor (electrochemical, optical, acoustic, etc); Bio-recognition Element: Type of biomolecules used in biosensor: enzymes, antibodies, nuclear acids, cells. Rapid Immunodiagnostics: Overview of immuno-electrochemical (impedimetry, potentiometric), optical (surface plasmon resonance), piezoelectric: Emerging Trends: Recent advances in biosensor technology including nanomaterials and lab-on-a-chip systems.

#### Practical

1. Demonstrate the wave-particle duality of light
2. Analyze entropy changes in a physical process
3. Study diffusion rates of different structures.
4. Identify molecular structures using UV-VIS spectroscopy
5. Explore molecular mechanics.
6. Evaluate the effect of monosaccharides on reactor performance.

#### Suggested Readings:

1. Chang R. 2005. *Physical Chemistry*, 6/e. An International University Science Book.
2. Giusti 2012. Biophysics. Springer.
3. Potato V & Gómez N. 2001. Biophysics. North Publishing House.
4. Kotenay-Cottrell. 2001. Biophysics. An Introduction. John Wiley & Sons.
5. Okun, Ovsi, Slepnev, Smirnov: Fundamentals, Emerging Techniques, and Applications
6. Biocomputing Methods, Applications and Technology. Nova Publishers
7. Biophysics and Biomimetics. Elsevier

## LIST 206: Nanotechnology (0+6)

### UNIT I

Introduction to Nanotechnology - Nanomaterials - Necessity to artificial assembly for creation of useful nanomaterials - Bottom up and Top down approach (Nano rods, nano wires, nanotubes, quantum dots, nanowires, metal / polymer-based nanomaterials) - Preparation and Characterization of nanoparticles (particle size analysis, microscopy etc., electron microscopy, atomic force microscopy etc.)

### UNIT II

CDI materials - Biomacromolecules: Types, Structure, Dynamics of interaction with water - Calcium ions: Adsorption - cellular membranes, membranes, membrane transport, Membrane carriers - Chemistry of biomacromolecules (Proteins, Lipids, Carbohydrates, Nucleic acids)

### UNIT III

Chemical, physical and biological properties of biomaterials and bio-degradable biomaterials; biocompatibility, and properties of articular materials (prostheses, DNA, and polyisobutylene); structure-property relationship in polymeric materials (synthetic polymers and structural proteins); Articular prostheses, applications and functioning; Statistical Mechanics in Biological Processes.

### UNIT IV

Nanoparticle carrier systems; Micro- and Nano-Sustained Drug and gene delivery system; Micro/Nanobots, Biomimetics, Deep technologies, Nano-Imaging; Nanobiological engineering and Gene therapy;

### Practical:

- 1 Isolation of enzymes and molecules involved in biosynthesis of nanomaterials
- 2 Synthesis of Gold Oxide Nanoparticles by incipient method, Synthesis of nanodiamond and carbon nanotube
- 3 Synthesis of Carbon Nano materials by Chemical Vapor Deposition and Spattering technique
- 4 Preparation, characterisation and measurement of various nano materials
- 5 Zinc oxide quantum dot preparation, Synthesis of Zinc Oxide Nanoparticle
- 6 Zinc film preparation by spin coating technique, Synthesis of Nickel oxide nanoparticles by wet decomposition method
- 7 Synthesis of Zinc Oxide nanoparticles

### Suggested Readings:

1. Nairn, M. S. 2001. *Handbook of Structured Biomaterials and Their Applications in Nanobiotechnology*. American Scientific Publications.
1. Kusayev OM, AMYAKA CA, ED (2007) *Nanobiotechnology: Concepts, Applications and Perspectives*. Wiley InterScience publications. Cao, G., and Wang, Y. (2004) *Nanomaterials and Nanobiomaterials: synthesis, properties, and applications*. Imperial College Press.

### MBT 597. Computational Biology, Artificial Intelligence, and Big Data Analysis (2%)

#### UNIT I

Foundations of Computational Biology: Introduction to biological data types (genomic, proteomic, etc.), Overview of computational biology applications: Algorithms in Computational Biology: Sequence alignment algorithms (e.g., Needleman-Wunck, Smith-Waterman), Genome assembly techniques, Hidden Markov Models for biological sequence analysis.

#### UNIT II

Machine Learning in Biology: Supervised and unsupervised learning algorithms, Neural networks and deep learning applications in genomics. Predictive modeling for drug discovery and disease development. Big Data Analysis: Introduction to big data technologies (Hadoop, Spark), Data mining techniques for biological informatics, Statistical methods for large-scale data analysis.

#### UNIT III

Bioinformatics Tools and Software: Use of software tools for genomic data analysis (e.g., BLAST, Bioconductor), Visualization tools for biological data representation. Network Biology: Biological networks and their analysis, Systems biology approaches to understand complex interactions. Ethics in Computational Biology: Ethical considerations in bioinformatics research, Data privacy issues related to genomic information.

### Practical:

1. Training sessions on bioinformatics software.
2. Workshop on using machine learning libraries.
3. Comparative genomic analysis using machine learning.
4. Analysis of single-cell RNA sequencing data.

### Suggested Readings:

1. *Bioinformatics: Sequences and Genomes Analysis* by David W. Mount

- 1 "Computational Biology: A Practical Introduction to BioData Processing and Analysis with Linux, MySQL, and R" by Robert W. Saunders
- 2 "Systems Biology: A Unified Approach" by Andre G. McOuat et al.
- 3 "A Primer for Computational Biology" by Maria T. O'Malley

## **BET 508 Molecular and Industrial Biotechnology (710)**

### **UNIT I**

Introduction, scope and historical development; isolation, screening and genetic improvement (including classical approaches) of industrially important organisms.

### **UNIT II**

Primary metabolism, production of industrial alcohol as a case study; Secondary metabolism, bacterial antibiotics and nonribosomal peptide antibiotics as case study; Recombinant DNA, technologies for microbial processes, strategies for development of industrial microbial strains with role of proteomic approach; Metabolic pathway engineering of microbe for production of novel product for industry.

### **UNIT III**

Microbial enzymes, role in various industrial processes, production of fine chemicals for pharmaceutical industry; Bio-transformation, Bio- augmentation with production of citram C as a case study; Bioreactor, their design and types; Immobilized enzymes-based bioreactor; Microencapsulation technologies for immobilization of microbial enzymes.

### **UNIT IV**

Enzymatic biochemistry, biocatalysis for pollution control, treatment of industrial and other waste; Biocatalysis problems involving single cell process; Bio-commodification of oil; Production of eco-friendly agricultural chemicals, bio-pesticides, bio-fertilizers, bio-fertilizers, bio-fuels, etc.

### **Practical:**

- 1 Isolation of industrially important microorganisms, their maintenance and improvement.
- 2 Lab scale production of industrial compounds such as alcohol, beer, citric acid, lactic acid and their recovery.
- 3 Study of bio-reactor and their operations.
- 4 Production of bio-fertilizers.
- 5 Experiments on microbial fermentation processes/biocatalysis, bio-pesticides, dairy products, harvesting pathways and recovery of oil products.

- Immunotherapy of rats and humans, studies on its kinetic behavior, growth analysis and immunotherapy.
- Characteristics of some biostimulants.

#### Suggested Reading:

- 1. White, M. J., Morgan, N. L., Bailey, J. S., Hayes, G. (2000) *Veterinary Microbiology*: An Introduction, Wiley-Blackwell.
- 2. Lewis, A., Scott, R. W., & Peeling, M. R. (2001). *The genetic manipulation of plants*. Plant Biotechnology. Oxford, England: Oxford University Press.
- 3. Kim, J. Y. (2011). *Medical biotechnology: principles and applications*. West Publishing Company.

#### UNIT 5B: Virus Biotechnology (2+1)

##### UNIT I

History of virology, conventional approaches to vaccine development, live attenuated and killed vaccines, adjuvants, quality control, preservation and monitoring of microorganisms in used laboratory.

##### UNIT II

Surveillance related to monitoring of temperature, sterilization, environment, quality assurance and related tests.

Production techniques, growing the microorganisms in culture like, preservation techniques to maintain good antigen quality, freeze drying.

##### UNIT III

Introduction to newer vaccine approaches namely viral and recombinant, synthetic vaccines, DNA vaccines, virus like particles, recombinant vaccines, edible vaccines. Nano particles in vaccine delivery systems, etc.

##### UNIT IV

Introduction to pharmaceutical management, disease severity and hierarchy principles and OIE guidelines, risk and management, method of manufacture, in process control, batch control, tests on final product.

#### Practical:

1. Isolation of enveloped and non-enveloped viruses from infected chicken eggs for estimation of virus.
2. Harvesting of virus from infected cultures.
3. Preparation of purified virus.

6. Safety and quality testing of attenuated vaccines
7. Isolation of virus cultures for propagation of virus.
8. Harvesting and production of inactivated virus vaccines
9. Isolation and cloning of genes encoding immunogenic proteins
10. Preparation of cloned genes in Plasmids of recombinant biotechnological process.
11. Immunogenicity studies of recombinant proteins.
12. Immunization of laboratory animals.
13. Titration of antibodies against the recombinant protein.

#### Suggested Reading:

1. Berry, R. Elion and Paul-Henri Lederer. 2002. *The Vaccine Book*. Academic Press New York.
2. Levine, M.M., Krupp, J.B., Rappaport, R., Liu, M.A. and Ored, M.F. 2004. *New Generation Vaccines* 2nd Ed. Informa Healthcare, London
3. Lemire, D.J. & Wilson, K. 2008. *DNA Vaccines*. Humana Press, Totowa, New Jersey
4. Kohlmeier, A. & Orange, J.R. 2003. *Vaccine Protocols* 1st Ed. Humana Press, Totowa, New Jersey

#### BIRT 518: Enzymology and Enzyme Engineering (3+1)

##### UNIT I

Introduction: Enzymes- Michaelis-Menten kinetics- Kinetics and Steric Substrate- Effect of pH and temperature- Enzymology- Described enzymes: Nucleic, DNA, protein, carbohydrate and Industrial enzymes.

##### UNIT II

Introduction to metabolism- Nutrient transport- Glycolysis - TCA cycle and other pathways- Control of metabolism- Factors affecting microbial growth - Homeostatic- mass balance and energy balance. Growth homeostasis and control of growth.

##### UNIT III

Introduction to fermentation - Batch and Fed batch reactors, Continuous fermenter, Immobilized cells. Bioreactor operation, Sterilization, Aeration, Oxygen- Interspecies interaction, Culture - specific design aspects, plasmid mediated cell culture reaction.

##### UNIT IV

Bioproduct recovery - Biocatalysis - Membrane based techniques. Extraction - solvent, aqueous two phase, super critical, and Adsorption. Chromatography, Desorption (Ammonium Sulfoxide, solvent), Electrophoresis (capillary), Crystallization, Drying and Pressing.

## QMBT15

**Waste Biotechnology:** Few industrial processes using enzymes for production of drugs and fine chemicals; Enzyme based bioreactor, Enzyme as organic catalyst, Molecular imprinting, Enzyme engineering, selection of chiral molecules, and their enzymatic synthesis, functional expression of enzymes, protein engineering by modification of protein folding factors and control, Detailed study.

## Practical

1. Handling of enzymes and estimation of specific activity of an enzyme (e.g. amylase, pectinase, protease).
2. Isolation of  $\beta$ -D-glucosidase and determination of enzyme activity using specific substrate.
3. Purification of enzymes by ammonium sulphate precipitation.
4. Effect of pH, concentration, temperature on the activity of enzymes.
5. In vitro enzyme activity testing on PEG-Polyacrylamide gel (Amylase, Lactate dehydrogenase)
6. Immobilization of enzymes in gel suspension and cross linking reaction.

## Suggested Readings:

1. Michael Shuler and Faneil Kargi, "Bioprocess Engineering Basic Concepts", 2nd Edition, Prentice Hall, and Englewood Cliffs, NJ, 2000.
2. Pauline Doms, "Bioprocess engineering principles", Academic Press, 1997.
3. Colin Rutherford, Lynn Richardson, "Basic Biotechnology", 2nd Edition, Cambridge University Press, 2001.
4. Roger Hanzlik et al., "Bioprocessing Science and Engineering", Oxford University Press, 2003.
5. Hansen R.O. and P. Ranga P.A., "Bioprocessing Science and Engineering", Oxford Press 2003.

## MFTS13- Quality Assurance in Genetic Engineering and Biotechnology (1\*1)

## QMBT1

Concept and evolution of quality control and quality assurance, Total Quality Management, Philosophy of QAP and rGMP, Preparation of audit, Conducting audit, Audit Analysis, Audit Report and Audit follow up, Quality control laboratory responsibilities, GLP protocols in

conducting testing control on sample batches, data generation, interpretation and storage, statistical procedures, review of sample results; CPCSEA guidelines.

#### UNIT II

Quality review and batch release documents of finished products, overall product quality review and parameter review. Audit, quality audits of manufacturing processes and facilities, audit of quality control.

#### UNIT III

OvR (Oversight of Research) practice, role of risk analysis, corrective action preventive action (CAPA), out of specification (OOS) and out of trend (OOT). Clinical studies- ICH S6(R2) (E6) guidelines, pre marketing surveillance, Pharmacovigilance.

#### UNIT IV

BABE (bioavailability and bioequivalence) studies, Concepts and management of coated manufacturing guidelines, Statistical Tools for Quality Control and Precision, Tools of Problem Solving and Continuous Improvement.

#### UNIT V

Introduction, scope and importance of IP, Concept of trade mark, copyright and patent. Product registration guidelines - CDSCO, USFDA, Concept of ISO 9001:2008, 14000, CPhIA guidelines, Quality Strategy for Indian Industry, Brief concept of IND, NDA, ANDA, SMDA and PCD.

#### Practical

1. Conduct a walk audit of a laboratory or manufacturing unit, documenting findings and recommendations.
2. Design an experiment following GCP protocols, including test parameters and range.
3. Create a compliance checklist based on CPCSEA guidelines for clinical testing.
4. Develop a sample batch release document and perform a peer review and conduct a hypothetical annual product quality review using provided data.
5. Design and execute a simple bioequivalence study using simulated data to analyse results statistically.
6. Develop an implementation plan for ISO 9001:2008 = ISO 14000 standards in a simulated pharmaceutical environment.

#### Suggested Reading:

1. Gary J. Good Pharmaceutical Manufacturing Practice Standards and Compliance. CRC Press, 2002.
2. Gary J.C. Pharmaceutical Manufacturing Handbook: Production and Processes John Wiley & Sons, 2008.

1. Standard I. GMP ISO Quality Audit Manual for Healthcare Manufacturers and Their Suppliers, Seven Edition, (Volume 1 - With Checklist and Software Package). Taylor & Francis, 2003.
4. Klassen J, Meng R Scott G. Good Clinical Practice: Standard Operating Procedures for Clinical Researchers. Wiley, 1995.
5. Ulfar P. An Introduction to Pharmaceutical Quality. John Wiley & Sons, 2011.
6. Neal S. The Book of Biocompatibility Testing. CRC Press, 2007.
7. Chaitow A.R. International Pharmaceutical Registration. Informa Press, 2000.
8. Eisner A.J. ISO 14000 Environmental Certification Step-by-Step. Revised Edition. Butterworth-Heinemann, 2000.
9. Meiss D. FDA Regulatory Affairs: A Guide to Prescription Drugs, Medical Devices, and Biologics. Informa Healthcare USA, 2003.
10. Chaitow A.R. International Pharmaceutical Registration. Informa Press, 2000.
11. Geysph R. Industrial Property Rights. The McGraw-Hill Companies, 1998.

#### UNIT 5L : Molecular Diagnostics (1\*2)

##### UNIT I

Introduction, importance and historical perspective of development of molecular diagnostic technology, concept of development of group specific and strain specific nucleic acid based diagnostics, basis for selection of gene nucleotide sequences of pathogenic organisms as target for detection.

##### UNIT II

Application of restriction endonuclease analysis for identification of pathogens, principle of development of pathogen specific DNA probe, Southern and Northern hybridization.

##### UNIT III

Theoretical background of development of PCR and Real time PCR and its variations, application of PCR for diagnosis of molecular diseases of animals and poultry, marker and sequence based diagnostics.

##### UNIT IV

Advancement in diagnostic technology including DNA array technology, bioassays and nanotechnology, OIE guidelines in development of diagnostics.

#### Practical:

1. Preparation of buffer and reagent.
2. Collection of clinical and environmental samples from animal and poultry farms for molecular detection of pathogens.

- Isolation of bacterial pathogens from the samples.
- Enumeration of bacteria such those bacteria and clinical specimen.
- Karzonase and nucleic digestion and analysis in agarose electrophoresis.
- Determination of animal pathogen specific nucleic acid probes.
- Immunofluorescence for detection of pathogens.
- Polymerase chain reaction for detection of pathogens in blood and other animal tissues.
- RT-PCR for detection of DNA viruses.
- Real time PCR for detection of pathogens in meat and other animal tissues.
- DNA fingerprinting for identification of animal species.
- PCR based detection of meat adulteration in processed and raw materials.
- Detection of food borne pathogenic organisms in vegetables and fruits using PCR technology.
- PCR based detection of potential pathogens in milk, eggs and meat.

**Suggested Readings:**

- Elias, R. and Novakofski, R. 2004. Molecular Diagnosis of Gastrointestinal Diseases. Humana Press, Totowa, New Jersey.
- Kao, J.K., Flanagan, C.C. and Moore, J.B. 2004. Molecular Diagnostics. Humana BioScience Publishers, USA.

**MET 513 Environmental Biotechnology (3+0)**

**UNIT I**

Basic concept; and environmental toxic; types of environmental pollutants; pollution arising from high-yield agriculture; methodology of environmental management; air and water pollution and its control; waste water treatment - physical, chemical and biological processes used for water and nature resources management.

**UNIT II**

Microbiology and use of microorganisms in waste treatment; biodegradation; degradation of Xanthophyto, carbamate; biodegradation of soil & water contaminated with oil, petrochemical toxic chemicals, detergents; sewage processes (integrated sludge, maximum dilution, trickling filter, rotating drum, etc); wastewater processes: digester, filteration, etc.

**UNIT III**

Renewable and non-renewable resources of energy: energy from solid wastes, conventional fuels and their environmental impact: biogas; microbial hydrogen production; conversion of sugar to alcohol, gaseohol; biodegradation of lipids and cellulose; nitrification; denitrification; composting; vermiculture etc.

**UNIT IV**

Treatment schemes of domestic waste and industrial effluent; food, fuel and energy from solid waste; biodegrading mechanism of soil by microorganisms; global environmental problems: ozone depletion, UV-B, greenhouse effect, acid rain and toxic; biodiversity and its conservation; biotechnological approaches for the management environmental problems.

#### Suggested Reading:

1. Evans, G. and Tulett, I. C. (2010). Environmental Biotechnology: Theory and Applications. 2<sup>nd</sup> edition, Wiley-Blackwell.
2. Dennerling, E. and Winkel, J. (2006). Environmental Biotechnology: Concepts and Applications. Wiley-VCH Verlag.

#### MBT 514: Stress Biology and Genetics (2+0)

##### UNIT 1

Different kinds of stresses (biotic and abiotic) and adaptation strategies: Plant cell as a sensor of environmental changes; role of cell membranes in signal perception; Waves of signal transmission in cells and whole plants as a response to external factors. Abiotic stresses affecting plant productivity – Drought, salinity, waterlogging, temperature extremes, light stress and nutrient stress; Drought stress – Effects on plant growth and development; Components of drought resistance; Physiological, biochemical and molecular basis of tolerance mechanisms; Drought stress (biotic and abiotic) resistance mechanisms.

##### UNIT 2

Strategies to manipulate drought tolerance – Domestic adjustment and Crop protection - synthesis of proteins, glycine betaine, poly-phenols and tannins, ROS and antioxidants, hormonal metabolism - ABA signaling, signaling compounds - transcription factors. Water logging stress - effects on plant growth and metabolism, adaptation to water logging, tolerance mechanisms (anaerobic and flooding tolerance). Strategies for improving耐水性 tolerance. Salinity stress - effects on physiology and metabolism of plants, ROS pathways and ion homeostasis. Strategies to improve salinity tolerance in plants. Water logging stress - effects on plant growth and metabolism; tolerance mechanisms. Physiological and biochemical changes - High & Low temperature tolerance mechanisms - molecular basis of thermal tolerance. Morphological and physiological changes in plants due to high and low light stresses - photo-oxidative - plant development. Characteristics of heliophytes and xerophytes - solar tracking - suns effect and light domaining. Heavy metal stress - Al and Cd stress - effects on plant growth and development; biotech strategies to overcome heavy metal.

stress. Various cross- effects on plant growth and development. Genetic manipulations strategies to overcome the stress effects.

#### Q3.2.12

Genomics; transcriptomics; small RNAs and epigenetics; functional genomics; transfer of tolerance related genes to model plants and validation of gene function. Different techniques for the functional validation of genes. Signaling pathway related to defense gene expression, R genes, RNAi approach and genes from pathogens and other sources, transgenic plants, biostimulation genes, biogas and disease management. In practice, various management strategies in transgenic crops, ecological impact of GM release of transgenic crops. Bioinformatics approaches to determine gene function and network in model plants under stress.

#### Suggested Reading

1. Sarker, S. S., Grossnik, U. and Islam A. (2012) Biotechnology and Molecular Biology of Plants, 2<sup>nd</sup> edition, Wiley and Blackwell Publications.
2. Srivastava, M., Ahmad, A., Abidin, M.Z. (2012) Stress Signaling in Plants: Genetics and Proteomic Perspectives, Volume 1, Springer.
3. Hartung, J. (2000) Plant Stress Biology: From Genetics to Systems Biology John Wiley & Sons, J. K., Theoretical of Abiotic Stress Signaling in Plant, Wiley.

#### Q3.3.1: IPR, Biodiversity & Biosafety (T+9)

#### Q3.3.1

IPR: Material designated in Table; trade secret; patent, trademark, Acceptable licensing procedure for patent applications in India, Patent Cooperation Treaty (PCT). Examples of patents in biotechnology- Case studies in India and abroad, copyright and PVP, Implications of IPR on the commercialization of biotechnology products, ecological implications, Trade agreements- The WTO and other international agreements, and Cross border movement of germplasm.

#### Q3.3.2

Biodiversity and biosafety; General principles for the laboratory and environmental bio-safety. Biodiversity and risk assessment issues; handling and disposal of bio-hazardous; Approved regulatory laboratory practice and principles. The Cartagena Protocol on Biodiversity, Biodiversity regulations in India; national Biodiversity Policy and Law; Regulations and Guidelines related to Biodiversity in other countries.

## UNIT 11

Potential sources of transport plane - Environmental safety and food and feed safety. Principles of safety assessment of Transport planes - sequential steps in risk assessment. Concepts of feasibility and inherent equivalence. Risk - Environmental risk assessment - insecticides, herbicides, gas firm forward gas traffic; inspection non-stop operation. Food and feed safety assessment - toxicity and oligogeneity. Monitoring strategies and methods for detecting transgenes.

## UNIT 12

Field trials - Bio-safety research trials - standard operating procedure. Making of GM food and crop bio-safety. Medical and religious, social, spiritual & environmental ethics. Ethics in Biotechnology. Making of GM food and crop. Safety.

### Suggested Reading:

1. God, D., and Persson, S. (2001) GM, creativity and biosafety.
2. Ishaaya, S. (2004) Biosafety and Bioethics.
3. Vanham, P. (2017) An Introduction to Ethical, Safety and Intellectual Property Rights Issues in Biotechnology.

## BEST 518: Bio-entrepreneurship (I+II)

## UNIT 1

Scope of Biotechnology; types of Bio-entrepreneur - Bio-preneur, Bio-ign, Bio-entrepreneur and bio-industrial. Importance of entrepreneurship, transition to bio-entrepreneurship - Biotechnology is a global unlevered for successful entrepreneurship-creativity, leadership, management, team building, decision making opportunities for biotechnology-entrepreneurship development programs of public and private agencies (DBT, DBT-BRAC, Startup & Make it India).

## UNIT 2

Business plan preparation; business feasibility analysis by SWOT, socio-economic cost benefit analysis, funds support from various agencies, statutory and legal requirements for starting a company venture.

## UNIT 3

Entry and exit strategy; identifying needs of customers; Market linkage, branding issues; developing distribution channels - franchising, policies, promotion, structuring, branding and market linkage for 'virtual startup company'. Pricing strategy.

## GLOSSARY

Knowledge center e.g., a university, innovation centre, research institution (public & private) and business incubator; R&D for technology development and application; assessment of technology development; managing technology transfer;

## Suggested Reading

1. Almeida, D. J. & Sperber, J. C. (2008). *Strategies for Life Sciences: Developing Innovation and Entrepreneurship in the Biomedical Sector*. John Wiley.
2. Ünaltepe, C. D. (2014). *BioTechnology Entrepreneurship: Starting, Managing, and Leading BioTech Companies*. Amsterdam: Elsevier Academic Press is an imprint of Elsevier.
3. Castell, A. & Zuchella, A. *Business Modeling for Life Science and Biotech Companies: Creating Value and Competitive Advantage with the Business Model Canvas*. Routledge.
4. Joritz, J. F. (2014). *Innovation, Commercialization, and Start-Ups in Life Sciences*. London: CRC Press.
5. Deau, U. (2009). *The Dynamics of Entrepreneurial Development and Management*. New Delhi: Manohar Pub. House.

## **Annexure-VII**



**SHAHEED BENAZIR BHUTTO  
UNIVERSITY OF AGRICULTURAL SCIENCES & TECHNOLOGY OF  
JHELUM**

**5<sup>TH</sup> SEMESTER**

Academic Session		Date _____	Year _____			
Post Graduate	Serial No.	Name	Program	Registration No.	Result marked on	GPA out of 100
<b>1.1. Doctor of Philosophy in Agricultural Science</b>						
<b>AGROBIOLOGY</b>						
4143	1	Kiran Akhter	Ms. Economics (Agri) Stream	310-D-112-A	27-06-2024	8.88
4144	2	Sohail Sharif	Ms. Agri. Entomology	310-D-113-A	25-06-2024	8.17
4145	3	Liaquat Hussain Saeed	Ms. Soil Science (Agri)	310-D-114-A	27-06-2024	8.30
4146	4	Mohammad Imran	Ms. Crop Science	310-D-115-A	28-06-2024	8.18
<b>ENTOMOLOGY</b>						
4147	1	Shanaya Riaz	Ms. Ento. (Agri) Stream	310-D-116-A	21-06-2024	8.22
4148	2	Umair Iqbal	Ms. Entomology (Agri)	310-D-117-A	20-06-2024	8.19
4149	3	Tauseef Majeed	Ms. Insect Pest Control	310-D-118-A	22-06-2024	8.10
<b>GENETICS AND PLANT BREEDING</b>						
4150	1	Ishrat N.	Ms. Cytogenetics & V	310-D-119-A	21-06-2024	8.44
<b>SOIL SCIENCE AND AGRICULTURAL CHEMISTRY</b>						
4151	1	Sohail Shams	Ms. Soils (Agri) Stream	310-D-120-A	27-06-2024	8.00
4152	2	Naveed Yousaf	Ms. Fertilizer Science (Agri)	310-D-121-A	21-06-2024	8.19
<b>AGRICULTURAL ECONOMICS</b>						
4153	1	Umer Ghamkhar A.M	Ms. Macroeconomics & E	310-D-122-A	27-06-2024	8.22
4154	2	Haseeb Shams	Ms. Microeconomics	310-D-123-A	29-06-2024	7.78
<b>AGRICULTURAL EXTENSION &amp; COMMUNICATION</b>						
4155	1	Imran Khan	Ms. Extension Science (Agri)	310-D-124-A	27-06-2024	8.27
<b>PLANT PATHOLOGY</b>						
4156	1	Riaz Ahmad Qai	Ms. All Gen. Dis.	310-D-125-A	28-06-2024	7.34
4157	2	Leela Devi	Ms. Plant Pathology (Agri)	310-D-126-A	21-06-2024	8.22
4158	3	Imran Zaidi	Ms. Plant Disease	310-D-127-A	29-06-2024	8.21
4159	4	Umar	Ms. Microbiology (Agri) Stream	310-D-128-A	21-06-2024	8.11
<b>BIOTECHNOLOGY</b>						
4160	1	Javed Q.B.	Ms. Biotech	310-D-129-A	21-06-2024	7.98
<b>AGRO-BIOTECH MANAGEMENT</b>						
4161	1	Rashid Shah Taseer	Ms. Agro-Bio Tech Stream	310-D-130-A	23-06-2024	8.73
<b>2.1. Doctor of Philosophy in Soil: Forensics</b>						
<b>BIOCHEMISTRY</b>						
4162	1	Pakayal Sajid Dar Asif	Ms. P.L.D. Stream	310-D-131-A	21-06-2024	8.27



**ACROPOLOGY**

4134	1	Johny Sharma	Sh. Tarseer Dass	521-06-214	01-01-2004	7.15
4135	1	Padmini	Sh. Balwant Singh	521-06-219	21-01-2004	7.15
4136	1	Gurjeet Kaur	Sh. Gurjeet Singh	521-06-220	21-01-2004	7.15
4137	4	Jaswinder Singh	Sh. Jagjeet Singh	521-06-271	21-01-2004	7.15
4138	1	Anmol	Sh. Gurnar Singh	521-06-240	21-01-2004	7.15
4139	1	Gurkirti	Sh. Kartarjeet Singh	521-06-250	21-01-2004	7.15
4140	1	Ramandeep Singh	Sh. Chintan Ram	521-06-212	21-01-2004	7.15
4141	4	Amanjeet Kaur	Sh. Deepak Kumar	521-06-219	21-01-2004	7.15
4142	4	Dormi	Sh. Kartik Kumar	521-06-204	21-01-2004	7.15
4143	11	Mary Jitwani	Sh. Davinder Singh	521-06-202	21-01-2004	7.15
4144	11	Kriti Deol	Sh. Kishore Kumar	521-06-233	21-01-2004	7.15
4145	11	Jasvir Virk	Sh. Ravi Pratap	521-06-260	21-01-2004	7.15
4146	11	Surinder Kaur	Sh. Gurdeep Singh	521-06-207	21-01-2004	7.15
4147	11	Virender Kaur	Sh. Jagjeet Singh	521-06-242	21-01-2004	7.15
4148	11	Zohra Mehta	Sh. Zain Singh Dhillon	521-06-270	21-01-2004	7.15
4149	11	Latajai Khapra	Sh. Yashpal Kumar	521-06-229	21-01-2004	7.15

## Chauhan

4201	17	Dipali Kumar	Sh. Om Puri	521-06-717	30-01-2004	7.15
<b>AGRICULTURAL ECONOMICS</b>						
4202	1	Yashwant Singh	Sh. Atul Singh Bhat	521-06-733	30-01-2004	7.15
4203	1	Geeta Jitpal	Sh. Lakhbir Singh Y.R.	521-06-473	30-01-2004	7.15
4204	1	Rakesh Kaur	Sh. Savinder Singh	521-06-473	30-01-2004	7.15
4205	4	Agro	Sh. Jagjeet Singh	521-06-473	30-01-2004	7.15
4206	1	Neetu Oberoi	Sh. R.K. Gujral	521-06-473	30-01-2004	7.15
<b>AGRICULTURAL EXTENSION EDUCATION</b>						
4207	1	Yashwant Kaur	Sh. Harpreet Chahal	521-06-704	30-01-2004	7.15
4208	1	Dilpreet Kaur	Sh. Jitwan Singh	521-06-704	30-01-2004	7.15
4209	1	Geetika	Sh. Arun Pal Pannu	521-06-433	30-01-2004	7.15
4210	4	Geetika Kaur	Sh. Lajpat Singh	521-06-470	30-01-2004	7.15
4211	1	Harki Bhambhani	Sh. Bawa Bhambhani	521-06-271	30-01-2004	7.15
<b>ENTOMOLOGY</b>						
4212	1	Vineender Tadka	Sh. Balwant Singh Vadehra	521-06-802	20-01-2004	7.15
4213	1	Sukhbir Singh	Sh. Mohd Shahid Chaudhary	521-06-401	20-01-2004	7.15
4214	1	Tanveer Hussain	Sh. Gurdev Singh	521-06-292	20-01-2004	7.15
4215	4	Deepti Chaudhary	Sh. Atul Singh	521-06-203	20-01-2004	7.15
4216	1	Lakshmi Chaudhary	Sh. Atul Kumar	521-06-217	20-01-2004	7.15
4217	4	New Armed Team	Sh. Suresh Kumar Vira	521-06-706	20-01-2004	7.15
4218	1	Zohra	Sh. Preeti	521-06-451	20-01-2004	7.15
4219	1	Neelam Dholka	Sh. Navneet Dholka	521-06-890	20-01-2004	7.15
<b>GENETICS AND PLANT BREEDING</b>						
4220	1	Lehla Kaur	Sh. Baljeet Lal	521-06-831	20-01-2004	7.15
4221	1	Lehla Singh	Sh. Ingrid Singh Chaudhary	521-06-417	20-01-2004	7.15
4222	1	Lehla Singh	Sh. Atul Kumar Singh	521-06-497	20-01-2004	7.15
4223	4	Neelam Kaur	Sh. Lopamudra Chaudhary	521-06-808	20-01-2004	7.15
4224	1	Nirmala Singh	Sh. Apna Singh	521-06-292	20-01-2004	7.15
4225	4	Reema Kumar	Sh. Ranjeet Lal	521-06-390	20-01-2004	7.15
4226	1	Shivinder Kaur	Sh. Jagjeet Singh	521-06-492	20-01-2004	7.15
4227	1	Sukhbir Singh	Sh. Gurjeet Singh	521-06-292	20-01-2004	7.15

## GENETICS AND PLANT BREEDING

4228	1	Lehla Kaur	Sh. Baljeet Lal	521-06-831	20-01-2004	7.15
4229	1	Lehla Singh	Sh. Ingrid Singh Chaudhary	521-06-417	20-01-2004	7.15
4230	1	Lehla Singh	Sh. Atul Kumar Singh	521-06-497	20-01-2004	7.15
4231	4	Neelam Kaur	Sh. Lopamudra Chaudhary	521-06-808	20-01-2004	7.15
4232	1	Nirmala Singh	Sh. Apna Singh	521-06-292	20-01-2004	7.15
4233	4	Reema Kumar	Sh. Ranjeet Lal	521-06-390	20-01-2004	7.15
4234	1	Shivinder Kaur	Sh. Jagjeet Singh	521-06-492	20-01-2004	7.15
4235	1	Sukhbir Singh	Sh. Gurjeet Singh	521-06-292	20-01-2004	7.15

ROLL NO.	NAME	DEPARTMENT	REGISTRATION NO.	DATE OF BIRTH	AGE
<b>PLANT PATHOLOGY</b>					
4224	1	Indresh Kumar Singh	Sh. Raman Lal	321-10-100	07-02-2004 19
4225	1	Anujit Singh	Sh. Jitendra Singh	321-10-102	08-02-2004 19
4226	1	Nishu Kaur	Sh. Tarsem Arvind Singh	321-10-103	14-02-2004 19
4227	1	Lopamudra S.	Sh. Gurwinder Singh	321-10-104	19-02-2004 19
4228	1	Sonika Srivastava	Sh. S. Chauhan	321-10-105	04-02-2004 19
4229	1	Minal	Sh. Lajpal Kumar	321-10-106	20-02-2004 19
4230	1	Sonika Parwal	Sh. Jag Kumar Patel	321-10-107	21-02-2004 19
4231	1	Uttam Kumar	Sh. Ranbir Lal	321-10-108	25-02-2004 19
4232	1	Amitika Gupta	Sh. Ram Paul Gupta	321-10-109	25-02-2004 19
4233	1	Deep Chawla	Sh. Jitender Singh	321-10-110	06-02-2004 19
4234	1	Pratima Sharma	Sh. Ravi Lal Sharma	321-10-111	29-02-2004 19
<b>MERCILITIUM</b>					
4235	1	Gurpreet Kaur	Sh. Balwinder Singh	321-10-112	21-02-2004 19
4236	1	Sukhbir Kaur	Sh. Jagjeet Singh	321-10-113	09-02-2004 19
4237	1	Chandigarh Chanchal	Sh. Deepak Arora	321-10-114	27-02-2004 19
<b>AGRI. SCIENCE</b>					
4238	1	Kavita Kaur	Sh. Jagjeet Singh	321-10-115	20-02-2004 19
4239	1	Bhawna Sharma	Sh. Anil Kumar Sharma	321-10-116	20-02-2004 19
4240	1	Harsimran Kaur	Sh. Balwinder Singh	321-10-117	24-02-2004 19
4241	1	Neetu Chahal	Sh. Deepak Arora	321-10-118	27-02-2004 19
<b>AGRI. SCIENCE AND TECHNOLOGY</b>					
4242	1	Davinder Kaur	Sh. Jaywan Lal Bhambhani	321-10-119	21-02-2004 19
4243	1	Neeru	Sh. Raman Lal	321-10-120	21-02-2004 19
4244	1	Sweta Sharma	Sh. Balwinder Singh	321-10-121	20-02-2004 19
4245	1	Adish Kumar Sandhu	Sh. S. Chauhan	321-10-122	20-02-2004 19
4246	1	Jaspreet Bagh Qazalvi	Sh. Anil Kumar Qazalvi	321-10-123	20-02-2004 19
4247	1	Vani Malhotra	Sh. Anil Malhotra	321-10-124	21-02-2004 19
4248	1	Yogesh Arora	Sh. Balwinder Chahal	321-10-125	20-02-2004 19
4249	1	Tarika Malhotra	Sh. Deepak Singh	321-10-126	20-02-2004 19
4250	1	Neetu Kaur	Sh. Jagjeet Kumar Dass	321-10-127	20-02-2004 19
4251	1	Omran Jabeen	Sh. Harman Kumar	321-10-128	21-02-2004 19
<b>ORGANIC FARMING</b>					
4252	1	Lohita Dangra	Sh. Tarsem Pannu	321-10-129	06-02-2004 19
4253	1	Lehnujeet Kaur	Sh. Gurcharan Lal	321-10-130	20-02-2004 19
4254	1	Swarnjeet Kaur	Sh. Aniljeet Pal Kaur	321-10-131	20-02-2004 19
4255	1	Surjeet Kaur	Sh. Balwinder Singh	321-10-132	20-02-2004 19
<b>AGRO ECOLOGY</b>					
4256	1	Crochet Kaur	Sh. Balwinder Singh	321-10-133	16-02-2004 19
4257	1	Malvinder Kaur	Sh. Pashu Singh Chahal	321-10-134	20-02-2004 19
4258	1	Parkash Singh	Sh. Gurjeet Singh	321-10-135	20-02-2004 19
<b>MBA - AGRI BUSINESS MANAGEMENT</b>					
4259	1	Geetanjali	Sh. Anil Kumar	321-10-136-A001	04-02-2004 19
4260	1	Janmejai Kaur	Sh. Atma Ram Singh	321-10-137-A001	04-02-2004 19
4261	1	Surjeet	Sh. Karam Lal	321-10-138-A001	08-02-2004 19
4262	1	Yashpal Singh Randhawa	Sh. Manjeet Singh Jathbir Kaur	321-10-139-A001	04-02-2004 19
4263	1	Devinder Chahal	Sh. Jitender Singh Dhania	321-10-140-A001	04-02-2004 19

426	6	Dileep	Sh. Jagjeet Singh	521-0221-AB01	11-1-2024	8.00
427	7	Akash Bhambhani	Sh. Kavita Dahiya	521-0227-AB01	11-1-2024	7.00
428	2	Parveen	Sh. Lakhwinder Singh	521-0228-AB01	11-1-2024	7.00
429	4	Kamlesh Jaiswal	Sh. Lakhwinder Kumar	521-0229-AB01	11-1-2024	7.00
430	22	Rajendra	Sh. Rajendra Singh	521-0240-AB01	11-1-2024	12.00
			<b>Dhanan</b>			
431	11	Amrit Singh	Sh. Deepak Prakash Mehta	521-0241-AB01	11-1-2024	7.00
432	12	Utkarsh Thakur	Sh. Jitender Thakur	521-0242-AB01	11-1-2024	8.00
433	11	Yash Verma	Sh. Jit Singh	521-0243-AB01	11-1-2024	7.00
434	4	Jasbir Singh	Sh. Jyoti Singh	521-0244-AB01	11-1-2024	7.00

### 1.7 Master of Science in Basic Sciences

#### 1.7.1 PHYSIOLOGY

435	1	Abhishek Verma	Sh. Kavita Lal	521-0281-AB01	10-10-2024	8.00
436	1	John Malhotra	Sh. Jyoti Kumar	521-0286-AB01	10-10-2024	7.00
437	1	Parveen	Sh. Jyoti Kumar	521-0287-AB01	10-10-2024	7.00
438	1	Yashika Malhotra	Sh. Jagjeet Singh	521-0288-AB01	10-10-2024	8.00
439	1	Gurpreet Chahal	Sh. Jit C. Chahal	521-0289-AB01	10-10-2024	7.00

#### 1.7.2 STATISTICS

440	1	Indranil Mukhopadhyay	Sh. Akash Kumar Singh	521-0291-AB01	10-10-2024	8.00
441	1	Divyanshu Shukla	Sh. Dhruv Shukla	521-0292-AB01	10-10-2024	8.00
442	1	Anumeha Verma	Sh. Gurmeet Singh Verma	521-0293-AB01	10-10-2024	8.00

#### 1.7.3 MICROBIOLOGY

443	1	Armaan Thakur	Sh. Gurjeet Thakur	521-0295-AB01	10-10-2024	7.00
444	1	Avneet Chahal	Sh. Yash Kumar	521-0296-AB01	10-10-2024	7.00

### 1.8 Master of Science in Microbiology & Genetics

#### 1.8.1 MICROBIOLOGY & GENETICS

445	1	Trish Patel	Sh. Baljeet Singh	521-0307-AB01	10-10-2024	8.00
446	2	Ishvita	Sh. Anil Chopra	521-0308-AB01	10-10-2024	8.00
447	1	Imran Khan	Sh. Jagjeet Kumar	521-0309-AB01	10-10-2024	7.00
448	4	Divyanshu Chahal	Sh. Jyoti Singh	521-0307-AB01	10-10-2024	8.00
449	4	Siddarth Jaiswal	Sh. Nishant Kumar	521-0309-AB01	10-10-2024	8.00
450	4	Abhay Lal Bhambhani	Sh. Ravi Lal Bhambhani	521-0310-AB01	10-10-2024	7.00
451	1	Sandeep Kumar	Sh. Suresh Kumar	521-0307-AB01	10-10-2024	7.00

#### 1.8.2 PLANT PATHOLOGY MANAGEMENT

452	1	Ramandeep Sharma	Sh. Deepak Mehta	521-0311-AB01	10-10-2024	8.00
453	1	Surjeet Kaur	Sh. Gurjeet Singh	521-0312-AB01	10-10-2024	8.00
454	1	Neeru Kumar Sharma	Sh. Kailash Chandra Sharma	521-0313-AB01	10-10-2024	7.00
455	1	Shivani Sharma	Sh. Neeru Kumar Sharma	521-0313-AB01	10-10-2024	7.00
456	1	Manmohan Pal Singh	Sh. Preetpal Singh	521-0312-AB01	10-10-2024	8.00
457	4	Sneha Jaiswal	Sh. Rupinder Singh	521-0313-AB01	10-10-2024	8.00
458	1	Neeru Chahal	Sh. Ravi Singh	521-0312-AB01	10-10-2024	8.00
459	1	Gyan Singh Takhar	Sh. Rajendra Singh Takhar	521-0313-AB01	10-10-2024	7.00

#### 1.8.3 ENTOMOLOGY AND AGROFORESTRY

460	1	Avneet Chahal	Sh. Hitesh Rai	521-0318-AB01	10-10-2024	7.00
461	1	Avneet Singh	Sh. Jyoti Kumar	521-0319-AB01	10-10-2024	8.00
462	1	Kavita Badal	Sh. Sandeep Kumar Sharma	521-0320-AB01	10-10-2024	8.00

#### 1.8.4 HORTICULTURE/VEGETABLE SCIENCE

4766	Sanjay Ah	Dr. Nitin Patel	531-087-001	06-01-2004	8.07
4767	Mr. Mihir Patel	Dr. Parvat Vilas Patil	531-087-002	05-01-2004	7.98
4768	Sameer Kumar	Dr. Anil Kumar Vora	531-087-003	21-01-2004	7.97
4769	Tejas Kaviraj	Dr. Dinesh Lal Verma	531-087-004	21-01-2004	7.97
4770	Imanullah Khan Bell	Dr. Lata Singh	531-087-005	24-01-2004	7.97
4771	Aman	Dr. Kishor	531-087-006	25-01-2004	7.97
4772	Imran Iqbal	Dr. Nisha Joshi	531-087-007	25-01-2004	8.02
4773	Shashank Thakur	Dr. Meenakshi Singh	531-087-008	26-01-2004	7.97
<b>NONTECHNICAL PROGRAMS &amp; CLASSES/COURSES</b>					
4774	Suraj Patel	Dr. Parvez Ahmad Mirza	531-087-009	06-01-2004	7.97
4775	Rishi Mehta	Dr. Kavita Singh	531-087-010	06-01-2004	7.97
4776	Harman Kaur	Dr. Suresh Kumar	531-087-011	10-01-2004	7.97
4777	4. Deepak Singh	Dr. Anil Singh	531-087-012	10-01-2004	7.97
4778	Archana Kaur	Dr. Gurpreet Singh	531-087-013	07-01-2004	7.97
4779	Anupama Kumar	Dr. Sandeep Kumar	531-087-014	11-01-2004	7.97
<b>L.P. Master of Technology in Agricultural Engineering</b>					
<b>MATERIAL HANDLING MACHINERY AND POWER ENGINEERING</b>					
4780	Tanveer Chaudhary	Dr. Subhash Kumar	531-088-001	21-01-2004	1.00
<b>L.T. Master of Veterinary Science (M.V.Sc.)</b>					
<b>ANIMAL NUTRITION</b>					
4781	Xanadil Khan	Dr. Jagdish Singh	531-087-001	06-01-2004	1.40
4782	1. Kanchan Singh Kaur	Dr. Gurjeet Kaur Singh	531-087-002	06-01-2004	1.10
4783	1. Aarti	Dr. A.N. Chauhan	531-087-003	26-01-2004	1.17
4784	Qura Tariq Latif	Dr. Meenu Singh Latif	531-087-004	27-01-2004	1.10
<b>ANIMAL PHYSIOLOGY, PATHOLOGY &amp; TECHNOLOGY</b>					
4785	Vinita Malhotra	Dr. Anil K. Kishan	531-087-005	04-01-2004	1.12
<b>ANIMAL PRODUCTION AND MANAGEMENT</b>					
4786	John Nick	Dr. Nitin Patel	531-087-006	06-01-2004	1.14
4787	1. Anmol Puri	Dr. Anmol Puri	531-087-007	04-01-2004	1.14
<b>ANIMAL REPRODUCTION, GENETICS, BREEDING &amp; GENOTYPING</b>					
4788	Nigam Singh Sethi	Dr. G.B. Singh Sethi	531-087-008	06-01-2004	1.10
4789	1. Anuradha Sharma	Dr. Anuradha Sharma	531-087-009	06-01-2004	1.14
<b>VEETERINARY MEDICINE</b>					
4790	Neha V	Dr. Nitin Patel	531-087-010	11-01-2004	1.10
4791	1. Inakiha Durga Kaur Bell	Dr. Parveen Singh Bell	531-087-011	07-01-2004	1.10
4792	1. Veterinary Nurse	Dr. Neelam George	531-087-012	07-01-2004	1.10
4793	4. Deepak Bell	Dr. Nitin Singh	531-087-013	07-01-2004	1.10
<b>VEETERINARY MICROBIOLOGY</b>					
4794	Sameer Adhikar	Dr. Gurjeet Kaur Singh	531-087-014	21-01-2004	1.14
<b>VEETERINARY PATHOLOGY</b>					
4795	1. Shanti Pareek	Dr. Sandeep Kaur	531-087-015	21-01-2004	1.14
4796	2. Shanti Pareek Kaur	Dr. Gurjeet Kaur Singh	531-087-016	21-01-2004	1.14
<b>VEETERINARY PHYSIOLOGY</b>					
4797	1. Anuradha Kaur	Dr. Lata Singh	531-087-017	20-01-2004	1.11
<b>VEETERINARY &amp; ANIMAL HABITAT MANAGEMENT PROGRAMS</b>					
4798	Umar	Dr. Ranjith Nagore	531-087-018	09-01-2004	1.10
<b>VEETERINARY PUBLIC HEALTH AND EPIDEMIOLOGY</b>					

4037	1	Neeraj Singh	Mr. Pawan Kumar Singh	521-071-488	01-07-2004	T-07
4038	2	Dinesh Singh	Mr. Nitin Kumar Singh	521-071-487	21-07-2004	T-08
<b>SECONDARY EDUCATION AND BASIC LEVEL</b>						
4039	1	Devender Singh	Mr. Jitender Singh	521-071-489	11-07-2004	T-09
4040	1	Karan Singh	Mr. Balwinder Singh	521-071-490	04-07-2004	T-12
<b>Under Graduate</b>						
<b>2.7 Bachelor of Science (Hons.) in Agriculture</b>						
<b>Batch 2014</b>						
4141	1	Amanjeet Singh	Mr. Amanjeet Singh	521-071-491	11-07-2004	T-09
<b>Batch 2015</b>						
4142	1	Anmol Dahiya	Mr. Anmol Dahiya	521-071-492	11-07-2004	T-09
4143	1	Deekshita Singh	Mr. Deekshita Singh	521-071-493	11-07-2004	T-09
4144	1	Sohail Ahmad	Mr. Sohail Ahmad	521-071-494	11-07-2004	T-09
4145	1	Mohammed Akbar Qureshi	Mr. Faizan Ahmed Qureshi	521-071-495	11-07-2004	T-09
4146	1	Shivam Lalwani Bhat	Mr. Shivam Lalwani Bhat	521-071-496	11-07-2004	T-09
<b>Batch 2016</b>						
4147	1	Lehal Sharma	Mr. Lehal Sharma	521-071-497	11-07-2004	T-09
4148	2	Avneet Sharma	Mr. Avneet Singh Sharma	521-071-498	11-07-2004	T-09
4149	1	Surveen Kaur	Mr. Surveen Singh	521-071-499	11-07-2004	T-09
4150	4	Amit Singh	Mr. Mohan Singh	521-071-500	11-07-2004	T-09
4151	1	Simran Sharma	Mr. Simran Sharma	521-071-501	11-07-2004	T-09
4152	6	Tarul Arora	Mr. Anil Arora	521-071-502	11-07-2004	T-09
4153	1	Nikita Thakur	Mr. Iqbal Thakur	521-071-503	11-07-2004	T-09
4154	1	Anup Singh	Mr. Surjeet Kaur	521-071-504	11-07-2004	T-09
4155	7	Shobha Singh	Mr. Dharmendra Singh	521-071-505	11-07-2004	T-09
4156	10	Zainab Pathan	Mr. Parvez Pathan	521-071-506	11-07-2004	T-09
4157	11	Surveen Verma	Mr. Anil Kumar Verma	521-071-507	11-07-2004	T-09
4158	11	Vishal K. Sharma	Mr. Anil Sharma	521-071-508	11-07-2004	T-09
4159	12	Asmita Thakur	Mr. Asmita Kumar	521-071-509	11-07-2004	T-09
4160	13	Qandeel Ali Haider	Mr. Waheed Haider	521-071-510	11-07-2004	T-09
4161	17	Zayn Ullah	Mr. Khurram Khan	521-071-511	11-07-2004	T-09
<b>Batch 2017</b>						
4162	18	Mohammad Arman	Mr. Nadeem Ahmad Yousaf	521-071-512	11-07-2004	T-09
4163	17	Mohit Choudhary	Mr. Hemant K. Choudhary	521-071-513	11-07-2004	T-09
4164	12	Nirajpal Kaur	Mr. Iqbal Singh	521-071-514	11-07-2004	T-09
4165	19	Teesta Rani Ajmal Naqvi	Mr. Md. Ajmal Naqvi	521-071-515	11-07-2004	T-09
<b>Batch 2018</b>						
4166	20	Malvika Lall Singh	Mr. Bhawna Lal Singh	521-071-516	11-07-2004	T-09
4167	11	Himanshu Patra	Mr. Nitin K. Patra	521-071-517	11-07-2004	T-09
4168	22	Shobhan Patra	Mr. Deepak Patra	521-071-518	11-07-2004	T-09
4169	23	Mohammed Junaid	Mr. Javed Junaid	521-071-519	11-07-2004	T-09
4170	23	Shoaib Ullah	Mr. Mohammad Junaid	521-071-520	11-07-2004	T-09
4171	22	Jaswan	Mr. Ashok Kumar	521-071-521	11-07-2004	T-09
4172	22	Yours Chaudhary	Mr. Dinesh Kumar	521-071-522	11-07-2004	T-09
4173	17	Rahul Sharma	Mr. Gurjeet Ram	521-071-523	11-07-2004	T-09
4174	22	Tarun Bhat	Mr. Tariq Singh	521-071-524	11-07-2004	T-09
4175	22	Amritpal Kaur	Mr. Jaspal Singh	521-071-525	11-07-2004	T-09
4176	10	Waseem Kumar	Mr. Tushar Kumar Dhir	521-071-526	11-07-2004	T-09

4377	41	Tarun Kishore Sharma	Sh. Kishore Chatterjee Sharma	530-Agen-1118	21-07-2004	731
4378	42	Janam Sharma	Sh. Janam Choudhary	530-Agen-1117	21-07-2004	732
4379	43	Kohinoor Khat	Sh. Jitendra Singh	530-Agen-1115	21-07-2004	733
4380	44	Gaurav Taliwar	Sh. Jitender Singh	530-Agen-1119	21-07-2004	734
4381	45	Gurcharan Sharma	Sh. Gurcharan Singh	530-Agen-1121	21-07-2004	735
4382	46	Nirmal Sharma	Sh. Nirmal Kumar Sharma	530-Agen-1120	21-07-2004	736
4383	47	Aqib Alihan Shukla	Sh. Aqib Alihan Shukla	530-Agen-1122	21-07-2004	737
4384	48	Saini	Sh. Tushar Bag	530-Agen-1123	21-07-2004	738
4385	49	Priyal Karmal	Sh. Priyal Karmal	530-Agen-1126	21-07-2004	739
4386	50	Siddharth Singh Puri	Sh. Siddharth Singh Puri	530-Agen-1127	21-07-2004	740
4387	51	Aman Sharma	Sh. Aman Sharma	530-Agen-1128	21-07-2004	741
4388	52	Yashwant Singh	Sh. Yashwant Singh	530-Agen-1129	21-07-2004	742
4389	53	Jaswant Singh	Sh. Jaswant Singh	530-Agen-1130	21-07-2004	743
4390	54	Zoya Ali	Sh. Zoya Ali	530-Agen-1131	21-07-2004	744
4391	55	Brijendra Sharma	Sh. Brijendra Sharma	530-Agen-1132	21-07-2004	745
4392	56	Praveen Sharma	Sh. Praveen Kumar Sharma	530-Agen-1133	21-07-2004	746
4393	57	Suresh Sharma	Sh. Suresh Singh Sharma	530-Agen-1134	21-07-2004	747
4394	58	Chintan Kavadi	Sh. Chintan Kavadi	530-Agen-1135	21-07-2004	748
4395	59	Yashpal Sharma	Sh. Yashpal Sharma	530-Agen-1136	21-07-2004	749
4396	60	Yogesh Sharma	Sh. Yogesh Kumar Sharma	530-Agen-1137	21-07-2004	750
4397	61	Surjeet Sharma	Sh. Surjeet Singh Sharma	530-Agen-1138	21-07-2004	751
4398	62	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1139	21-07-2004	752
4399	63	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1140	21-07-2004	753
4400	64	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1141	21-07-2004	754
4401	65	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1142	21-07-2004	755
4402	66	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1143	21-07-2004	756
4403	67	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1144	21-07-2004	757
4404	68	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1145	21-07-2004	758
4405	69	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1146	21-07-2004	759
4406	70	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1147	21-07-2004	760
4407	71	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1148	21-07-2004	761
4408	72	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1149	21-07-2004	762
4409	73	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1150	21-07-2004	763
4410	74	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1151	21-07-2004	764
4411	75	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1152	21-07-2004	765
4412	76	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1153	21-07-2004	766
4413	77	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1154	21-07-2004	767
4414	78	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1155	21-07-2004	768
4415	79	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1156	21-07-2004	769
4416	80	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1157	21-07-2004	770
4417	81	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1158	21-07-2004	771
4418	82	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1159	21-07-2004	772
4419	83	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1160	21-07-2004	773
4420	84	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1161	21-07-2004	774
4421	85	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1162	21-07-2004	775
4422	86	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1163	21-07-2004	776
4423	87	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1164	21-07-2004	777
4424	88	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1165	21-07-2004	778
4425	89	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1166	21-07-2004	779
4426	90	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1167	21-07-2004	780
4427	91	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1168	21-07-2004	781
4428	92	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1169	21-07-2004	782
4429	93	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1170	21-07-2004	783
4430	94	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1171	21-07-2004	784
4431	95	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1172	21-07-2004	785
4432	96	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1173	21-07-2004	786
4433	97	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1174	21-07-2004	787
4434	98	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1175	21-07-2004	788
4435	99	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1176	21-07-2004	789
4436	100	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1177	21-07-2004	790
4437	101	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1178	21-07-2004	791
4438	102	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1179	21-07-2004	792
4439	103	Yogesh Kumar	Sh. Yogesh Kumar	530-Agen-1180	21-07-2004	793

4422	78	Honey Tikee	Sh. Honey Tikee	120-Agen-2196	21-07-2024	8.00
4423	77	Afroza Kumar	Sh. Afroz Kumar	120-Agen-2179	21-07-2024	7.14
4424	72	Lakshmi Kumar	Sh. Lakshmi Kumar	120-Agen-2175	21-07-2024	7.14
4425	70	Cheng	Sh. Cheng	120-Agen-2173	21-07-2024	7.14
4426	65	Manisha Ray	Sh. Digna Ray	120-Agen-2177	21-07-2024	7.14
4427	61	Parveen Kumar	Sh. Parveen Kumar	120-Agen-2178	21-07-2024	7.14
4428	52	Soham Singh	Sh. Ranjeet Singh	120-Agen-2179	21-07-2024	8.00
4429	52	Vijay Kumar	Sh. Vinay Kumar	120-Agen-2180	21-07-2024	8.00
4430	49	Anandita Arora	Sh. Anupreet Singh	120-Agen-2182	21-07-2024	8.14
4431	47	Vishal Kumar	Sh. Jagdish	120-Agen-2183	21-07-2024	8.14
4432	42	Ravi Kumar	Sh. Balbir Kumar	120-Agen-2184	21-07-2024	7.14
4433	42	Amritpal Kumar	Sh. Sominder Kumar	120-Agen-2185	21-07-2024	7.14
Drives:						
4434	32	Kamlesh	Sh. Raj Kumar	120-Agen-2186	21-07-2024	8.14
4435	32	Umangdeep Kaur	Sh. Gurjeet Singh	120-Agen-2187	21-07-2024	7.14
4436	30	Neetu Jitender Kumar	Sh. Jitender Kumar	120-Agen-2188	21-07-2024	7.14
4437	29	Gurpreet	Sh. Gurpreet	120-Agen-2189	21-07-2024	7.14

## 2.2 Statistics of Institutions in Amritsar District

### Batch 2018

4438	1	Avneek Dugga	Sh. S.K. Dugga	120-Banesh-204	20-01-2024	7.00
4439	1	Surinder Singh	Sh. Nitin Singh	120-Banesh-205	20-01-2024	8.14

### Batch 2019

4440	1	Sanjay Kumar	Sh. Jagjeet Singh	120-Banesh-206	19-01-2024	8.14
4441	1	Jyoti Singh	Sh. Laxmi Singh Kaur	120-Banesh-207	19-01-2024	7.14

### Batch 2020

4442	1	Avneek Kaur	Sh. Parneet Kaur	120-Banesh-208	20-01-2024	8.14
4443	1	Nisha Sandhu	Sh. Jassi Bhawna Sandhu	120-Banesh-209	20-01-2024	7.14
4444	1	Minal Dugga	Sh. Pawan Dugga	120-Banesh-210	20-01-2024	7.14
4445	4	Shiva Devanshu	Sh. Takir Jassal	120-Banesh-211	20-01-2024	7.14
Subjects:						
4446	1	Brijesh Dauli	Sh. Chaudhary Raj Dauli	120-Banesh-212	20-01-2024	7.14
4447	4	Leena Sharma	Sh. Rishi Leena Sharma	120-Banesh-213	20-01-2024	8.00
4448	1	Archit Kaur	Sh. Aditya Kaur	120-Banesh-214	20-01-2024	7.14
4449	1	Udit Singh	Sh. Gurjot Singh	120-Banesh-215	20-01-2024	8.00
4450	9	Gurpreet Dugga	Sh. Jaskaran Dugga	120-Banesh-216	20-01-2024	7.14
4451	10	Aarti	Sh. Parneet Almehar Singh	120-Banesh-217	20-01-2024	7.14
4452	11	Madan Dugga	Sh. Jaspal Dugga	120-Banesh-218	20-01-2024	7.14
4453	12	Kampreet Chahal	Sh. Parneet Kaur	120-Banesh-219	20-01-2024	7.14
4454	13	Devika	Sh. Ravi Kumar	120-Banesh-220	20-01-2024	7.14
4455	18	Akash Kaur	Sh. Balwinder Singh	120-Banesh-221	20-01-2024	8.00
4456	12	Umaima Lalvir	Sh. Alok Kumar Lalvir	120-Banesh-222	20-01-2024	8.00
4457	10	Nick Tihra	Sh. Ram Krishan Tihra	120-Banesh-223	20-01-2024	7.14
4458	17	Neeta Dhami	Sh. Jaydeep Dhami	120-Banesh-224	20-01-2024	7.14
4459	18	Lakshmi Malhotra	Sh. Komal Malhotra	120-Banesh-225	20-01-2024	7.14
Males:						
4460	12	Vivian Ager	Sh. Ajay Dugga	120-Banesh-226	20-01-2024	7.14
4461	22	Devendra Dhami	Sh. Tarsem Dhami	120-Banesh-227	20-01-2024	7.00
4462	11	Surat Dhami	Sh. Jagjeet Dhami	120-Banesh-228	20-01-2024	7.14

4480	22	Dakshita Kavita	Sh. Koller Singh	5-18-Ramnath-274	22-08-2024	7.22
4484	22	Nisha Malik	Sh. Dinesh Lal	5-18-Ramnath-281	22-08-2024	6.17
4486	22	Ajanta Arun Rana	Sh. Mohammad Iqbal	5-18-Ramnath-284	22-08-2024	6.49
4488	22	Suman K. K. Sharma	Sh. Anupendra Kumar Sharma	5-18-Ramnath-284	22-08-2024	7.11

### 2.2 Bachelor of Veterinary Science & Animal Husbandry(B.V.Sc & A.H.)

#### Batch-2024

4487	1	Supriya Kapoor	Sh. Aj. Chahal	5-18-BV-100	22-08-2024	6.89
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#### Batch-2023

4489	1	Bruno Krish Sharma	Sh. Dev Raj	5-17-BV-107	22-08-2024	7.42
4490	2	Surjeet Singh Luthra	Sh. Gurmeet Singh	5-17-BV-1120	22-08-2024	6.78
4491	3	Kavita Datta	Sh. Suresh Kumar	5-17-BV-1180	22-08-2024	6.42
4492	4	Rishabh	Sh. Manjeet Kumar	5-17-BV-1181	22-08-2024	7.11

#### Batch-2022

4493	1	Anupma J. Patel	Sh. Mohammad Iqbal Ali	5-18-BV-1140	22-08-2024	6.89
4494	1	Shabnil Hussain	Sh. Mohammad Shahid Ali	5-18-BV-1140	22-08-2024	6.67
4495	1	Mohammed Almas Ali	Sh. Almas Umar Ali	5-18-BV-1140	22-08-2024	7.01
4496	4	Ranbir	Sh. Hardeep Singh Kaur	5-18-BV-1144	22-08-2024	6.11
4497	1	Aman Pal Singh Chawla	Sh. Darbar Ahmed Chawla	5-18-BV-1140	22-08-2024	6.22
4498	1	Jyoti Singh	Sh. Deep Lal	5-18-BV-1140	22-08-2024	7.14
4499	1	Aman Kaur Singh	Sh. Aman Kaur Singh	5-18-BV-1140	22-08-2024	7.11
4500	1	Arvind Panesar	Sh. Arvind Panesar	5-18-BV-1140	22-08-2024	6.47
4501	4	Shubh Datta	Sh. Nitin Datta	5-18-BV-1140	22-08-2024	7.22
4502	12	Kavita Datta	Sh. Arpan Kumar	5-18-BV-1140	22-08-2024	7.11
4503	11	Ravi	Sh. Deepak Chahal	5-18-BV-1140	22-08-2024	7.43
4504	12	Mohina P. Bhagat	Sh. Dinesh Bhagat	5-18-BV-1140	22-08-2024	6.92
4505	12	Jaswant Kaur	Sh. Jaswant Kaur	5-18-BV-1140	22-08-2024	7.17
4506	12	Jaswant Datta	Sh. Sandeep Singh	5-18-BV-1140	22-08-2024	7.11
4507	12	Lata Pal	Sh. Parveen Singh Buta	5-18-BV-1140	22-08-2024	6.62
4508	12	Lydia Kaurwani Kaur	Sh. Khawaja Ahmad	5-18-BV-1140	22-08-2024	7.42

#### From

4509	17	Mohit Kumar	Sh. Mohit Kumar	5-18-BV-1170	22-08-2024	6.62
4510	18	Devender Kumar	Sh. Devender Kumar	5-18-BV-1170	22-08-2024	7.4
4511	12	Alvin Sharma	Sh. Harvir Kumar	5-18-BV-1170	22-08-2024	7.20
4512	22	Prayanki	Sh. Karti Kumar Kaur	5-18-BV-1170	22-08-2024	6.69
4513	12	Shivya Jain	Sh. Gurmeet Jain	5-18-BV-1170	22-08-2024	7.41
4514	11	Shreya Kaur	Sh. Upinder Kaur	5-18-BV-1170	22-08-2024	7.18
4515	22	Ekta Kaur	Sh. Mohammad Saleem Khan	5-18-BV-1170	22-08-2024	7.16
4516	21	Reverie Jain	Sh. Anil Mehta	5-18-BV-1180	22-08-2024	7.02
4517	11	Fird Sharma	Sh. Vilaj Kumar	5-18-BV-1180	22-08-2024	7.33
4518	20	Harman Dhillon	Sh. Atul Kishan	5-18-BV-1180	22-08-2024	7.42
4519	17	Jeetu Jassal	Sh. Apur Singh	5-18-BV-1180	22-08-2024	6.92
4520	22	Jyoti Tiwari	Sh. Bhagwati Tiwari	5-18-BV-1180	22-08-2024	7.42
4521	22	Pulkit Sharma	Sh. Dayashai Sharma	5-18-BV-1180	22-08-2024	7.11
4522	21	Reetika Sehgal	Sh. K. S. Sehgal	5-18-BV-1180	22-08-2024	7.26
4523	21	Dulha, Arif	Sh. Arya Chandra Pr.	5-18-BV-1180	22-08-2024	6.79

4786	12	Bhinder Singh	Sh. Gurpreet Singh	3-11-87-1142	10-01-2024	* 728
4787	11	Suresh Dass	Sh. Balwinder Singh	3-11-87-1139	10-01-2024	* 729
4788	18	Jitender	Sh. Jaydeep	3-11-87-1138	10-01-2024	* 729
4789	11	Ishant Singh	Sh. S.P. Tomy	3-11-87-1137	10-01-2024	* 729
4790	22	Jaswan Singh	Sh. Sukhbir Kumar	3-11-87-1136	10-01-2024	* 729
4791	17	Kamal Lata	Sh. Nitinder Singh Lata	3-11-87-1135	10-01-2024	* 729
4792	15	Worlton Arin	Sh. Atish Kumar	3-11-87-1134	10-01-2024	* 729
4793	12	Naveen Kaur	Sh. Harpal Singh	3-11-87-1137	10-01-2024	* 729
4794	42	Sukhpal Kaur	Sh. Amanjeet Singh	3-11-87-1136	10-01-2024	* 729
4795	41	Khushbir	Sh. Rajesh Kumar	3-11-87-1139	10-01-2024	* 729
4796	42	Kavita Dass	Sh. Parveen Dass	3-11-87-1130	10-01-2024	* 729
4797	11	Sardar Singh Dhad	Sh. Balwinder Singh	3-11-87-1138	10-01-2024	* 729
			Sheet			
4798	48	Jaswinder Singh	Sh. Gurpreet Singh	3-11-87-1136	10-01-2024	* 729
4799	43	Chitra Sharma	Sh. Dr. Deep Ranbir	3-11-87-1136	10-01-2024	* 729
			Sharma			
4800	46	Nikita Kaur	Sh. Harvir Kumar	3-11-87-1136	10-01-2024	* 729
4801	47	Himangul Mehta	Sh. Jyoti Dass	3-11-87-1136	10-01-2024	* 729
4802	42	Munni Lalita	Sh. Mahindra P.L. Kalra	3-11-87-1136	10-01-2024	* 729
4803	42	Lakshmi Renuka	Sh. Vinod Kumar	3-11-87-1137	10-01-2024	* 729
4804	47	Raminder Kaur	Sh. Dineshwar Singh	3-11-87-1136	10-01-2024	* 729
4805	51	Waseem Riaz Shabbir	Sh. Rajinder Singh	3-11-87-1136	10-01-2024	* 729
			Shabbir			
4806	47	Yash Kedarkar	Sh. Arvind Kumar	3-11-87-1136	10-01-2024	* 729
4807	44	Tanvi Devra	Sh. Jagjeet Singh	3-11-87-1136	10-01-2024	* 729
4808	38	Amit Lekha	Sh. Arvind Kumar	3-11-87-1136	10-01-2024	* 729
4809	11	Tharun Malja	Sh. Daljip Kaur	3-11-87-1135	10-01-2024	* 729
4810	36	Anup Ahluwalia	Sh. Virend Singh	3-11-87-1136	10-01-2024	* 729
4811	17	Leena Kaur	Sh. Anmol Ahluwalia	3-11-87-1136	10-01-2024	* 729
4812	35	Dogri Kumar	Sh. Kartar Singh	3-11-87-1136	10-01-2024	* 729
4813	44	Adick Singh	Sh. Gurjeet Singh	3-11-87-1136	10-01-2024	* 729
4814	40	Shivam Kaur	Sh. Dileep Dass	3-11-87-1136	10-01-2024	* 729
			Rank-2021			
4815	1	Surjeet Singh	Sh. Harmeet Singh	3-11-87-1132	10-01-2024	* 129
4816	2	Umesh Chauhan	Sh. Jagjeet Kumar Chauhan	3-11-87-1133	10-01-2024	* 432
4817	1	Misti Jay Kaur	Sh. Gurpreet Singh	3-11-87-1137	10-01-2024	* 729
4818	4	Kusman Lasy	Sh. Farvy Kumar	3-11-87-1132	10-01-2024	* 241
4819	1	Harpreet	Sh. Lajpat Kumar Kamal	3-11-87-1132	10-01-2024	* 729
4820	4	Witold Singh Dass	Sh. Witold Kumar Dass	3-11-87-1133	10-01-2024	* 122
4821	7	Abhishek Sharma	Sh. Ankur Kumar Sharma	3-11-87-1132	10-01-2024	* 242
4822	3	Yana Deva	Sh. Gurjeet Sharma	3-11-87-1132	10-01-2024	* 129
4823	3	Amiti Vally	Sh. Rakhi Vally	3-11-87-1134	10-01-2024	* 129
4824	11	Niravita Sharma	Sh. Kartikey Kumar	3-11-87-1134	10-01-2024	* 241
4825	11	Amit Kumar	Sh. Inder Kumar	3-11-87-1136	10-01-2024	* 729
4826	12	Amritpal	Sh. Jagjeet Singh	3-11-87-1133	10-01-2024	* 241
4827	12	Gurpreet	Sh. Jaspal Dass	3-11-87-1133	10-01-2024	* 129
4828	14	Chetan Sharma	Sh. Jitendra Kumar Sharma	3-11-87-1133	10-01-2024	* 129
4829	11	Dev Lali Dass	Sh. Jagjeet Singh	3-11-87-1133	10-01-2024	* 129

4546	10	Harman Singh	Mr. Jitinder Singh	10-10-2004	8728
4547	17	Jaspal Singh	Mr. Jasvir Puri	10-10-2004	8451
4548	14	Lambodar Kumar	Mr. Tarsem Singh	10-10-2004	8449
4549	12	Leet Baldev Kumar	Mr. Jyoti Singh Dhami	10-10-2004	7729
4550	22	Levrae Balbir Singh	Mr. Jitender Kumar Dhill	10-10-2004	6390
4551	22	Autman Singh	Mr. Gurpreet Kumar Dhill	10-10-2004	7124
4552	22	Vighnesh Singh	Mr. Atul Singh	10-10-2004	6351
4553	22	Rishi Singh	Mr. Jagdeep Singh	10-10-2004	7211
4554	19	Anmol Dass	Mr. Karmal Kumar Dass	10-10-2004	7444
4555	19	Epyne Dass	Mr. Virinder Dass	10-10-2004	6379
4556	21	Yashpal Dass	Mr. Bal Dass	10-10-2004	7149
4557	11	Levrae Balbir Kaur	Mr. Jitender Kaur	10-10-2004	7197
4558	15	Amarjeet Dattu	Mr. Gurcharan Dattu	10-10-2004	7721
4559	22	Tarwali Datta	Mr. Baljeet Datta	10-10-2004	6312
4560	20	Amrit Datta	Mr. Amritpal Datta	10-10-2004	7422
4561	11	Levrae Dattu	Mr. Kamal Dattu	10-10-2004	7180
4562	22	Champa Singh Dattu	Mr. Baljeet Dattu	10-10-2004	7372
4563	11	Avneet Dattu	Mr. Lajwan Kumar Dattu	10-10-2004	8120
4564	11	Yashpal Dattu	Mr. Gurcharan Dattu	10-10-2004	7778
4565	21	Kavita Davduary	Mr. Lajwan Singh	10-10-2004	7422
4566	16	Gurpreet Singh	Mr. Gurpreet Singh	10-10-2004	7147
4567	17	Ang Dhaliwal	Mr. Dalip Kumar Dhaliwal	10-10-2004	7319
4568	11	Tarunjeet Dhill	Mr. Kartarp Singh	10-10-2004	8127
4569	11	Yashpal Dhill	Mr. Gurpreet Singh Dhill	10-10-2004	8018
4570	40	Chintuji Dhillon	Mr. Baljeet Dhillon	10-10-2004	7356
4571	41	Darsh Dhillon	Mr. Angjeet Dhillon	10-10-2004	7759
4572	27	Levrae Dhillon	Mr. Deepak Dhillon	10-10-2004	7333
4573	45	Amrit Dilliwala	Mr. Jitendar Dilliwala	10-10-2004	7320
4574	44	Tarjeet Singh	Mr. Gurpreet Singh	10-10-2004	7341
4575	13	Kartarjeet Durr	Mr. Gurpreet Singh	10-10-2004	7442
4576	46	Tina Durr	Mr. Jitender Singh Durr	10-10-2004	7711
4577	7	Kartarjeet Durr	Mr. Kartarp Singh	10-10-2004	7412
4578	11	Levrae Durr	Mr. Gurpreet Singh Durr	10-10-2004	7388
4579	42	Amrit Durr	Mr. Gurjeet Durr	10-10-2004	8100
4580	30	Parkash Durr	Mr. Shep Durr	01-01-2007	7310
4581	21	Khushbir Durr	Mr. Jagjeet Durr	10-10-2004	7459

## **Annexure-VIII**



**SHRI D RASEEM**  
**UNIVERSITY OF AGRICULTURAL SCIENCES & TECHNOLOGY OF**

JAMMU

**REGISTRATION**

MEN'S SECTION		DRAFT DEGREE		
ROLL No.	Name	Parasitic	Registration No.	Date certified and signed
<b>Post Graduate Students</b>				
<b>I.I. DRAFT OF PH.D. IN AGRICULTURE SCIENCE</b>				
Serial No.	S. Name	Parasitic	Registration No.	Date certified and signed
1	Yashwant Singh	Dr. Kamlesh Lal Sharma	A.I.D. 228-A	27-02-2014 3-16
2	Yogesh Kumar	Dr. Kishan Singh	A.I.D. 229-A	27-02-2014 3-17
<b>INTERNSHIPS</b>				
1	Pawan Kumar	Dr. Jagdish Kumar Singh	A.I.D. 230-A	27-02-2014 3-18
<b>AGRICULTURAL CHEMISTRY</b>				
1	Dinesh Kumar	Dr. Jagjeet Singh	A.I.D. 231-A	27-02-2014 3-19
1	Gaurav Verma	Dr. Suresh Kumar Verma	A.I.D. 232-A	27-02-2014 3-20
<b>AGRICULTURAL ECONOMICS</b>				
1	Naveen Kumar A.Y	Dr. Hemalata A.Y	A.I.D. 233-A	27-02-2014 3-21
<b>AGRICULTURAL EXTENSION &amp; COMMUNICATION</b>				
1	Ramkrishna	Dr. Balbir Kumar Singh	A.I.D. 234-A	27-02-2014 3-22
<b>AGRO-BIOCHEMICAL MANAGEMENT</b>				
1	Lokendra Singh	Dr. Deeksha Singh	A.I.D. 235-A	27-02-2014 3-23
<b>I.I. DRAFT OF PH.D. IN SOIL SCIENCE</b>				
<b>RESEARCH STUDIES</b>				
1	Prabhat Kumar	Dr. Jagdish Singh	A.I.D. 443-B	18-11-2014 3-25
<b>I.I. DRAFT OF PH.D. IN AGRICULTURE &amp; FOREST</b>				
<b>FOOD PROCESSING TECHNOLOGY</b>				
1	Umesh Kumar	Dr. Jagdish Singh	A.I.D. 419-A	18-02-2014 3-26
<b>I.I. DRAFT OF PH.D. IN AGRICULTURE &amp; ENGINEERING</b>				
<b>FARM MACHINERY AND FARM ENGINEERING</b>				
1	Om Prakash	Dr. Jagdish Singh	A.I.D. 148-A	17-02-2014 3-27
<b>I.I. DRAFT OF PH.D. IN VETERINARY SCIENCE</b>				
<b>ANIMAL NUTRITION</b>				
1	Shambhu Ray	S. Deepak Singh	A.I.D. 117-A	17-02-2014 3-28
<b>LIVESTOCK PRODUCTS TECHNOLOGY</b>				

	Suresh Kumar	Dr. Anil Kumar Sharma	120-D-1167	07-03-2024	3.00
<b>EXTRADURAL MEDICINE</b>					
1	Surinder Kumar	Dr. Deepak Singh	120-D-1167	12-03-2024	3.00
<b>EXTRADURAL SURGERY AND RADIOLOGY</b>					
1	Anand Kumar	Dr. Gurjeet Singh	120-D-1167	14-03-2024	3.00
<b>EXTRADURAL PUBLIC HEALTH AND EPIDEMIOLOGY</b>					
1	Kavita Gupta	Dr. Jitender Singh	120-D-1167	07-03-2024	3.00
<b>J.C. Master of Science in Agriculture &amp; Allied Sciences</b>					
<b>AGRONOMICS</b>					
1	Atma Singh	Dr. Veerendra Singh	120-D-1171	14-03-2024	3.00
1	Akashdeep Kaur	Dr. Darshan Kaur	120-D-1172	04-03-2024	3.00
1	Deepti	Dr. Komal Kaur	120-D-1173	08-03-2024	3.00
4	Amrit Kaur	Dr. Deepak Kaur	120-D-1174	04-03-2024	3.00
2	Lakshmi Gupta	Dr. Ranjeet Singh	120-D-1175	06-03-2024	3.00
<b>AGRICULTURAL ECONOMICS</b>					
1	Gurpreet Kaur	Dr. Lakhbir Singh	120-D-1176	06-03-2024	3.00
<b>PLANT PATHOLOGY</b>					
1	Janardhan Gupta	Dr. Lata Pal Singh	120-D-1177	22-03-2024	3.00
<b>MICROBIOLOGY</b>					
1	Tarun Kaur	Dr. Darshan Singh	120-D-1178	20-03-2024	3.00
<b>J.D. Master of Science in Horticulture &amp; Forestry</b>					
<b>HORTICULTURE (FRUIT SCIENCE)</b>					
1	Dinesh Kaur	Dr. Jagjeet Singh	120-D-1179	11-03-2024	3.00
1	Shivani	Dr. Neelam Gupta	120-D-1180	21-03-2024	3.00
1	Imran Khan	Dr. Gurpreet Kaur	120-D-1181	21-03-2024	3.00
<b>POST HARVEST MANAGEMENT</b>					
1	Parvati Kaur	Dr. Meenakshi	120-D-1182	10-03-2024	3.00
1	Surinder Kaur	Dr. Gurpreet Singh	120-D-1183	20-03-2024	3.00
<b>HORTICULTURE (FLORICULTURE &amp; LANDSCAPING)</b>					
1	Kuljeet Kaur	Dr. Kavita Singh	120-D-1184	20-03-2024	3.00
1	Neeru Kaur	Dr. Jagjeet Kaur	120-D-1185	20-03-2024	3.00
1	Shreya Gupta	Dr. Anil Singh	120-D-1186	21-03-2024	3.00
4	Rishabh Kaur	Dr. Gurpreet Singh	120-D-1187	21-03-2024	3.00
<b>J.D. Master of Science in Animal Husbandry</b>					
<b>ANIMAL HUSBANDRY</b>					
1	Anmol	Dr. A.K. Duggal	120-D-1188	24-03-2024	3.00
<b>EXTRADURAL &amp; ASPIRAL ALTERNATE DATES AND REGULATIONS</b>					
1	Simran	Dr. Gurpreet Kaur	120-D-1189	25-03-2024	3.00

# **Annexure-IX**



- 1 -

The document can be submitted to the editor at [Ole.Hansen@Eduard.Hegel.no](mailto:Ole.Hansen@Eduard.Hegel.no) or to the journal editor at [JournalEditor@Eduard.Hegel.no](mailto:JournalEditor@Eduard.Hegel.no).

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www.english-test.net

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100

- Effectiveness** of HCV-ABC treatment after 12 weeks of therapy  
Dose-DNA T<sub>MAX</sub> (Fibroblast) = 4441. Dose-Tek was 125% of Dose-X, because of blood dilution. 140 > 37 is dose reduction.  
Early Dose-X, Dose-Great, HCV-ABC known to according to the literature.  
See Fig 8.

# **Annexure-X**



Shri-e-Kashmir  
University of Agricultural Sciences and Technology of Jammu  
Faculty of Dairy Technology

Re: I.S. Scheme

Date

No-AUMUTD/2014-2019/452

Date: 01-12-2014

Agenda: Institute of Mathematics and Computational Biology (PCB) at 10+2 level.

Dear, SET/AST/Dean or the following students with PCB at 10+2 level. So admission in B.Tech (Dairy Technology), home examination is required to ensure continuation of studies admitted with PCB at 12th level. As per AICTE norms committee normative action PCB has been kept to the maximum requirement for giving admissions in B.Tech (Dairy Technology). Since our university is admitting students with PCB along with PCB, the basic course of fundamental Mathematics could have 10+2 level included in compulsory courses for students with PCB badge and at 10+2 level. The syllabus of Basic mathematics course has been approved for your kind reference and approval.

S. S.  
Date:

**SKUAST**  
SCHOOL OF COMPUTATIONAL SCIENCES

Department of Computer Science and Engineering  
Department of Mathematics

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
DEPARTMENT OF MATHEMATICS

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- Answers**

  - Identify the laws, principles and functions in mathematics for both real and imaginary numbers.
  - Identify the various applications of complex numbers.
  - Explain the similarities and differences.

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**3MT** Testimony, 1994, handwritten, 14 double-spaced typed pages, note by the author of black ink and blue ink, reference Database of categories, methods of digital analysis, and approaches and experimental designs.

Differences in the number of first cephalic, non-diffuse, primary and secondary differentiations along the four main differentiation axes (transverse, longitudinal and vertical) in the *Cladocera* genera has been addressed by the following differences:

**English language learners are taught to read, listen, speak, and write in English.**

Section 6.2.2 provides further information about the analysis of multiple sources of data, including how to incorporate historical data.

Received Nov 1970

- NCBI/EMBL/Malevolent-DB/MG-NCBI/la24

130

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1. Security is best ensured via distributed systems.
  2. Security is better to pass through a proxy server.
  3. Security is good grain of salt.

10

First impressions and responses of many people about anything – words, stories and illustrations of more even, less serious and informative nature – can often be misleading. In our efforts to evaluate what we read and hear, we must not let first impressions rule.

Talk to someone. It's normal to feel angry. Call 1-800-273-TALK (8255) or visit [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org).

**Hypothetical scenario of population size,  $\lambda$ , from 1980 and current expected trend (1980-2010) for each species and its estimated extinction risk.**

## ANSWER

1. Basler, J. and Ester, A., 1995, *Workshop of Success Stories*, pp. 1-174, Temp  
2. 2000.

## **Annexure-XI**



Shao-e-Hakim: University of Agricultural Sciences and Technology of Jammu  
Faculty of Basic Sciences, Chatha, Jammu - 180005

第十一章

The NCGRB is a 501(c)(3) organization.

Registration Number: S00000000  
Address: One off  
P.O.B. 10000

Early Adopter Rate for the 2014 version of Academic Discourse.

1

In reference to the decision No. AGU/Asiat-E-01/04-20034-0113, on 18.11.2004, kindly find enclosed herewith the decision, appeal form for the 19<sup>th</sup> Meeting of Australia Council from the Ministry for the Development of State Education and Higher Education of Russian Federation.  
Attachment.

This is the journal of empirical and futures research articles, editorials,

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**Proposal for Faculty of Basic Sciences & Humanities, SKSCEAST Jhansi  
(Up gradation of existing faculty of Basic Sciences)**

This proposal for Faculty of Basic Sciences SKSCEAST Jhansi, which was established in July, 2012 vide Umar. Notifications No 14 (Sec) of 2012, dated 12-07-2012 after its approval in the 12<sup>th</sup> meeting of University Council held on 12-04-2015, may be recognized and re-arranged as "Faculty of Basic Sciences and Humanities" that is needed due to its importance and implications as envisaged in the National Education Policy (NEP-2020) to establish Departments in Languages, Mathematics, Statistics, Pure and Applied Sciences, Sociology, and other such subjects needed for a multidisciplinary stimulating education environment in higher education institutions. This is also in line with University Act, 1961 Chapter No 1 Sec. 13. Faculty that says: "Each university shall have initially the Faculties of Agriculture, Veterinary science & animal husbandry and Post-graduate Studies and as soon as may be it shall also have the Faculties of Forestry, Basic Science and Humanities and such other faculties as may be prescribed".

The detail of the existing and required teaching and non-teaching positions of the various disciplines to be covered in the proposed Faculty of Basic Sciences and Humanities is given below:

**Detail of teaching positions:**

Position	Searched	Minimum Requirements	Gap
Dean	01	01	0
Assistant Professor/Chennai	00	01	01
<b>Engineering Disciplines</b>			
<b>Division of Statistics and Computer Science<sup>a</sup></b>			
Professor	01	01	00
Associate Professor	02	02	00
Assistant Professor	02	02	00
<b>Division of Biochemistry</b>			
Professor	01	01	00
Associate Professor	02	02	00
Assistant Professor	02	02	00
<b>Division of Plant Pathology</b>			
Professor	01	01	00
Associate Professor	02	02	00
Assistant Professor	02	02	00
<b>Division of Microbiology</b>			
Professor	01	01	00

Associate Professor	0	05	05
Assistant Professor	02	04	02
<b>Newly Proposed Division:</b>			
Position	Specified	Minimum Requirements	Gap
<b>Division of Culture and Languages (Dangcalans, Hindi, English, Urdu and French)*</b>			
Professor	0	01	00
Associate Professor	0	01	00
Assistant Professor	0	05	00
<b>Division of Environmental Sciences</b>			
Professor	0	01	00
Associate Professor	0	02	00
Assistant Professor	0	04	00
<b>Division of Mathematics</b>			
Professor	0	01	00
Associate Professor	0	01	00
Assistant Professor	0	04	00
<b>Division of Chemistry</b>			
Professor	0	01	00
Associate Professor	0	05	00
Assistant Professor	0	04	00
<b>Division of Computer Science</b>			
Professor	0	01	00
Associate Professor	0	02	00
Assistant Professor	0	06	00
<b>Division of Social Sciences</b>			
Professor	0	01	00
Associate Professor	0	02	00
Assistant Professor	0	04	00

### **Summary (Teaching positions)**

Sr. No.	Post	Proposed position	Existing position	GAP
1	Dean	01	01	00
2	Professor	10	01	09
3	Associate Professor	23	02	21
4	Assistant Professor	41	02	39
5	Assistant Professor (External)	01	00	01
Total		93	15	48

\*Competent Bodies will be referred from Division of Students & Competent Bodies and relevant Divisions will be created.

\*\*Faculty Structure for the Faculty of Agriculture, Faculty of Environment and Forestry, Faculty of Veterinary Sciences and A.I.I.S., Faculty of Agricultural Engineering, Faculty of Dairy Sciences, Faculty of Basic Sciences and Humanities and Faculty of Community Services.

\*\*\*English and French are required for teaching at 100 and 200 level respectively. Other languages are required for publications of Four Disciplines in regional languages and establishments of Disapgras 100.

\*\*Refers Division of Division of Extension Education.

### Detail of non-teaching positions

#### Administrative Office of the Dean

Post	Specified position	Minimum requirement	GAP
Administrative Office Admin. Registrar	06	01	01
Administrative Officer Admin. Computer	01	01	01
Senior Stenographer	01	01	01
Train. Typewriter	01	01	01
Accountant	01	01	01
Assistant Accountant	01	01	01
Data Entry Operator/Computer Assistant	01	01	01
Book Assistant	01	01	01
Assistant-com-Typist (ACT)	01	01	01
P.C.A.	01	01	01
Electrician	01	01	01
Store Keeper	01	01	01
Dove	01	01	01
CCC/Fitter/Mechanic	04	06	02
Surveycer	06	06	00

Existing Divisions:			
Post	Specified positions	Maximum registrations	Gap
<b>Division of Statistics and Computer Science*</b>			
In. Geographer	01	01	0
Data Entry operator/ Computer Assistant	0	01	01
Accounts Assistant	0	01	01
Field-camp-Lab Assistant (FCLA)	01	01	0
Lab Assistant	0	01	01
DOC Helper/Mkt/Prom	01	01	01
<b>Division of Biochemistry</b>			
In. Geographer	0	01	01
Data Entry operator/ Computer Assistant	01	01	0
Accounts Assistant	0	01	01
Field-camp-Lab Assistant (FCLA)	01	01	01
Lab Assistant	0	01	01
DOC Helper/Mkt/Prom	01	01	01
<b>Division of Plant Physiology</b>			
In. Geographer	01	01	0
Data Entry operator/ Computer Assistant	0	01	01
Accounts Assistant	0	01	01
Field-camp-Lab Assistant (FCLA)	01	01	01
Lab Assistant	0	01	01
DOC Helper/Mkt/Prom	01	01	01
<b>Division of Microbiology</b>			
In. Geographer	0	01	01
Data Entry operator/ Computer Assistant	0	01	01
Accounts Assistant	0	01	01
Field-camp-Lab Assistant (FCLA)	0	01	01
Lab Assistant	0	01	01
DOC Helper/Mkt/Prom	0	01	01
Newly proposed Divisions:			

Post	Sacredness position	Minimum requirements	Gap
Divice of Geogrpahy (Digi culture, Hindi, English, Urdu and French)			
B. Geographer	0	01	01
Data Entry operator/ Computer Assistant	0	01	01
Accurate Assistant	0	01	01
ACT	0	01	01
DCC Major: Msc.Psu.	0	04	04
Division of Technological Sciences			
B. Geographer	0	01	01
Data Entry operator/ Computer Assistant	0	01	01
Accurate Assistant	0	01	01
Field-expo-Lab Assistant (FCLA)	0	02	02
Lab Assistant	0	01	01
DCC Major: Msc.Psu.	0	02	02
Division of Mathematics			
B. Geographer	0	01	01
Data Entry operator/ Computer Assistant	0	01	01
Accurate Assistant	0	01	01
Lab Assistant	0	04	04
Lab Assistant	0	01	01
DCC Major: Msc.Psu.	0	02	02
Division of Chemistry			
B. Geographer	0	01	01
Data Entry operator/ Computer Assistant	0	01	01
Accurate Assistant	0	01	01
Lab Assistant	0	01	01
Lab Assistant	0	01	01
DCC Major: Msc.Psu.	0	02	02
Division of Computer Science			
B. Geographer	0	01	01
Data Entry operator/ Computer Assistant	0	01	01
Accurate Assistant	0	01	01
Lab Assistant	0	04	04
Lab Assistant	0	01	01
DCC Major: Msc.Psu.	0	02	02
Division of Social Sciences			
B. Geographer	0	01	01

Data Entry operator/ Clerical Assistant	0	21	01
Account Assistant	0	21	01
ACT	0	21	01
DOC Helper/Mkt/Prom	0	21	01
Central Instrumentation Lab			
Communication Junior Engineer	0	21	01
Communication Technology Lab	0	21	01
Database			
Lab Assistant	0	21	01
Faculty Library			
Arch. Librarian	0	21	01
Library Assistant	0	21	01
DOC Helper/Mkt/Prom	0	21	01

#### Summary of non-teaching positions:

No.	Post	Required personnel	Working personnel	GAP
1.	Administrator/Office Ass't. Registrar	21	00	21
2.	Accounts Officer/ Ass't. Comptroller	21	00	21
3.	Arch. Librarian	21	00	21
4.	Senior Draughtsperson RA to Dean	21	00	21
5.	Head Assistant	21	00	21
6.	Accountant	21	01	20
7.	2. Draughtsperson	12	02	08
8.	Data Entry operator/ Clerical Assistant	12	01	11
9.	Communication Junior Engineer	21	00	21
10.	Communication Technology Lab	21	00	21
11.	Technician			
12.	Library Assistant	21	00	21
13.	Accessories Assistant	12	05	12
14.	Field-Cross-Lab Assistant (FCLA)	12	05	07
15.	Lab. Assistant	24	00	24
16.	Lab. Checker	18	00	18
17.	Electronist	20	00	20
18.	Store Keeper	21	00	21
19.	Assistant - cum- Typist	21	01	20
20.	Driver	21	01	20
21.	DOC Helper/Mkt/Prom	17	09	15
22.	Venue	20	5	15
	Total	112	29	92

