

INFORMATION BULLETIN

For

Bachelor Degree Programmes

ICAR's

22nd ALL INDIA ENTRANCE EXAMINATION FOR ADMISSION (AIEEA-UG-2017) TO 15% SEATS (100% SEATS AT NDRI KARNAL,RLB CAU JHANSI AND DR.RP CAU PUSA)IN BACHELOR DEGREE PROGRAMMES AND AWARD OF NATIONAL TALENT SCHOLARSHIPS IN AGRICULTURE & ALLIED SCIENCE SUBJECTS (OTHER THAN VETERINARY SCIENCE) IN ACCREDITED AGRICULTURAL UNIVERSITIES FOR ACADEMIC SESSION 2017-18

**FOR ACADEMIC SESSION
2017-18**

(AIEEA-UG-2017)



Agricultural Education Division
Indian Council of Agricultural Research
Krishi Anusandhan Bhavan II
Pusa, New Delhi-110 012
www.icar.org.in

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH
(AGRICULTURAL EDUCATION DIVISION)
KRISHI ANUSANDHAN BHAVAN-II PUSA, NEW DELHI 110 012**

The Deputy Director General (Agricultural Education)
Indian Council of Agricultural Research
KrishiAnusandhanBhavan-II
Pusa, New Delhi -110 012

Assistant Director General (HRD)/
Controller of Examinations (Agril. Edn, COE)
Examination Cell, Agricultural Education Division,
Indian Council of Agricultural Research,
KrishiAnusandhanBhavan-II
Pusa, New Delhi -110 012
Help Desk Phone No: 011-25843392/25840746
Fax No.: 011-25843329

ALL CORRESPONDENCE REGARDING ADMISSION SHOULD BE ADDRESSED TO THE ASSISTANT DIRECTOR GENERAL (HRD)/CONTROLLER OF EXAMINATIONS (AGRIL. EDN), AGRICULTURAL EDUCATION DIVISION, ICAR, KRISHI ANUSANDHAN BHAVAN-II, PUSA, NEW DELHI - 110 012.

(This Information Bulletin should not be treated as a legal document)

Mode of Application:

Application will be received through online mode only. In no other form, the applications will be entertained. For details please refer Item No. 8.1 (B) in the Information Bulletin. Application fee of Rs.500/- for General, OBC(NCL)& UPS Categories and Rs.250/- for SC, ST and PC Categories with additional Payment Gateway charges plus service tax, as applicable, will be chargeable.

IMPORTANT DATES

Event	Date
Date and Time of Examination	10.06.2017 (Saturday) 10:00 A.M to 12:30 P.M. (2 ½ hrs)
Commencement of Online Application submission	20.04.2017 (Thursday)
Last date of online application	04.05.2017 (Thursday up to 11.59 P.M.)
Last date for receipt of hard copy of computer generated confirmation page of online application	15.05.2017
e-Admit card information (on ICAR website)	Last week of May, 2017
Declaration of result	30 th June, 2017 (Tentative)
Schedule for online Counseling	07.07.2017, First round (Tentative) 17.07.2017, Second round(Tentative) 27.07.2017, Third round, if need arises (Tentative)

(There will be online counseling only)

All announcements, including e-Admit card information, declaration of result, online counseling schedule, general notices, etc., will be available on Internet at the ICAR website www.icar.org.in. Candidates are advised in their own interest to remain in touch with the website or contact on telephone or the Nodal Officer of the Examination City Centre (for Exam Centre & Roll No. only).

NOTE: Office of COE may be contacted on any working day on telephone 011-25843392 between 10.00 A.M. to 5.00 P.M.

DIRECTIONS TO CANDIDATE

1. Day and Date of Examination : Saturday, the 10th June, 2017
2. Duration : 2½ hrs (10.00 AM to 12.30 PM)

Online Application and downloadable Information Bulletin are available on ICAR website.

3. Before mailing hard copy of computer generated confirmation page (refer **Annexure-IX**) from online application complete in all respect, check that proof of fee payment has been attached.
Online Application and downloadable prospectus are available on ICAR website. Candidate has to visit www.icar.org.in and click the option of filling online application AIEEA-UG-2017 as per the given instructions.
In the last week of May, 2017, e-Admit Card containing information regarding Roll Number, Center and Venue of Examination, etc., would be downloadable from the ICAR website by providing the Application Number and Date of Birth.
4. Incomplete/mutilated hard copy of computer generated confirmation copy of Application with unclear photograph or copy having overwriting or non-payment of requisite fee amount or amount lesser than prescribed fee or without Aadhaar number or 28 digit Aadhaar Enrolment ID or in case of candidates from J&K, Assam & Meghalaya passport number/ration card number/bank account number or any other valid Govt. identity number, shall be summarily rejected and no correspondence in this regard shall be entertained.
5. Request for change in any particulars once given in the Application shall not be entertained.
6. Admission of a candidate to the entrance examination is provisional subject to his/her being found otherwise eligible for admission to the course concerned by the admitting university.
7. Candidates are advised to retain at least three identical colour photograph with name and date same as uploaded on the application for subsequent use at the time of admission.
8. A candidate is allowed to submit only one application. If a candidate submits more than one application, his/her candidature shall be cancelled.
9. If a candidate belongs to General /OBC(NCL) /UPS category mentions his category as SC/ ST/PC in the application by mistake or otherwise and claims after closure of the last date of online application process that he actually belongs to General /OBC/UPS category, then the claim of such candidates shall not be entertained and their application shall be summarily rejected on the grounds of underpayment of fee. In the event of rejection of the application due to non-payment/underpayment of the application fee or any other reason(s) specified elsewhere in the Information Bulletin, the application fee paid shall not be refunded.
10. Application (Hard copy) should be sent through Speed/Registered post only **and the applications sent through any other mode like private courier service, fax, e-mail, etc., shall not be entertained. Hard copy of Application** should be dispatched well in advance so as to reach on or before 15.05.2017.
11. Council shall not be responsible for any postal delay/loss in transit in respect of submission of hard copy of Application, etc.
12. Candidates are advised to retain a photocopy of the Application for their personal record. It may be used at any time in support of having submitted application and also retain a copy of Post Office receipt as a proof for dispatch of hard copy of application through Registered Post or Speed Post.
13. Ragging in any form inside or outside the campuses is strictly prohibited.
14. Use or attempt to use unfair means of any kind for this examination including impersonation will automatically lead to the cancellation of candidature at any stage besides taking the legal action as deemed fit.
15. Candidates may seek any information as per scheduled date and time only. Changes, if any, in the scheme of examination will be notified on the ICAR website.
16. **The records of the AIEEA-UG-2017 shall be preserved for the period as specified in the Record Retention Schedule of the Council.**

Postal Address:

Controller of Examinations (Agril. Edn)
Examination Cell, Agricultural Education Division
Indian Council of Agricultural Research
Room No. 216, Krishi Anusandhan Bhavan-II
Pusa, New Delhi 110 012

Contact Number:

Help Desk Phone No: 011-25843392/25840746

INDEX

S.No.	Description	Page No.
<i>Scope of Agricultural Education</i>		
1.0	Introduction	6
2.0	Degree Programmes Available for Admission	6
2.1.	Courses Available for Admission & Subjects to be attempted in the Examination	
3.0	Eligibility Requirements	7
3.1.	Age and Nationality	
3.2.	Qualifying Examination	
4.0	Accredited university-wise and Subject-wise Number of Seats Available for Admission	7
5.0	Reservation of Seats for SC, ST, PC, UPS and OBC(NCL)	7
5.1	Scheduled Caste/ Scheduled Tribe/ Physically Challenged/ UPS/ Other Backward Classes(NCL)	
5.2	Reservation for Remote and Under Privileged States/UTs (UPS)	
6.0	ICAR National Talent Scholarship (NTS)	8
7.0	General Scheme of Entrance Examination	8
7.1	Examination Schedule	
7.2	Question Paper and Writing Answers in the Examination	
7.3	Examination City Centres	
7.4	Ensuring Eligibility Requirements are Satisfied	
7.5	Options for accredited Agricultural University/ Subject for Admission	
7.6	e-Admit Card	
7.7	Evaluation and Declaration of Result	
7.8	No Re-Checking / Re-Evaluation of OMR Answer Sheets	
7.9	Admission through ICAR Examination	
7.10	Legal Jurisdiction	
8.0	Instructions to Candidates	11
8.1	Filling Application Form Online	
8.2	Conduct of Examination	
8.3	Checking/Changing Question Booklet	
8.4	Writing Answers on OMR Answer Sheet	
8.5	Changing an Answer	
8.6	Wrong/Incorrect Way of Marking	
8.7	Rough Work	
9.0	Method of Selection and Admission through Online Counseling	14
9.1	Method of Selection	
9.2.	Admission through Online Counseling	
9.3.	Filling of Vacant Seats after the Counseling	
10.0	Institutional Information on NDRI, Karnal	16

ANNEXURES(FROM I TO X)

Scope of Agricultural Education

Agriculture has been the mainstay of Indian economy since ages. The science and art of agriculture has many references in the Vedic literature and the ancient history of the mankind. The agriculture sector in India provides livelihood to about 52% of the population of the country and contributes about 15% to the Gross Domestic Product. Trained human resource has been the key factor behind the Green, White, Blue and Yellow Revolutions, that has led India to become self-reliant in food and becoming a fast growing economy. Knowledge based, input-use efficient, eco-friendly, and high tech precision agriculture has been the next stage for which efforts have been directed by Indian Council of Agricultural Research (ICAR) and Agricultural Universities (AUs) in planning, designing and executing the national agricultural educational programmes. Considering the importance of Agricultural Education, University Education Commission under the Chairmanship of Dr. S. Radhakrishnan, recommended the establishment of independent Rural Universities in the country in the year 1948. As a result of this recommendation, first State Agricultural University (SAU) was established in 1960 at Pantnagar (Nainital) on the pattern of the Land Grant Colleges of the United States. The University Grants Commission accorded the status of Deemed-to-be-University (DU) to Indian Agricultural Research Institute, New Delhi in 1958 which became the first ICAR Institute as Deemed University conducting postgraduate teaching and research. Today, the country has a large ICAR-AU system with a total of 73 Agricultural Universities (AUs) comprising of 61 State Agricultural, Veterinary, Horticulture, and Fisheries Universities, 3 Central Agricultural Universities (CAU, Imphal; DR.RPCAU Pusa and RLBCAU, Jhansi), 5 DUs and 4 Central Universities having agricultural faculty (BHU, AMU, ViswaBharati and Nagaland University) awarding various kinds of degrees in different disciplines of agricultural, veterinary and allied sciences. At present there are 55 (Tentative) Accredited Agricultural Universities (AUs) under ICAR-AU system under which admissions would be granted in accredited programmes. Agricultural education is also imparted in some traditional universities of the country. Agricultural education system is producing invaluable human resource and every year about 15,000 graduates, 11,000 Masters and 2,500 Ph.D.s are admitted. The Under Graduate degree in 11 subjects of agriculture and allied sciences and Master's degree in about 95 subjects, awarded by the Universities associated with the ICAR are well recognized and accepted for higher education globally. **All undergraduate degrees in the disciplines of Agricultural Sciences have been declared as professional degrees.** Some of the graduates also start their own business units including the Agri. Clinics and Agro Service Centres. For enhancing the employability and entrepreneurial ability of the graduates, in the revised curricula, the student READY (Rural and Entrepreneurship Awareness Development Yojana) including RAWE and Experiential Learning have been introduced for one year, out of the entire four years duration of UG degree programmes. Following are some of the sectors providing placement to the agricultural graduates:-

- (i) Development Departments of Central and State Governments
- (ii) Commercial Banks and Insurance Sector
- (iii) Area development/ watershed development agencies including NGOs
- (iv) Industry dealing with fertilizers and plant nutrients
- (v) Plant protection chemicals, insecticides and pesticides manufacturing and marketing companies
- (vi) Organizations dealing in seeds and planting materials
- (vii) Industries dealing with Ag.Machinery, Sericulture, Horticulture, Fisheries, Dairy, etc.
- (viii) Manufacturers and suppliers of irrigation systems
- (ix) Agricultural products processing industry
- (x) Multi-nationals dealing with production, field evaluation, and marketing of agricultural inputs including export marketing and consultancy services.

The growth achieved in agricultural sector has been attributed to the concerted efforts of skilled human resource developed through AES. After independence, from the state of deficiency, country has reached to the stage of self-sufficiency in food grain production. It has enabled the country to increase production of food grains by 4-fold, horticultural crops by 6-fold, fish by 9-fold (marine 5-fold and inland 17-fold), milk by 6-fold, and eggs by 27-fold since 1950-51; thus making a visible impact on the national food and nutritional security.

The interest of girl.candidates towards agricultural education is rising and during 2016 about 40% female candidates were admitted through AIEEA-UG. Presently, efforts are being directed by the ICAR and Agricultural Universities to impart necessary skills and confidence among agricultural graduates to start and operate their own business units through first-hand experience of running Model Farms and Pilot-Plants during the course of study. Experiential learning, Rural Agricultural Work Experience are some special features of agricultural education in the country. ICAR provides annual grants to AUs for infrastructural development, scholarships/fellowship schemes and monitoring system through Accreditation norms for quality assurance. Besides, the teaching quality is also stressed through continuous national and international training programmes for the faculty. In summary, Agricultural Education could be termed as one of the most relevant education in the country for growth and sustainable development. The ICAR and associated Agricultural Universities would like to congratulate you for choosing the area of agricultural sciences for your education and career and wish all the success in your life.

ICAR'S 22nd ALL INDIA ENTRANCE EXAMINATION FOR ADMISSION (AIEEA-UG-2017) TO 15% SEATS (100% SEATS AT NDRI KARNAL, RLB CAU JHANSI AND DR.RP CAU PUSA) IN BACHELOR DEGREE PROGRAMMES AND AWARD OF NATIONAL TALENT SCHOLARSHIPS IN AGRICULTURE & ALLIED SCIENCE SUBJECTS (OTHER THAN VETERINARY SCIENCE) IN AGRICULTURAL UNIVERSITIES FOR ACADEMIC SESSION 2017-18

1.0 INTRODUCTION

The Indian Council of Agricultural Research (ICAR), an apex body for coordinating, guiding, and managing research and education in agriculture in the entire country under the aegis of DARE, Ministry of Agriculture, has been able to foster a countrywide arrangement with the AUs to set aside 15% of their seats for Bachelor degree programmes to be admitted through ICAR's All India Entrance Examination so as to reduce academic breeding, increase mobility among students, encourage national integration and infuse merit and uniform examination standards leading to improved overall quality of agricultural education. Accordingly, ICAR conducts All India Entrance Examination for Admission (AIEEA) to Bachelor degree programmes in agriculture and allied subjects, other than veterinary sciences, at Agricultural Universities (**Annexure-VIII**) on 15% of the University seats (except RLB CAU Jhansi, NDRI Karnal and Dr.RP CAU Pusa, Bihar where 100% seats will be filled up) every year. National Talent Scholarship (NTS) of Rs.2000/month are awarded based on the AIEEA-UG examination to all those candidates who take admission outside their state of domicile. Further, not more than 40% candidates from any one state are admitted in any agricultural university/subject. ICAR's 22nd AIEEA-UG-2017 examination for the academic session 2017-18 will be conducted at 49 examination city centres spread all over the country, enabling participation of a large number of candidates seeking admission in Bachelor degree programmes in accredited AUs in different disciplines. Only candidates declared qualified for counselling will be considered for allocation of subject and the Agricultural University. **There is no direct nomination for admission through ICAR in any Bachelor degree programme without qualifying in this examination.**

2.0 DEGREE PROGRAMMES AVAILABLE FOR ADMISSION

During this academic session, admission to 10 Bachelor degree programmes of four years duration in the subjects of: (i) Agriculture (ii) Horticulture (iii) Fisheries (iv) Forestry (v) Community Science (erstwhile Home Science) (vi) Sericulture (vii) Biotechnology (viii) Agricultural Engineering (ix) Dairy Technology (x) Food Technology is available to Indian Nationals based on merit-rank in ICAR's All India Entrance Examination.

2.1 Eligibility and Subjects to be attempted in the Entrance Examination: For the purpose of Entrance Examination and admissions in above 10 undergraduated degree programmes, the following eligibility requirements at 10+2 level shall be applicable:

Degree Programme for Admission	Code No.	Subjects which the candidate must have passed in 10+2 Examination	Subjects to be attempted in the Entrance Examination
B.Sc. (Hons.) Agriculture	01	PCB/PCMB/ PCM/Inter-Agriculture	PCB/PCM/PCA/ABC
B.Sc. (Hons.) Horticulture	02	PCB/PCMB/PCM/PCF/ Inter-Agriculture	PCB/PCM/PCA/ABC
B.F.Sc.	03	PCB/PCMB/ Inter-Agriculture	PCB/PCA/ABC
B.Sc. (Hons.) Forestry	04	PCB/PCMB/ Inter-Agriculture	PCB/PCA/ABC
B.Sc. (Hons.) Community Science	05	PCB/ PCMB/ PCM	PCB/PCM
B.Sc. (Hons.) Sericulture	06	PCB/ PCMB/ PCM	PCB/PCM
B. Tech. Agricultural Engineering	07	PCM/ PCMB	PCM
B. Tech. Dairy Technology	08	PCM/PCMB	PCM
B. Tech. Food Technology	09	PCM/PCMB	PCM
B. Tech. Bio- Technology	10	PCM/PCMB/PCB	PCM/PCB

P = PHYSICS
B = BIOLOGY
A = AGRICULTURE

C = CHEMISTRY
M = MATHEMATICS
F = FORESTRY

Note: As per the V Deans Committee Report, Agril. Marketing & Co-operation subject has been dropped for Admission to UG degree programme through ICAR- AIEEA-UG from the Academic Session 2017-18.

3.0 ELIGIBILITY REQUIREMENTS

3.1 Age and Nationality

Indian Nationals of at least 16 years of age as on 31.08.2017 are eligible to apply for the examination.

3.2 Qualifying Examination

3.2.1(i) Candidate must have passed 10+2 Senior Secondary Examination of the Central Board of Secondary Education or any other examination within scope and standard found to be equivalent to the Senior Secondary Examination of a recognised Indian Board/university(**Annexure-VII**) after a period of 12 years of study. Besides, for admission in the Universities specifically located in non-Hindi speaking areas, candidate must have passed English as a core subject in 10+2 examination.

(ii) (a) Candidate must have passed any one of the qualifying examinations enumerated above securing not less than 50% marks in aggregate for General, OBC(NCL) and UPS categories and 40% marks in aggregate for SC, ST and PC categories.

(b) Candidate having a compartment/ supplementary in any of the subjects will not be eligible unless proof of having cleared the examination with requisite percentage as in 3.2.1(ii)(a) above is available.

3.2.2 Candidate appearing in the qualifying examination enumerated above, can also apply but would be required to submit evidence of having satisfied the conditions in 3.2.1 (i) & (ii), latest by the counseling date/admission, as otherwise the candidature will be automatically cancelled.

3.2.3 While submitting application, candidate must ensure that he/she fulfills the eligibility criteria in entirety.

4.0 UNIVERSITY-WISE AND SUBJECT-WISE NUMBER OF SEATS AVAILABLE FOR ADMISSION

Number of ICAR seats (tentative) available for admission in Agricultural Universities through this examination in different accredited subjects for the academic session 2017–18 are given in **ANNEXURE-II**. It has been decided by the Council that filling of 15% seats in UG programmes in Agricultural Universities through ICARs Entrance Examination may not be allowed for non-accredited colleges'w.e.f. Academic Year 2017-18 excluding RLBCAU Jhansi and Dr.RP CAU Pusa.Exact seat position would be known only on the counseling date.

5.0 RESERVATION OF SEATS FOR SC, ST, PC, UPS and OBC(NCL)

5.1 SCHEDULED CASTE/ SCHEDULED TRIBE/ PHYSICALLY CHALLENGED/ OTHER BACKWARD CLASSES (NCL)

(i) There would be reservation of seats to the extent of 15% for Scheduled Caste and 7.5% for Scheduled Tribe candidates in different subjects. The reservation of seats among SC/ST categories is interchangeable, i.e., if sufficient number of candidates are not available to fill up seats reserved for ST candidates, these can be filled up from among suitable SC candidates and vice-versa in a given subject as per merit-rank in examination. The original SC/ST certificate in prescribed form (**ANNEXURE-III**)is required to be produced for verification at the time of admission in allotted university through online counseling. Depending on merit and choice, they can also take seat from the General Category.

(ii) Three percent seats are also reserved, **horizontally across the categories** in different subjects, for Physically Challenged (PC) candidates suffering from low vision, hearing impairment, locomotors disability or cerebral palsy with appropriate medical certificate having at least 40% disability and found suitable by the University officials. The candidate applying for admission under this category should submit a copy of the

certificate about being handicapped from a Govt. Hospital/Medical Board at the time of admission in allotted university. The criteria for assessing the degree of handicap could be variable from one subject to another. The decision of the University allotted will be final in this regard.

- (iii) Reservation for candidates belonging to OBC (NCL) category will be given only at NDRI, Karnal; Nagaland University SASARD, Medziphema; BHU; ViswaBharati (PSB); CAUs; as per Government of India directives applicable at the time of counseling and Hon'ble SC order and as per seat positions communicated by the University concerned (specimen copy of Central OBC,NCL certificate can be seen at **ANNEXURE-IV**).

5.2 RESERVATION FOR REMOTE AND UNDER PRIVILEGED STATES/UTs (UPS)

Two percent seats under each subjects would be reserved, **horizontally across categories** for the candidates of the remote and Under Privileged States/ UTs namely (i) Andaman & Nicobar Islands, (ii) Arunachal Pradesh, (iii) Dadra and Nagar Haveli, (iv) Daman & Diu, (v) Goa, (vi) Lakshadweep, (vii) Manipur, (viii) Meghalaya, (ix) Mizoram, (x) Nagaland, (xi) Sikkim and (xii) Tripura where educational facilities in agriculture and allied science subjects either do not exist or have no SAU(s) and who qualify this examination. UPS candidates will have to produce domicile certificate issued by the competent authority at the time of admission. There will not be any State quota within this quota.

6.0 ICAR NATIONAL TALENT SCHOLARSHIP (NTS)

National Talent Scholarship would be available through the Agricultural University concerned, to every student admitted on ICAR seat at any Agricultural University in a state outside his/her domicile state, at the rate of Rs.2,000/- per month during the period of study.

For further details, please refer [http://www.icar.org.in/files/FINALGuidelines\(GNTS\)-26072016.pdf](http://www.icar.org.in/files/FINALGuidelines(GNTS)-26072016.pdf).

7.0 GENERAL SCHEME OF ENTRANCE EXAMINATION

7.1 Examination Schedule

- (i) **DATE OF EXAMINATION:** **SATURDAY, the 10 June, 2017**
- (ii) **DURATION:** **2½ hours, Time 10.00 A.M. to 12:30 P.M.**

7.2 Question Paper and Writing Answers in the Examination

- (i) There will be a single question paper booklet comprising of five subjects-Physics, Chemistry, Mathematics, Biology and Agriculture.
- (ii) For subjects to be attempted in the Entrance Examination, depending on the choice and eligibility, please refer item No.2.1.
- (iii) Out of five subjects in the question booklet, candidate has to attempt/opt/choose only three subjects.
- (iv) Question paper will have 60 multiple-choice objective type questions for each subject i.e. 60 questions in Physics, 60 questions in Chemistry, 60 questions in Mathematics, 60 questions in Biology and 60 questions in Agriculture, each with four options. Only 180 questions have to be attempted out of any of the five subjects based on the subjects studied at 10+2 level.
- (v) **Marking Scheme:** Each correctly answered question will earn four marks, with a maximum of 720 marks for the paper. **For each incorrect answer one mark will be deducted from the total score.** Question with no response indicated will not be awarded any mark and there will be no negative marking for that question. The candidates are advised not to attempt such questions in the OMR answer sheet, for which they are not sure of the correct answer. More than one answer indicated against a question will be deemed as incorrect answer and will invite negative marking.
- (vi) Candidate will be required to choose the correct answer and mark in the OMR answer sheet by darkening the corresponding circle/bubble against the serial number of the question with black/ blue ball-point pen.
- (vii) Question paper for the examination shall be bilingual, i.e., in **ENGLISH and HINDI**. In case of any variation in English and Hindi versions of question(s), English version will be taken as the final and correct version.
- (viii) **Syllabus for the Examination** is given at **ANNEXURE-I**.
- (ix) A visually challenged (blind) candidate, can request for the services of amanuensis (scribe) who must be one grade junior in academic qualification i.e. not more than X / Matriculation pass in the present case and should not be related to the candidate. For amanuensis, the candidate must submit a separate request letter, at least one week in advance, to the concerned Nodal Officer of the Examination City Centre giving a copy of the PD/PC certificate issued by a competent authority. The services of amanuensis (Scribe) who should be from academic discipline other than that of the candidate, shall be provided free of cost by the Nodal Officer. The scribe will have to give a suitable undertaking, confirming that the scribe fulfills all the stipulated eligibility criteria for a scribe as mentioned above. In case later on it is proved that candidate has suppressed

material facts, the candidature of the applicant will stand cancelled, irrespective of the outcome of result of the written test. Such candidates who use a scribe shall be eligible for extra time of 50 minutes during examination.

7.3 Examination City Centres

- (i) A list of Examination City Centres with numeric codes and the contact addresses of Nodal Officer at those cities is given in **ANNEXURE-V**.
- (ii) Candidate must fill the code number for the Examination City Centre from where he/she opts to appear for the Examination. ICAR can change/shift the examination city center opted by the candidate to another nearby center, if number of candidates are more at any examination city center.
- (iii) **Examination City Centre, once opted, shall not be allowed to be changed later on by the candidates. The e-Admit Card will be uploaded on ICAR website www.icar.org.in. In case of any problem related to e-Admit card, please contact COE (Agril. Edn.) or concerned Nodal Officer on telephone after Last week of May, 2017.**

7.4 Ensuring Eligibility Requirements are Satisfied: Candidate should fill-up the **online** Application Form with due care and must ensure that he/she fulfills the eligibility requirements for the examination as well as admission as detailed in the Information Bulletin. No certificates are required to be attached with the Application at the time of online submission of Application. Eligibility of the candidate for the examination and admission is not checked until the date of counseling/personal appearance of the candidate for admission in the allotted university when the related documents will be checked and verified. It means the documents / certificates etc., will be checked directly at the time of admission in the admitting university. In case the candidate is found not-eligible at any stage, his/her candidature would be summarily rejected and admission will be cancelled.

7.5 Options for Agricultural University/ Subject for Admission: Candidates are not required to give any option for admission in any Agricultural University/subjects at the time of filling up online application form. The admission/allotment of seats in the Agricultural Universities will be made through online counseling in accordance with the choice made by the qualified candidate during the online counseling process, and as per the seats available at his/her merit-rank within the 10 Degree Programmes available for Admission depending on their eligibility.

7.6 e-Admit Card: The e-Admit Card will be uploaded on ICAR website during specified period. This copy of Admit Card must be self-attested by the candidate and brought to the Examination Hall for appearing in the examination. **Candidate may note that without self attestation of photo as well as signature and putting thumb impression of the candidate on e-Admit card, candidate will not be allowed to appear in the examination.** Candidate is advised to preserve this e-Admit card till completion of counseling and admission process in the allotted Agricultural University. In case of any difficulty in obtaining the roll number/examination venue from the ICAR website, the candidate is advised to contact the Nodal Officer of the respective Examination City center; two days before the scheduled examination date (see **ANNEXURE-V** for contact details of Nodal Officers).

7.7 Evaluation and Declaration of Result

- (i) OMR answer sheets of the candidates shall be scanned through computer/scanner and evaluated through computer by matching the OMR answer sheet responses of the candidate with Series-wise (Series-1/ Series-2) Answer Key templates prepared beforehand. Single overall merit-rank list shall be prepared. In the event of candidates getting equal marks in the Entrance Examination, relative merit will be determined on the basis of marks obtained in the main subjects Mathematics(PCM)/Biology(PCB)/Agriculture (ABC/PCA) in AIEEA-UG Examination. In the event of tie again, a candidate, higher in age, would be rated higher in merit. **Category-wise final merit list for counseling shall be prepared based on the reservation category information given by the candidate in OMR Answer sheet.**
- (ii) The result of the AIEEA-UG-2017 is likely to be declared by **30th June, 2017 (Tentative) and will be placed on ICAR website.** The copies of the result will also be displayed at the Examination Cell of the Indian Council of Agricultural Research, KrishiAnusandhanBhavan-II, Pusa, New Delhi.
- (iii) The result of the entrance examination would be available in terms of **overall merit-rank and category rank** obtained by the candidates qualified for counseling.
- (iv) All announcements related to the conduct of entrance examination including, issue of examination notification, e-Admit card information, examination result, schedule of online counseling, general notices, etc., would be posted and available on the ICAR website. **The candidates are advised to be vigilant about the announcements on the ICAR website as the ICAR would not be held responsible for non-receipt of any information/ letter by post or otherwise.**

- (v) No separate intimation about the non-selection of the candidate in AIEEA-UG-2017 Examination nor marks obtained therein, will be sent to the candidate and no correspondence (Letter/ Fax/ e-mail etc.) in this regard will be entertained.

7.8 No Re-Checking/ Re-Evaluation of OMR Answer Sheets: No representation for re-evaluation / rechecking shall be entertained as answer sheets of the entrance examination are in the format of OMR sheets which are evaluated through computerized scanning / processing. However, the candidate may be allowed to inspect his / her own OMR answer sheet along with answer key or given a copy thereof, if such representation / request is submitted by the candidate in his or her own handwriting and signature **within 10 days** from the date of declaration of result on ICAR website along with a copy of e-admit card, hard copy of online application form and Demand Draft of Rs.500/- (Rupees five hundred only) drawn in favour of "Secretary,ICAR Education Division Revolving Fund" payable at New Delhi.

7.9 Admission through ICAR Examination

- (i) Based on the overall merit-rank, the candidate is allowed to take admission in a specific degree programme at an Agricultural University as per his/her choice and availability of seat at that merit-rank through a process of online counseling as explained **at item 9.0**. In the matter of allotment/admission of candidates to respective Agricultural Universities, the decision of the ICAR/Agricultural University concerned shall be final. Once a candidate accepts admission /joins an Agricultural University, he/she will be a bona-fide student of that Agricultural University and would, thereafter, be governed by all the academic rules/regulations including migration, as applicable at that university. ICAR will not entertain any direct request from the candidates in any such matters thereafter.
- (ii) After the admission in allotted university, change in the subject/university or transfer/migration would not be permissible under any circumstances. ICAR will have no responsibility for change of subject/university after the counseling. No correspondence in this respect will be entertained. Canvassing of any kind may invite cancellation of admission.
- (iii) Candidate selected for admission through All India Entrance Examination for Admission, conducted by ICAR, may seek admission only during the session for which the Examination has been conducted. He/she will not be entitled for admission in subsequent sessions and thus cannot claim for seat allotment in other sessions/years based on this year's examination.
- (iv) Female candidates admitted through this examination on ICAR seats should be accommodated, to the extent possible, in the main campus of the University or in the campus located in a major city where there are adequate facilities for the stay of female students.
- (v) In case, at any stage, the documents submitted by the candidate are found to be fake/ forged, admission of the candidate will be forfeited and he/she shall be liable for consequential legal action.
- (vi) If any candidate/person engages in act(s) that might possibly lead to the leakage of question paper(s), or attempt to use or help in the use of unfair means in the examination, he/she will be liable to legal action under the Indian Penal Code, and his/her candidature would be forfeited.
- (vii) Any external pressure/canvassing by any candidate for admission will be treated as disqualification and would invite cancellation of admission.

7.10 Legal Jurisdiction: All disputes pertaining to the conduct of this examination and any other issue relating to All India Entrance Examination conducted by ICAR, shall fall within the jurisdiction of Delhi Courts only. As per Rules and Bye-laws of ICAR Society, it may sue or be sued in the name of Secretary, ICAR.

NOTE: Students are severely warned not to indulge in any kind of ragging inside or outside the campus of any educational institution. Severe disciplinary/criminal action will be taken by the concerned institution against the students/persons found to be indulging in ragging.

8.0 INSTRUCTIONS TO CANDIDATES

8.1 Filling of Online Application Form

Application is allowed **ONLINE only**. **No application will be allowed on any other format and will be summarily rejected.**

- (i) **The** Choice of degree programmes for admission need not to be given. Choice of degree programmes for admission will be available at the time of online counseling based on availability of seats, and merit rank of the candidate. **The Name of Examination i.e. AIEEA-UG-2017, Application number, the Examination City**

Centre chosen, Aadhaar Number or applicable ID proof Number and the Sex, must be quoted in all future correspondences.

- (ii) Online application, filled-in correctly and complete in all respects including payment of fee, should be submitted and a computer generated hard copy of the same, after downloading, should be sent through Registered/ Speed Post only so as to reach the office of Controller of Examinations (Agril. Education), ICAR, Room No. 216, Krishi Anusandhan Bhavan-II, Pusa, New Delhi 110 012, well in time but not later than the last date i.e. 15-05-2017. Any incomplete application or application received after the last date may not be considered and no claim/correspondence in this regard will be entertained. The ICAR will not be responsible for any postal delay or loss of application during transit in this regard.
- (iii) The candidates appearing in the final qualifying examination are also eligible to apply and can appear in this entrance examination, but they must produce documentary evidence of their acquiring eligibility on the date of admission.
- (iv) Candidates are not required to submit any certificates / marks sheet etc., with the Application. It is the sole responsibility of the candidates to ensure that they fulfill the specified eligibility in toto before appearing in the examination.
- (v) Detailed instructions for online application may be read carefully before filling and submitting application.
- (vi) If any candidate has been found at any stage to have furnished wrong information or deliberately suppressed any relevant information, his/her candidature/ admission will be rejected/ cancelled as soon as it comes to the notice of either ICAR or the university concerned.
- (vii) **Applications without Aadhaar number or 28 digit Aadhaar Enrolment ID or in case of candidates from J&K, Assam & Meghalaya, a passport number/ration card number/bank account number or any other valid Govt. identity number, shall be summarily rejected and no correspondence in this regard shall be entertained.**

The candidate has to visit www.icar.org.in and click the option of filling online application AIEEA-UG-2017. The candidate can download prospectus, read it carefully and then fill his/her form online.

During filling of prescribed online form, candidate can either opt for making fee payment through **Credit / Debit card or Net Banking using Payment Gateway of Canara Bank.**

a. Making payment through Credit/Debit card/Net Banking using Payment Gateway of Canara Bank

During online filling of the form, candidate can opt for making fee payment through Credit / Debit card or Net Banking using Payment Gateway of Canara Bank. In this case, the candidate will make payment directly using a computer and will not be required to visit the bank

Note: While filling the online form, candidate should upload soft copy of his /her clear, recent, colour photograph with name and date, thumb impression (his left/ her right hand) and signature and send its computer generated hard copy, after completing declaration in his/her own handwriting, to COE (Agril. Edn.) by post at the given address.

8.2 Conduct of Examination

- (i) Examination Hall will be opened to candidates 30 minutes before the commencement of examination.
- (ii) **Candidate who does not possess both Admit Card and Aadhaar card or 28 digit Aadhaar Enrolment ID proof or in case of candidates from J&K, Assam & Meghalaya, a passport /ration card /bank account passbook or any other valid Govt. Identity card will not be admitted to the Examination Hall under any circumstances.**
- (iii) Pre-written material in any form, viz., notes/books/ log table, and mobile phones/i-pods, tablets, calculator or any electronic device are not allowed inside the examination hall. ICAR reserves all rights to verify the identity and genuineness of each candidate by any means that is considered appropriate. For verification, candidate may be searched at any time during the examination.
- (iv) The examination will start strictly on time and an announcement to this effect will be made by the Invigilator.
- (v) A time signal will be given ringing a long bell at the start of the examination. To indicate that one hour is remaining, or 15 minutes are remaining, short bells will be given. A signal (long bell) will also be given at the closing time for collection of OMR sheet and question booklet when the candidate must stop writing/mark the answers.
- (vi) Candidate coming late may be allowed to enter the examination hall up to 10.30 A.M. only but no extra time will be given. Candidate coming late beyond 30 minutes, after the commencement of the examination, will not be permitted.

- (vii) Fifteen minutes before the commencement of the examination, each candidate will be given OMR Answer Sheet and five minutes before, the Question Booklet.
- (viii) Immediately on receipt of Question Booklet, candidate should write/fill-in the required particulars on the cover page of the Question Booklet with **BLACK/ BLUE BALL-POINT PEN ONLY**. Candidate will not open the Question Booklet, until asked to do so by the Invigilator. After opening the Question Booklet, read the instructions given on it carefully before attempting the questions.
- (ix) Candidate will write required particulars on OMR answer sheet as per the instructions given therein with only BLACK / BLUE BALL-POINT PEN on SIDE-I and–II.
- (x) No candidate shall be allowed to leave the Examination Hall until the completion of examination and related formalities. Candidate will hand over Question Booklet and OMR Answer Sheet to the Invigilator before leaving the Examination Hall.
- (xi) After completing the examination and before handing over the Question Booklet and the OMR Answer Sheet, the candidate should once again check that all the particulars required in the Question Booklet and the OMR Answer Sheet has been correctly filled-in.
- (xii) The OMR Answer sheet shall be scanned and evaluated through computer and the **category-wise final merit list for counseling shall be prepared based on the reservation category information given by the candidate in OMR Answer sheet**. It must be ensured by the candidate that Roll Number, Series of Question Booklet and Reservation Category are correctly written in the OMR Answer Sheet and also the OMR Answer Sheet is duly signed by the invigilator and the candidate at appropriate places, failing which it may not be considered for evaluation.
- (xiii) Before leaving the Examination Hall, the candidate must ensure that OMR Answer Sheet and Question Booklet have been handed over to the invigilator on duty. In case, the candidate does not hand over the OMR Answer Sheet with Question Booklet to the invigilator and takes away the same with him/her, this shall amount to use of unfair means and the candidate will be declared failed besides inviting further necessary action.
- (xiv) Candidates are advised to bring with them their own writing material such as hard card-board (on which nothing should be written) and their own good quality black/blue ball-point pens.
- (xv) Any attempt of using unfair means by the candidate during the examination process will render him/ her liable to be disqualified and his/her candidature for the examination would be forfeited.

8.3 Checking/Changing Question Booklet: Before attempting the questions, the candidate must check Question Booklet for any defect in printing/number of pages, serial order of the questions etc., and ensure that Question Booklet given to him/her is serially numbered and contains pages as written on top of the first page. In case of any discrepancy/ defect, the candidate should immediately report to the Invigilator concerned and get the Question Booklet changed. **Change of question booklet would not be permitted 30 minutes after the start of examination.** The candidate shall not remove any page(s) from the Question Booklet and if any page(s) is/are found missing from his/her Question Booklet, it will be treated as use of unfair means and shall render him/her liable for action/ cancellation of candidature.

8.4 Writing Answers on OMR Answer Sheet

- (i) Candidates are advised to go through the instructions very carefully and be conversant with the requirements of filling various particulars and marking the answers so that during the examination they could do so without any difficulty.
- (ii) OMR Answer Sheet used in the examination will be of special type amenable to scanning through Optical Scanner. There will be two sides of the OMR Answer Sheet, Side-I, containing particulars of candidate, instructions and Side-II, containing circles/bubbles.

Side – I (To be written with black/blue ball-point pen only)

Item No. 1–5: Write full Name, Father's Name, Roll Number, Examination-City-Centre Code number in item No. 1 to 4 exactly as given in the Admit Card and Question Booklet Serial Number at item No. 5.

Item No. 7: Put your signature in full, which must match with the signature as recorded in the Application and Admit Card.

Item No. 8: Must be signed by the invigilator.

Side - II (Use black/blue ball-point pen only)

Item No. 9: Fill in your roll number, writing one digit in each box and also shade/darken the corresponding circle/bubbles in the vertical columns underneath.

Item No. 10: Fill-in the Question Booklet serial number as indicated on the Question Booklet. You may omit the leading zero, if any.

Item No. 11: Darken the circle/bubble of Subjects to be attempted i.e. PCM,PCB,PCA,ABC.

Item No. 12: Darken the circle/bubble corresponding to the Question Paper Series-1 or Series-2 as provided in the box at right corner of the Question Booklet.

Item No. 13: Darken the circle/bubble for Reservation Category being claimed. **Note that after evaluation of Answer Sheet, the category-wise merit-rank list would be prepared on the basis of this information only.**

SC – for Scheduled Caste

ST – for Scheduled Tribe

PC – for Physically Challenged

UPS – for Under Privileged States

OBC (NCL) –for Other Backward Classes having Central OBC certificate

GEN – for General category

NOTE:

- In case columns 11&12 are left blank or filled wrongly, the candidate would expose him/her-self to the risk of evaluation under wrong subject/Series for which candidate him/her-self would be responsible. ICAR would not entertain any correspondence in this regard.
- In the event of leaving column 13 of OMR Answer sheet blank or filling wrongly, the candidate would be evaluated under General Category.
- It is the responsibility of the candidate to put his signature and also get the OMR Answer Sheet signed (serial No. 8) by the Invigilator which is a must for authentication and evaluation of the answer sheet.

Item No. 14: Corresponding to every serial number of question booklet, numbering 001 to 300, there is a corresponding answer-row on the Side-II of OMR Answer sheet, comprising of four circles/bubbles for recording correct answer to the question by completely darkening the appropriate circle/bubble and these circles/bubbles are marked with options A, B, C and D. Only one of these four options is the most appropriate and correct. The candidate is required to indicate his/her answer to the question by shading/darkening the appropriate circle/bubble completely with black/ blue ball-point pen. For example, the Question No. 004 in the Question Booklet may read as follows:

Q.No. 004. The unit of velocity is:

(A) ms_2

(B) ms_1

(C) ms_2

(D) ms

If the correct answer to this question is (B) i.e. ms_1 . The candidate will locate question No. 004 in the answer sheet and darken the circle/bubble marked (B) as shown below:

Q.No. 004 (A) ● (C) (D)

If the candidate does not want to attempt a question, he/she should not mark any of the circles/bubbles given against that question.

8.5 Changing an Answer: The candidate will answer on the OMR Answer sheet by darkening the appropriate circle /bubble with black/ blue ball-point pen. The candidates will not be allowed to change the answer once marked as the computer processing will automatically discredit marking of more than one answer to a question during evaluation. Candidate must also ensure that no visible mark is left on OMR answer sheet, otherwise the answer will be treated as wrong and invite negative marking. The candidate should bring his/her own good quality black/ blue ball-point pen for the exam.

8.6 Wrong/Incorrect Way of Marking: If more than one circle/bubble is darkened, or if the answer is marked in any manner other than the one as shown above, it shall be treated as wrong. A lightly/faintly darkened circle/bubble or otherwise marked circle/bubble will also be read by the Optical Scanner during scanning and the answer whether right or wrong shall not be the responsibility of the Council and the onus will lie on the candidate on account of incorrect way of marking. **Any indicative marking or stray marks on the OMR answer sheet shall be treated as an act of unfair means and discredit the candidate during optical scanning. The candidate must also ensure that the OMR answer sheet is not folded/ wrinkled.**

8.7 Rough Work: The candidate will not do any rough work or writing work on the OMR answer sheet. Rough work, if any, must be done on the pages provided for the purpose in the Question Booklet.

9.0 METHOD OF SELECTION AND ADMISSION THROUGH ONLINE COUNSELING

9.1 Method of Selection

- (i) The candidate declared/notified as qualified for counseling, based on the merit-rank, shall register for online counseling as per counseling instructions (also see **ANNEXURE-X**). Candidate shall forfeit the claim for admission if he/she, does not register for counseling within specified date and time. **Candidate who has not been declared/ notified as qualified for counseling, shall not be considered for admission on ICAR quota seats in any Agricultural University at any stage.**
- (ii) Candidate will be recommended for admission in the ICAR accredited subject/degree programme of choice in the accredited Agricultural Universities on the basis of merit in the Entrance Examination and availability of seats at his/her merit-rank during online counseling.
- (iii) List of original documents with self-attested photocopies, photographs to be produced at the time of admission in the allotted university is as under:
 - (a) All certificates and mark sheets/grade reports, in original related to Class X and XII, Transfer Certificate/ School Leaving Certificate, Character Certificate from the School last attended.
 - (b) In case of candidates from SC, ST and non-creamy layer of OBC categories, Original Certificate as per Central Govt. requirements and issued by Competent Authority.
 - (c) Medical Certificate in case of Physically Challenged (PC) candidates issued by Medical Officer of any Government Hospital with description of the kind and the degree of disability.
 - (d) In case the Date of Birth is not mentioned in Class X Certificate, Date of Birth (DOB) Certificate.
 - (e) e- Admit Card, hard copy of Online application Form and letter issued by the ICAR to qualified candidates related to admission.
 - (f) Three recent and clear passport size color **photographs with name and date same as uploaded on the Application Form.**
 - (g) Domicile certificate.
 - (h) Aadhaar card or 28 digit Aadhaar Enrolment ID copy or in case of candidates from J&K, Assam & Meghalaya, a copy of passport /ration card /bank passbook or any other valid Govt. Identity card as applicable.

9.2 Admission through Online Counseling

- (i) There will be online counseling only. The candidates declared qualified for counseling for the consideration of admission to the Agricultural Universities would be generally larger than the number of seats available, provided they have achieved a minimum of 50% marks for General and UPS categories and a minimum of 40% marks for SC/ST/PC categories in the Entrance examination. For OBC, it will be as per Supreme Court directives in this regard. The competent authority (DDG, Agril. Edn.) may relax the minimum qualifying marks in case the required number of candidates to be called for counseling are not available.

The Tentative online counseling process involves:

1. For Online Counseling, qualified candidate will have to get registered by paying Rs.2000/- through online payment gate way of ICAR by using Credit/Debit card/Net banking.
2. Only the registered candidate will be able to log on to online counseling page. He /she will be able to access the website from any place of his / her convenience like cyber cafe / home / office etc.
3. If candidate does not remember his / her login ID and password then the login ID / password will be recoverable by input of some personal parameters.
4. Details of available seat matrix (with reservation category), eligibility requirements, process of Online counseling, helpline numbers, parameter based Online search system for previous year admission cut offs will be available on the home page of the portal. Some other parameters related to accredited universities like their geographical location, course fee, date of registration, hostel facility, etc., will be displayed to facilitate the candidates.
5. The candidates qualified in the entrance examination under different categories shall be permitted to make choice of Courses / University in stipulated time period.
6. Only those accredited programme shall be displayed whose qualifying criteria is fulfilled by the candidate. Similarly, list of only those Universities will be displayed where the accredited programme desired by the candidate is offered.
7. Candidate will be able to select the courses and university one by one in combination to select multiple choices for the courses. There will be provisions to add / modify / delete choices during the stipulated time period. Further, provision for interchange/ upward movement/ downward movement will also be available and permissible any number of times.
8. The procedure for exercising choices or seeking other information will be menu-driven and guide the candidates through appropriate messages on the computer screen.
9. After completion of choice selection, the candidate will save the choices. He/ she will be able to take a draft printout so that he/ she can discuss the choices filled-with his/her mentors and update the same, if desired.
10. Candidate can update his/ her choices any number of times before the last date/until the choices are locked by the candidate. If by the last date and time, the choices are not locked by the candidate, then the last saved choices will be automatically locked.

11. Multiple login will be provided to all the accredited AUs so that they can login through their login ID and password. The Universities should be able to see the number and details of candidates who have chosen a particular course as their first / second / third choice etc.
12. The locked choices shall be processed according to merit and available seats on a scheduled date for the allotment of seats. The candidates will be intimated through e-mail/SMS about the University and Course allotted. The list of allotted candidates will be updated in the relevant database.
13. The candidates then will download the provisional allotment letter in PDF format from the portal.
14. For admission, the successful candidates will report to the allotted University. The University will check online details of provisional admission offer (from ICAR) downloadable by the candidates for verification. After checking the original documents of the candidates, the university will issue the **final admission letter online** to the admitted candidates mentioning the award of NTS, as applicable. As a consequence of this, the university will update the database of the Admissions Given/ Admission Denied (with reason)/ Auto up-gradation requested by the candidate. If admission is given, then final admission letter will be generated. If admission is denied, then a regret letter will be generated and if auto-up gradation is requested, then an auto-up gradation letter will be generated. All such letters will be in pdf format and ready to print.
15. Subsequent round of online counseling will be conducted immediately after the reporting is complete. The Auto-up-gradation requests to be first tried to give them their better choice. Then the next round shall be started.
16. Thereafter, the same process for second and third rounds (if the need arises) of counseling will be followed.
17. Candidate, not fulfilling the eligibility condition(s) at the time of admission in the allotted university, will forfeit claim for admission and will not be considered for seat allocation. Candidature in such cases shall be rejected summarily. No correspondence shall be entertained thereafter in this regard.
18. Against total number of ICAR seats available for a particular degree programme in a university, not more than 40% of ICAR seats from one State would be allocated to any one university in that subject under a particular category. While computing 40% number, mathematical method of rounding to the nearest integer would be adopted except where there is only one seat, in which case, the whole seat would be allocated. While rounding off, the number might exceed 40% to that extent.
19. It should be noted carefully that ICAR allocates the University, whereas the choice of the accredited College within the University allotted shall be regulated by the University itself. **The university will admit and place the candidates in accredited colleges and programmes only.** Candidate may not approach ICAR, thereafter, for any specific College within the allotted University.
20. In case a candidate has been admitted in a university and subject after the counseling, any request for change/transfer of subject/university thereafter, will not be entertained by ICAR. The candidate, once admitted in a degree programme as per his/her merit-rank and availability of seat at the time of counseling, will not stake claim for change of subject/University later on after his/her admission is over.
21. All admitted candidates will be required to submit original certificates and mark sheets to the Registrar of the allotted University, otherwise admission may not be granted. All original certificates submitted by the candidates may be sent to their respective Boards for verification. In case a candidate wishes to withdraw the original certificates after the admission, he/she shall directly request the allotted University for the same if the university rules permit so.
22. If any candidate fails to deposit the prescribed admission fee and original certificates as required by the university, the admission may not be granted and candidate would forfeit his/her claim for admission.
23. In case any particular Board is not recognized or has been derecognized by some university, ICAR will not be responsible for admitting students of that Board in the universities not willing to admit such candidates.

9.3 Filling of Vacant seats after the final round of online counseling

- (i) The **ICAR quota seats after the final round of online counseling** if remain vacant, shall automatically stand released to the Agricultural University concerned for filling up at their level and as per the procedure in vogue at the respective university. **These seats will no more be called as ICAR seats and treated as university seats.** Once the counseling/ admission process is over, filling up of any subsequent vacancies created due to any reasons, shall not be the responsibility of ICAR. No correspondence in this regard will be entertained either from the universities or from any candidate.
- (ii) The candidate allotted seat through online counseling in a Agricultural University through ICAR examination, shall have to report to the concerned Agricultural University within the given time period for admission in the concerned university. Before proceeding for the admission, candidates must enquire about the fee etc. and carry the same for admission.
- (iii) No correspondence from the candidates/ guardians/ parents will be entertained by the Council for seeking permission for late registration/ admission in the universities or issuing any direction in this regard.

10.0 INSTITUTIONAL INFORMATION ON NDRI (DAIRY TECH.):

From this Academic Session, 100% seats at NDRI, Karnal in Dairy Technology will be filled based on merit-rank in this examination. Reservation of SC, ST, PC and UPS categories will be applicable as per ICAR norms at **item 5.0**. However, out of the total seats, not more than 40% seats (with mathematical rounding procedure applied as explained earlier) will be filled from one State. Reservation for OBC will be as per Government of India directives applicable at the time of counseling.

**SYLLABUS FOR
ICAR'S ALL INDIA ENTRANCE EXAMINATION FOR ADMISSION TO
BACHELOR DEGREE PROGRAMMES (AIEEA-UG-2017)**

PHYSICS

Unit-1: Physical World and Measurement

Physics scope and excitement; nature of physical laws; Physics, technology and society. Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures. Dimensions of physical quantities, dimensional analysis and its applications.

Unit-2: Kinematics

Frame of reference. Motion in a straight line: Position-time graph, speed and velocity. Uniform and non-uniform motion, average speed and instantaneous velocity. Uniformly accelerated motion: velocity-time graph, position-time graphs, relations for uniformly accelerated motion (graphical treatment). Elementary concepts of differentiation and integration for describing motion. Scalar and vector quantities: Position and displacement vectors, general vectors and notation, equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors. Relative velocity. Unit vector; Resolution of a vector in a plane - rectangular components. Motion in a plane. Cases of uniform velocity and uniform acceleration-projectile motion. Uniform circular motion. Motion of objects in three dimensional space. Motion of objects in three dimensional space.

Unit-3: Laws of Motion

Intuitive concept of force. Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces. Static and kinetic friction, laws of friction, rolling friction. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on level circular road, vehicle on banked road).

Unit-4: Work, Energy and Power

Scalar product of vectors. Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: conservation of mechanical energy (kinetic and potential energies); non-conservative forces: elastic and inelastic collisions in one and two dimensions.

Unit-5: Motion of System of Particles and Rigid Body

Centre of mass of a two-particle system, momentum conservation and centre of mass motion. Centre of mass of a rigid body; centre of mass of uniform rod. Vector product of vectors; moment of a force, torque, angular momentum, conservation of angular momentum with some examples. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions; moment of inertia, radius of gyration. Values of moments of inertia for simple geometrical objects. Statement of parallel and perpendicular axes theorems and their applications.

Unit-6: Gravitation

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

Unit-7: Properties of Bulk Matter

Elastic behaviour, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear, modulus of rigidity. Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes). Effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, Reynold's number, streamline and turbulent flow. Bernoulli's theorem and its applications. Surface energy and surface tension, angle of contact, application of surface tension ideas to drops, bubbles and capillary rise.

Heat, temperature, thermal expansion; specific heat - calorimetry; change of state - latent heat. Heat transfer-conduction, convection and radiation, thermal conductivity, Newton's law of cooling.

Unit-8: Thermodynamics

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

Unit-9: Behaviour of Perfect Gas and Kinetic Theory

Equation of state of a perfect gas, work done on compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic energy and temperature; rms speed of gas molecules; degrees of freedom, law of equipartition of energy (statement only) and application to specific heats of gases; concept of mean free path, Avogadro's number.

Unit-10: Oscillations and Waves

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

Unit-11: Electrostatics

Electric Charges; Conservation of charge, Coulomb's law - force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines; electric dipole, electric field due to a dipole; torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside). Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor. Van de Graaff generator.

Unit-12: Current Electricity

Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, $V - I$ characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity. Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel. Kirchoff's laws and simple applications. Wheatstone bridge, metre bridge. Potentiometer - principle and its applications to measure potential difference and for comparing emf of two cells; measurement of internal resistance of a cell.

Unit-13: Magnetic Effects of Current and Magnetism

Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire, straight and toroidal solenoids. Force on a moving charge in uniform magnetic and electric fields. Cyclotron. Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current-carrying conductors-definition of ampere. Torque experienced by a current loop in uniform magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.

Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron. Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and magnetic elements. Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths. Permanent magnets.

Unit-14: Electromagnetic Induction and Alternating Currents

Electromagnetic induction; Faraday's law, induced emf and current; Lenz's Law, Eddy currents. Self and mutual inductance. Need for displacement current. Alternating currents, peak and rms value of alternating current/voltage; reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, wattless current. AC generator and transformer.

Unit-15: Electromagnetic waves

Displacement current, Electromagnetic waves and their characteristics (qualitative ideas only). Transverse nature of electromagnetic waves. Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

Unit-16: Optics

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula. Magnification, power of a lens, combination of thin lenses in contact. Refraction and dispersion of light through a prism. Scattering of light - blue colour of the sky and reddish appearance of the sun at sunrise and sunset. Optical instruments: Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia, presbyopia and astigmatism) using lenses.

Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers. Wave optics: wave front and Huygens' principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygens' principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Resolving power of microscopes and astronomical telescopes. Polarisation, plane polarised light; Brewster's law, uses of plane polarised light and Polaroids.

Unit-17: Dual Nature of Matter and Radiation

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

Unit-18: Atoms & Nuclei

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

Unit-19: Electronic Devices

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

Unit-20: Communication Systems

Elements of a communication system (block diagram only); bandwidth of signals (speech, TV and digital data); bandwidth of transmission medium. Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation. Need for modulation. Production and detection of an amplitude-modulated wave.

CHEMISTRY

Unit-1: Some Basic Concepts of Chemistry

General Introduction: Importance and scope of chemistry. Historical approach to particulate nature of matter, laws of chemical combination. Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses mole concept and molar mass: percentage composition, empirical and molecular formula chemical reactions, stoichiometry and calculations based on stoichiometry.

Unit-2: Solid State

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea), unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties.

Unit-3: Solutions

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties – relative lowering of vapour pressure, elevation of Boiling Point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass.

Unit-4: Structure of Atom

Discovery of electron, proton and neutron; atomic number, isotopes and isobars. Thomson's model and its limitations, Rutherford's model and its limitations. Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p, and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli exclusion principle and Hund's rule, electronic configuration of atoms, stability of half filled and completely filled orbitals.

Unit-5: Classification of Elements and Periodicity in Properties

Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii. Ionization enthalpy, electron gain enthalpy, electro negativity, valence.

Unit-6: Chemical Bonding and Molecular Structure

Valence electrons, ionic bond, covalent bond: bond parameters. Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR (Valence

shell electron pair repulsion) theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital; theory of homonuclear diatomic molecules (qualitative idea only), hydrogen bond.

Unit-7: States of Matter: Gases and Liquids

Three states of matter. Intermolecular interactions, type of bonding, melting and boiling points. Role of gas laws in elucidating the concept of the molecule, Boyle's law, Charles law, Gay Lussac's law, Avogadro's law. Ideal behaviour, empirical derivation of gas equation, Avogadro's number. Ideal gas equation. Derivation from ideal behaviour, liquefaction of gases, critical temperature. Liquid State - Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

Unit-8: Thermodynamics

Concepts of System, types of systems, surroundings. Work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics - internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH , Hess's law of constant heat summation, enthalpy of: bond dissociation, combustion, formation, atomization, sublimation. Phase transformation, ionization, and solution. Introduction of entropy as a state function, free energy change for spontaneous and non-spontaneous processes, criteria for equilibrium.

Unit-9: Equilibrium

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle; ionic equilibrium - ionization of acids and bases, strong and weak electrolytes, degree of ionization, concept of pH. Hydrolysis of salts. Buffer solutions, solubility product, common ion effect.

Unit-10: Redox Reactions

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, applications of redox reactions.

Unit-11: Hydrogen

Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of hydrogen; hydrides - ionic, covalent and interstitial; physical and chemical properties of water, heavy water; hydrogen peroxide-preparation, properties and structure; hydrogen as a fuel.

Unit-12: s-Block Elements (Alkali and Alkaline earth metals)

Group 1 and Group 2 elements

General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens; uses.

Unit-13: Preparation and properties of some important compounds

Sodium carbonate, sodium chloride, sodium hydroxide and sodium hydrogen carbonate, biological importance of sodium and potassium. CaO , CaCO_3 and industrial use of lime and limestone, biological importance of Mg and Ca

Unit-14: Some p-Block Elements

General Introduction to p-Block Elements: Group 13 elements

General introduction, electronic configuration, occurrence. Variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group; Boron- physical and chemical properties, some important compounds: borax, boric acids, boron hydrides. Aluminum: uses, reactions with acids and alkalis.

Unit-15: Group 14 elements

General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first element, Carbon - catenation, allotropic forms, physical and chemical properties; uses of some important compounds: oxides. Important compounds of silicon and a few uses: silicon tetrachloride, silicones, silicates and zeolites.

Unit-16: Organic Chemistry

Some Basic Principles and Techniques

General introduction, methods of qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds, Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions

Unit-17: Hydrocarbons

Classification of hydrocarbons

Alkanes - Nomenclature, isomerism, conformations (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis.

Alkenes - Nomenclature, structure of double bond (ethene) geometrical isomerism, physical properties, methods of preparation; chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties. Methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.

Aromatic hydrocarbons: Introduction, IUPAC nomenclature; benzene: resonance, aromaticity; chemical properties: mechanism of electrophilic substitution. – nitration, sulphonation, halogenation, Friedel-Craft's alkylation and acylation: directive influence of functional group in mono-substituted benzene; carcinogenicity and toxicity.

Unit-18: Electrochemistry

Conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration, Kohlrausch's Law, electrolysis and laws of electrolysis (elementary idea), dry cell – electrolytic cells and Galvanic cells; lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, fuel cells; corrosion.

Unit-19: Chemical Kinetics

Rate of a reaction (average and instantaneous), factors affecting rate of reaction; concentration, temperature, catalyst; order and molecularity of a reaction; rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment)

Unit-20: Surface Chemistry

Adsorption – physisorption and chemisorption; factors affecting adsorption of gases on solids; catalysis : homogenous and heterogeneous, activity and selectivity: enzyme catalysis; colloidal state: distinction between true solutions, colloids and suspensions; lyophilic, lyophobic, multimolecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation; emulsion – types of emulsions.

Unit-21: General Principles and Processes of Isolation of Elements

Principles and methods of extraction - concentration, oxidation, reduction electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and iron.

Unit-22: p-Block Elements

Group 15 elements

General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; nitrogen - preparation, properties and uses; compounds of nitrogen: preparation and properties of ammonia and nitric acid, oxides of nitrogen (structure only); Phosphorous-allotropic forms; compounds of phosphorous: preparation and properties of phosphine, halides (PCl_3 , PCl_5) and oxoacids

Unit-23: Group 16 elements

General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; dioxygen: preparation, properties and uses; simple oxides; Ozone. Sulphur - allotropic forms; compounds of sulphur: preparation, properties and uses of sulphur dioxide; sulphuric acid: industrial process of manufacture, properties and uses, oxoacids of sulphur (structures only).

Unit-24: Group 17 elements

General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens: preparation, properties and uses of chlorine and hydrochloric acid, interhalogen compounds, oxoacids of halogens (structures only).

Unit-25: Group 18 elements

General introduction, electronic configuration. Occurrence, trends in physical and chemical properties, uses.

Unit-26: d and f Block Elements

General introduction ,electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour catalytic property, magnetic properties, interstitial compounds, alloy formation preparation and properties of $\text{K}_2\text{Cr}_2\text{O}_7$ and KMnO_4 .

Lanthanoids - electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction.

Actinoids - Electronic configuration, oxidation states.

Unit-27: Coordination Compounds

Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. bonding; isomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological systems).

Unit-28: Haloalkanes and Haloarenes

Haloalkanes: Nomenclature, nature of C-X bond, physical and chemical properties, mechanism of substitution reactions.

Haloarenes: Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only) Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Unit-29: Alcohols, Phenols and Ethers

Alcohols

Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only); identification of primary, secondary and tertiary alcohols; mechanism of dehydration, uses of methanol and ethanol. **Phenols** : Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols. **Ethers:** Nomenclature, methods of preparation, physical and chemical properties, uses.

Unit-30: Aldehydes, Ketones and Carboxylic Acids

Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.

Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

Unit-31: Organic compounds containing Nitrogen

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Cyanides and Isocyanides - will be mentioned at relevant places in context.

Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

Unit-32: Biomolecules

Carbohydrates- Classification (aldoses and ketoses), monosaccharide (glucose and fructose), oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); importance.

Proteins - Elementary idea of α -amino acids, peptide bond, polypeptides, proteins, structure of amines-primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes.

Vitamins - Classification and functions.

Nucleic Acids: DNA and RNA .

Unit-33: Polymers

Classification - natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers: natural and synthetic like polythene, nylon, polyesters, Bakelite, rubber.

Unit-34: Environmental Chemistry

Environmental pollution - air, water and soil pollution, chemical reactions in atmosphere, smog, major atmospheric pollutants; acid rain, ozone and its reactions, effects of depletion of ozone layer, greenhouse effect and global warming - pollution due to industrial wastes; green chemistry as an alternative tool for reducing pollution, strategy for control of environmental pollution.

Unit-35: Chemistry in Everyday life

1. **Chemicals in medicines** - analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.
2. **Chemicals in food** - preservatives, artificial sweetening agents.
3. **Cleansing agents** - soaps and detergents, cleansing action.

BIOLOGY (BOTANY AND ZOOLOGY)

Unit : 1 The Living World

Nature and scope of Biology. Methods of Biology. Our place in the universe. Laws that govern the universe and life. Level of organization. Cause and effect relationship.

Being alive. What does it mean? Present approaches to understand life processes, molecular approach; life as an expression of energy; steady state and homeostasis; self duplication and survival; adaptation; death as a positive part of life.

Origin of life and its maintenance. Origin and diversity of life. Physical and chemical principles that maintain life processes. The living crust and interdependence. The positive and negative aspects of progress in biological sciences. The future of the living world, identification of human responsibility in shaping our future.

Unit : 2 Unit of Life

Cell as a unit of life. Small biomolecules; water, minerals, mono and oligosaccharides, lipids, amino acids, nucleotides and their chemistry, cellular location and function. Macromolecules in cells - their chemistry, cellular location and functional significance. Polysaccharides, proteins and nucleic acids. Enzymes; chemical nature, classification, mechanism in action-enzyme complex, allosteric modulation (brief), irreversible activation. Biomembranes; Fluid mosaic model of membrane, role in transport, recognition of external information (brief). Structural organization of the cell; light and electron microscopic views of cell, its organelles and their functions; nucleus mitochondria, chloroplasts, endoplasmic reticulum. Golgi complex, lysosomes, microtubules, cell wall, cilia and flagella, vacuoles, cell inclusions. A general account of cellular respiration. Fermentation, biological oxidation (A cycle outline), mitochondrial electron transport chain, high energy bonds and oxidative phosphorylation, cell reproduction; Process of mitosis and meiosis.

Unit : 3 Diversity of Life

Introduction. The enormous variety of living things, the need for classification to cope with this variety; taxonomy and phylogeny; shortcomings of a two kingdom classification as plants and animals; the five kingdom classification, Monera, Protista, Plantae, Fungi and Animalia; the basic features of five kingdom classification. modes of obtaining nutrition- autotrophs and heterotrophs. Life style producers, consumers and decomposers. Unicellularity and multicellularity, phylogenetic relationships. Concepts of species, taxon and categories - hierarchical levels of classification; binomial nomenclature; principles of classification and nomenclature; identification and nature of viruses and bacteriophages; kingdom Monera-archaeobacteria - life in extreme environments; Bacteria, Actinomycetes, Cyanobacteria. Examples & illustration of autotrophic and heterotrophic life; mineralizes-nitrogen fixers; Monera in cycling matter; symbiotic forms; disease producers. Kingdom Protista-Eukaryotic unicellular organisms, development of flagella and cilia; beginning of mitosis; syngamy and sex. Various life styles shown in the major phyla. Evolutionary precursors of complex life forms. Diatoms, dinoflagellates, slime moulds, protozoans; symbiotic forms. Plant kingdom-complex autotrophs, red brown and green algae; conquest of land, bryophytes, ferns, gymnosperms and angiosperms. Vascularization; development of flower, fruit and seed. Kingdom fungi-lower fungi (Zygomycetes), higher fungi (Ascomycetes and Basidiomycetes); the importance of fungi. Decomposers; parasitic forms; lichens and mycorrhizae. Animal kingdom-animal body pattern and symmetry. The development of body cavity in invertebrate vertebrate phyla. Salient features with reference to habitat and example of phylum porifera, coelenterata, helminths, annelids, mollusca, arthropoda, echinoderms; chordata - (classes-fishes, amphibians, reptiles, birds and mammals) highlighting major characters.

Unit : 4 Organisms and Environment

Species: Origin and concept of species population, interaction between environment and population community. Biotic community, interaction between different species, biotic stability. Changes in the community. Succession. Ecosystem; interaction between biotic and abiotic components; major ecosystems, manmade ecosystem- Agro ecosystem. Biosphere; flow of energy, trapping of solar energy, energy pathway, food chain, food web, biogeochemical cycles, calcium and sulphur, ecological imbalance and its consequences. Conservation of natural resources; renewable and non-renewable (in brief). Water and land management, wasteland development. Wild life and forest conservation; causes for the extinction of some wild life, steps taken to conserve the remaining species, concept of endangered species-Indian examples, conservation of forests; Indian forests, importance of forests, hazards of deforestation, concept of afforestation. Environmental pollution; air and water pollution, sources, major pollutants of big cities of our country, their effects and methods of control, pollution due to nuclear fallout and waste disposal, effect and control, noise pollution; sources and effects.

Unit : 5 Multicellularity : Structure and Function - Plant Life

Form and function. Tissue system in flowering plants; meristematic and permanent. Mineral nutrition-essential elements, major functions of different elements, passive and active uptake of minerals. Modes of nutrition, transport of solutes and water in plants. Photosynthesis; photochemical and biosynthetic phases, diversity in photosynthetic pathways, photosynthetic electron transport and photophosphorylation, photorespiration. Transpiration and exchange of gases. Stomatal mechanism. Osmoregulation in plants: water relations in plant cells, water potential. Reproduction and development in Angiosperms; asexual and sexual reproduction. Structure and functions of flower: development of male and female gametophytes in angiosperms, pollination, fertilization and development of endosperm, embryo seed and fruit. Differentiation and organ formation. Plant hormones and growth regulation; action of plant hormones in relation to seed dormancy and germination, apical dominance, senescence and abscission. Applications of synthetic growth regulators. A brief account of growth and movement in plants.

Unit : 6 Multicellularity : Structure and Function - Animal Life

Animal tissues, epithelial, connective, muscular, nerve. Animal nutrition, organs of digestion and digestive process, nutritional requirements for carbohydrates, proteins, fats, minerals and vitamins; nutritional imbalances and deficiency diseases. Gas exchange and transport: Pulmonary gas exchange and organs involved, transport of gases in blood, gas exchange in aqueous media circulation: closed and open vascular systems, structure and pumping action of heart, arterial blood pressure, lymph. Excretion and osmoregulation. Ammonotelism, Ureotelism, ureotelism, excretion of water and urea with special reference to man. Role of kidney in regulation of plasma, osmolarity on the basis of nephron structure, skin and lungs in excretion. Hormonal coordination; hormones of mammals, role of hormones as messengers and regulators. Nervous coordination, central autonomic and peripheral nervous systems, receptors, effectors, reflex action, basic physiology of special senses, integrative control by neuroendocrinal systems. Locomotion: joints, muscle movements, types of skeletal muscles according to types of movement, basic aspects of human skeleton. Reproduction; human reproduction, female reproductive cycles. Embryonic development in mammals (upto three germs layers), growth, repair and ageing.

Unit : 7 Continuity of Life

Heredity and variation: Introduction, Mendel's experiments with peas and concepts of factors. Mendel's laws of inheritance. Genes: Packaging of heredity material in prokaryotes-bacterial chromosome and plasmid; and eukaryote chromosomes. Extranuclear genes, viral genes. Linkage (genetic) maps. Sex determination and sex linkage. Genetic material and its replication, gene manipulation. Gene expression; genetic code, transcription, translation, gene regulation. Molecular basis of differentiation.

Unit : 8 Origin and Evolution of Life

Origin of life: living and non-living, chemical evolution, organic evolution; Oparin ideas, Miller-Urey experiments. Interrelationship among living organisms and evidences of evolution: fossil records including geological scale, Morphological evidence - hematology, vestigial organs, embryological similarities and biogeographical evidence.

Darwin's two major contributions. Common origin of living organisms and recombination as source of variability, selection and variation, adaptation (Lederberg's replica plating experiment for indirect selection of bacterial mutants), reproductive isolation, speciation. Role of selection, change and drift in determining composition of population. Selected examples: industrial melanism; drug resistance, mimicry, malaria in relation to G-6-PD deficiency and sickle cell disease. Human evolution: Palcontological evidence, man's place among mammals. Brief idea of Dryopithecus, Australopithecus, *Homo erectus*, *H.neanderthlensis*, Cro-Magnon man and *Homo sapiens*. Human chromosomes, similarity in different racial groups. Comparison with chromosomes of non-human primates to indicate common origin; Cultural vs. biological evolution.

Mutation: origin and types of mutation, their role in speciation.

Unit : 9 Application of Biology

Introduction, role of biology, in the amelioration of human problems. Domestication of plant- a historical account, improvement of crop plants; Principles of plant breeding and plant introduction. Use of fertilizers, their economic and ecological aspects.

Use of pesticides: advantages and hazards. Biological methods of pest control. Crops today. Current concerns, gene pools and genetic conservation. Underutilized crops with potential uses of oilseeds, medicines, beverages, spices, fodder, New crops-Leucaena (Subabul), Jojoba, Guayule, winged bean, etc. Biofertilizers - green manure, crop residues and nitrogen fixation (symbiotic, non symbiotic). Applications of tissue culture and genetic engineering in crops. Domestication and introduction of animals. Livestock, poultry, fisheries (fresh water, marine, aquaculture). Improvement of animals: principles of animal breeding. Major animal diseases and their control. Insects and their products (silk, honey, wax and lac). Bioenergy-biomass, wood (combustion; gasification, ethanol). Cow dung cakes, gobar gas, plants as sources of hydrocarbons for producing petroleum, ethanol from starch and lignocellulose. Biotechnology, application in health and agriculture, genetically modified (GM) organisms, bio-safety issues. A brief historical account-manufacture of cheese. yoghurt, alcohol, yeast, vitamins, organic acids, antibiotics, steroids, dextrans. Scaling up laboratory findings to Industrial production, sewage treatment. Production of insulin, human growth hormones, interferon. Communicable diseases including STD and diseases spread through 'blood transfusion (hepatitis, AIDS, etc) Immune response, vaccine and antisera. Allergies and Inflammation. Inherited diseases and dysfunctions, sex-linked diseases, genetic incompatibilities, and genetic counseling. Cancer-major types, causes, diagnosis and treatment. Tissue and organ transplantation. Community health services and measures; blood banks; mental health, smoking, alcoholism and drug addiction-physiological symptoms and control measures. Industrial wastes, toxicology, pollution-related diseases. Biomedical engineering - spare parts for man, instruments for diagnosis of diseases and care. Human population related diseases. Human population, growth, problems and control, inequality between sexes, control measures; test-tube babies aminocentesis. Future of Biology.

MATHEMATICS

Unit-1: Sets and Functions

- Sets** : Sets and their representations. Empty set. Finite & Infinite sets. Equal sets. Subsets, Subsets of the set of real numbers especially intervals (with notations). Power set. Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Complement of a set.
- Relations & Functions**: Ordered pairs, Cartesian product of sets. Number of elements in the cartesian product of two finite sets. Cartesian product of the reals with itself (upto $R \times R \times R$). Definition of relation, Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function. Binary operations, Pictorial representation of a function, domain. Co-domain and range of a relation. Function as a special kind of relation from one set to another. Real valued function of the real variable, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum and greatest integer functions with their graphs. Sum, difference, product and quotients of functions.
- Trigonometric Functions**: Positive and negative angles. Measuring angles in radians & in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $\sin^2x + \cos^2x=1$, for all x . Signs of trigonometric functions and sketch of their graphs. Expressing $\sin(x+y)$ and $\cos(x+y)$ in terms of $\sin x$, $\sin y$, $\cos x$ & $\cos y$. Deducing the identities like the following:

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \pm \tan x \tan y}, \quad \cot(x \pm y) = \frac{\cot x \cot y \pm 1}{\cot y \pm \cot x}$$

$$\cos x + \cos y = 2 \cos \frac{x+y}{2} \cos \frac{x-y}{2}$$

$$\sin x - \sin y = 2 \cos \frac{x+y}{2} \sin \frac{x-y}{2} \quad \cos x - \cos y = -2 \sin \frac{x+y}{2} \sin \frac{x-y}{2}$$

Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ and $\tan 3x$. General solution of trigonometric equations of the type $\sin \theta = \sin \alpha$, $\cos \theta = \cos \alpha$ and $\tan \theta = \tan \alpha$.

Inverse Trigonometric Functions: Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.

Properties of triangles, including centroid, incentre, circum-centre and orthocentre, Solution of triangles. Heights and Distances.

Unit-2: Algebra

- 1. Principle of Mathematical Induction:** Processes of the proof by induction, motivating the application of the method by looking at natural numbers as the least inductive subset of real numbers. The principle of mathematical induction and simple applications.
- 2. Complex Numbers and Quadratic Equations:** Need for complex numbers, especially -1 , to be motivated by inability to solve every quadratic equation. Brief description of algebraic properties of complex numbers. Argand plane and polar representation of complex numbers. Statement of Fundamental Theorem of Algebra, solution of quadratic equations in the complex number system.
- 3. Linear Inequalities:** Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Solution of system of linear inequalities in two variables- graphically.
- 4. Permutations & Combinations:** Fundamental principle of counting. Factorial n . $(n!)$. Permutations and combinations, derivation of formulae and their connections, simple applications.
- 5. Binomial Theorem:** History, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, General and middle term in binomial expansion, simple applications.
- 6. Sequence and Series:** Sequence and Series. Arithmetic progression (A. P.). arithmetic mean (A.M.) Geometric progression (G.P.), general term of a G.P., sum of n terms of a G.P., geometric mean (G.M.), relation between A.M. and G.M. Sum to n terms of the special series $\sum n$, $\sum n^2$ and $\sum n^3$.
- 7. Matrices:** Concept, notation, order, equality, types of matrices, zero matrix, transpose of a matrix, symmetric and skew symmetric matrices. Addition, multiplication and scalar multiplication of matrices, simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists.
- 8. Determinants:** Determinant of a square matrix (up to 3×3 matrices), properties of determinants, minors, cofactors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Unit-3: Coordinate Geometry

- 1. Straight Lines:** Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axes, point-slope form, slope-intercept form, two-point form, intercepts form and normal form. General equation of a line. Distance of a point from a line.
- 2. Conic Sections:** Sections of a cone: circle, ellipse, parabola, hyperbola, a point, a straight line and pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.
- 3. Introduction to Three-dimensional Geometry:** Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula.

Unit-4: Calculus

- 1. Limits and Derivatives:** Derivative introduced as rate of change both as that of distance function and geometrically, intuitive idea of limit. Definition of derivative, relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.
- 2. Continuity and Differentiability:** Continuity and differentiability, derivative of composite functions, chain rule, derivatives of inverse trigonometric functions, derivative of implicit function. Concept of exponential and logarithmic functions and their derivative. Logarithmic differentiation. Derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretations.
- 3. Applications of Derivatives:** Applications of derivatives: rate of change, increasing/decreasing functions, tangents & normals, approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems.
- 4. Integrals:** Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts; only simple integrals of the type

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

to be evaluated. Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

5. **Applications of the Integrals:** Applications in finding the area under simple curves, especially lines, areas of circles/ parabolas/ellipses (in standard form only), area between the two above said curves.
6. **Differential Equations:** Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree. Solutions of linear

differential equation of the type: $\frac{dy}{dx} + py = q$, where p and q are functions of x.

Unit-5: Vectors and Three-Dimensional Geometry

1. **Vectors:** Vectors and scalars, magnitude and direction of a vector. Direction cosines/ratios of vectors. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors.
2. **Three-dimensional Geometry:** Direction cosines/ratios of a line joining two points. Cartesian and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes. (iii) a line and a plane. Distance of a point from a plane.

Unit-6: Linear Programming

Linear Programming: Introduction, definition of related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

Unit-7: Mathematical Reasoning

Mathematical Reasoning: Mathematically acceptable statements. Connecting words/ phrases - consolidating the understanding of "if and only if (necessary and sufficient) condition", "implies", "and/or", "implied by", "and", "or", "there exists" and their use through variety of examples related to real life and Mathematics. Validating the statements involving the connecting words, difference between contradiction, converse and contrapositive.

Unit-8: Statistics & Probability

1. **Statistics:** Measures of central tendency, mean, median and mode from ungrouped/grouped data. Measures of dispersion, mean deviation, variance and standard deviation from ungrouped/grouped data. Correlation, regression lines.
2. **Probability:** Random experiments: outcomes, sample spaces (set representation). Events: occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events Axiomatic (set theoretic) probability, Probability of an event, probability of 'not', 'and' & 'or' events. Multiplication theorem on probability. Conditional probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean and variance of stochastic variable. Repeated independent (Bernoulli) trials and Binomial distribution.

Unit-9: Statics

Introduction, basic concepts and basic laws of mechanics, force, resultant of forces acting at a point, parallelogram law of forces, resolved parts of a force, Equilibrium of a particle under three concurrent forces. Triangle law of forces and its converse, Lami's theorem and its converse, Two Parallel forces, like and unlike parallel forces, couple and its moment.

Unit-10: Dynamics

Speed and velocity, average speed, instantaneous speed, acceleration and retardation, resultant of two velocities. Motion of a particle along a line, moving with constant acceleration. Motion under gravity. Laws of motion, Projectile motion.

AGRICULTURE

Unit-1: Agrometeorology, Genetics and Plant Breeding, Biochemistry and Microbiology

Agrometeorology: Elements of Weather-rainfall, temperature, humidity, wind velocity, Sunshine weather forecasting, climate change in relation to crop production.

Genetics & Plant Breeding : (a) Cell and its structure, cell division-mitosis and meiosis and their significance (b) Organisation of the genetic materials in chromosomes, DNA and RNA (c) Mendel's laws of inheritance. Reasons for the success of Mendel in his experiments, Absence of linkage in Mendel's experiments. (d) Quantitative inheritance, continuous and discontinuous variation in plants. (e) Monogenic and polygenic inheritance. (f) Role of Genetics in Plant breeding, self and cross-pollinated crops, methods of breeding in field crops-introduction, selection, hybridization, mutation and polyploidy, tissue and cell culture. (g) Plant Biotechnology-definition and scope in crop production.

Biochemistry: pH and buffers, Classification and nomenclature of carbohydrates; proteins; lipids; vitamins and enzymes.

Microbiology: Microbial cell structure, Micro-organisms- Algae, Bacteria, Fungi, Actinomycetes, Protozoa and Viruses. Role of micro-organisms in respiration, fermentation and organic matter decomposition

Unit-2: Livestock Production

Scope and importance : (a) Importance of livestock in agriculture and industry, White revolution in India. (b) Important breeds Indian and exotic, distribution of cows, buffaloes and poultry in India.

Care and management : (a) Systems of cattle and poultry housing (b) Principles of feeding, feeding practices. (c) Balanced ration-definition and ingredients. (d) Management of calves, bullocks, pregnant and milch animals as well as chicks cackrels and layers, poultry. (e) Signs of sick animals, symptoms of common diseases in cattle and poultry, Rinderpest, black quarter, foot and mouth, mastitis and haemorrhagic septicaemia, coccidiosis, Fowl pox and Ranikhet disease, their prevention and control.

Artificial Insemination : Reproductive organs, collection, dilution and preservation of semen and artificial insemination, **role of artificial insemination in cattle improvement. Livestock Products:** Processing and marketing of milk and Milk products.

Unit-3: Crop Production

Introduction : (a) Targets and achievements in foodgrain production in India since independence and its future projections, sustainable crop production, commercialization of agriculture and its scope in India. (b) Classification of field crops based on their utility-cereals, pulses, oils seeds, fibre, sugar and forage crops.

Soil, Soil fertility, Fertilizers and Manures: (a) Soil, soil pH, Soil texture, soil structure, soil organisms, soil tilth, soil fertility and soil health. (b) Essential plant nutrients, their functions and deficiency symptoms. (c) Soil types of India and their characteristics. (d) Organic manure, common fertilizers including straight, complex, fertilizer mixtures and biofertilizers; integrated nutrient management system.

Irrigation and Drainage: (a) Sources of irrigation (rain, canals, tanks, rivers, wells, tubewells). (b) Scheduling of irrigation based on critical stages of growth, time interval, soil moisture content and weather parameters. (c) Water requirement of crops. (d) Methods of irrigation and drainage. (e) Watershed management

Weed Control : Principles of weed control, methods of weed control (cultural, mechanical, chemical, biological and Integrated weed management).

Crops: Seed bed preparation, seed treatment, time and method of sowing/planting, seed rate; dose, method and time of fertilizer application, irrigation, interculture and weed control; common pests and diseases, caused by bacteria, fungi virus and nematode and their control, integrated pest management, harvesting, threshing, post harvest technology: storage, processing and marketing of major field crops-Rice, wheat, maize, sorghum, pearl millet, groundnut, mustard, pigeon-pea, gram, sugarcane, cotton and berseem.

Unit-4: Horticulture

- (a) Importance of fruits and vegetables in human diet, Crop diversification & processing Industry. (b) Orchard-location and layout, ornamental gardening and kitchen garden. (c) Planting system, training, pruning, intercropping, protection *from frost* and sunburn. (d) Trees, shrubs, climbers, annuals, perennials-definition and examples. Propagation by seed, cutting, budding, layering and grafting. (e) Cultivation practices, processing and marketing of: (i) Fruits - mango, papaya, banana, guava, citrus, grapes. (ii) Vegetables - Radish, carrot, potato, onion, cauliflower, brinjal, tomato, spinach and cabbage. (iii) Flowers - Gladiolus, canna, chrysanthemums, roses and marigold. (f) Principles and methods of fruit and vegetable preservation. (g) Preparation of jellies, jams, ketchup, chips and their packing.

Note: Besides above syllabi, any other question of scientific and educational importance may be asked.

ANNEXURE-II

UNIVERSITY-WISE, SUBJECT-WISE TENTATIVE NUMBER OF SEATS FOR UG ADMISSION FOR THE
ACADEMIC SESSION 2017-2018

Sl. No.	Name of University	Agriculture						Horticulture					
		Gen	SC	ST	Total	PC	UPS	Gen	SC	ST	Total	PC	UPS
1.	AAU, Anand, Gujarat	15	3	2	20	1	1						
2.	AAU, Jorhat, Assam	22	4	2	28	1	1						
3.	AU, Kota							4	1		5		
4.	ANGRAU, Guntur, AP	57	11	6	74	2	2						
5.	BAU, Kanke, Ranchi, Jharkhand	9	2	1	12								
6.	BAU Sabour, Bhagalpur, Bihar	10	2	1	13			3	1		4		
7.	BCKVV, Mohanpur, WB	15	3	2	20	1		4	1	1	6		
8.	BHU, Varanasi, UP	11+(6 OBC)	3	2	22	1	1						
9.	CAU, Imphal, Manipur	8+(4 OBC)	2	1	15			4+(2 OBC)	1	1	8		
10.	CCSHAU, Hisar, Haryana	15	3	1	19	1							
11.	CSAUA&T, Kanpur, UP	14	3	1	18	1							
12.	CSKHPKV, Palampur, HP	12	2	1	15								
13.	Dr BSKKV, Dapoli, MS	15	3	1	19	1		4	1		5		
14.	Dr PDKV, Akola, MS	20	4	2	26	1	1						
15.	Dr. RPCAU, Pusa, Bihar	30+(16 OBC)	9	5	60	2	1						
16.	Dr YSPUH&F, Solan, HP							4	1	1	6		
17.	Dr. YSR Horticultural Univ. Venkataramannagudem, AP							25	4	2	31	1	1
18.	GBPUA&T, Pantnagar, UK	30	6	3	39	1	1						
19.	IGKV, Raipur, CG	37	7	4	48	1	1						
20.	JAU, Junagadh, Gujarat	14	3	1	18	1							
21.	JNKVV, Jabalpur, MP	30	6	3	39	1	1						
22.	KAU, Thrissur, Kerala	25	5	2	32	1	1						
23.	MPKV, Rahuri, MS	59	11	6	76	2	2	4	1		5		
24.	MPUA&T, Udaipur, Raj.	9	2	1	12								
25.	Nagaland University, SASARD, Medziphema	5+(2 OBC)	1	1	9								
26.	OUA&T, Bhubaneswar, Odisha	23	4	2	29	1	1						
27.	PAU, Ludhiana, PB	11	2	1	14								
28.	PJTSAU, Telangana	29	6	3	38	1	1						
29.	PSBVB, Sriniketan (W.B.)	5+(2 OBC)	1	1	9								
30.	RLBCAU, Jhansi	22+(9 OBC)	6	3	40	1	1	10+(5 OBC)	3	2	20	1	
31.	RVSKVV, Gwalior, MP	21	4	2	27	1	1	4	1	1	6		
32.	SKLTSHU, Hyderabad							18	3	2	23	1	1
33.	SKNAU, Jobner, Raj.	14	3	1	18	1							
34.	SKRAU, Bikaner, Raj.	9	2	1	12								
35.	SKUAS&T of K, Srinagar, J&K	11	2	1	14			11	2	1	14		
36.	SVBPUA&T, Meerut, UP	14	3	1	18	1							
37.	UAHS, Simoga	13	2	1	16	1		15	3	1	19	1	
38.	UAS, Bengaluru, Karnataka	57	11	5	73	2	2						
39.	UAS, Raichur, Karnataka	13	2	1	15	1							
40.	UBKVV, Cooch Behar, WB	7	2	1	10								
41.	UHS, Bagalkot, Karnataka							46	9	4	59	2	2
42.	VNMKV, Parbhani, MS	42	8	4	54	2	1						
	Total	752+(39 OBC)	153	77	1021	31	20	156+(7 OBC)	32	16	211	6	4

Sl. No.	Name of University	Forestry						Fisheries					
		Gen	SC	ST	Total	PC	UPS	Gen	SC	ST	Total	PC	UPS
1.	AAU, Jorhat, Assam							3			3		

2.	AU, Kota	3	1		4								
3.	BAU, Kanke, Ranchi, Jharkhand	6	1	1	8								
4.	CAU, Imphal, Manipur							3+(1 OBC)	1		5		
5.	Dr BSKKV, Dapoli, MS							4	1	1	6		
6.	Dr. RPCAU. Pusa, Bihar							12+(7 OBC)	4	2	25	1	1
7.	Dr YSPUH&F, Solan, HP	4	1		5								
8.	GBPUA&T, Pantnagar, UK							5	1		6		
9.	GADVASU, Ludhiana							3			3		
10.	JAU, Junagadh, Gujarat							7	2	1	10	1	1
11.	KAU, Thrissur, Kerala	4	1		5								
12.	KVAFSU, Bidar, MS							5	1		6		
13.	RLBCAU, Jhansi	10+(5 OBC)	3	2	20	1	1						
14.	SKUAS&T of K, Srinagar, J&K	4			4			4			4		
15.	TNFU, Nagapattinam							6	1	1	8		
16.	UAHS, Simoga	7	1	1	9	1							
17.	WBUFS, Kolkata, WB							5	1	1	7		
	Total	38+(5 OBC)	8	4	55	2	1	57+(8 OBC)	12	6	83	2	2

Sl. No.	Name of University	Community Science						Sericulture						
		Gen	SC	ST	Total	PC	UPS	Gen	SC	ST	Total	PC	UPS	
1.	AAU, Jorhat, Assam	5	1	1	7									
2.	CAU, Imphal, Manipur	3+(1 OBC)	1		5									
3.	CCSHAU, Hisar, Haryana	9	2	1	12	1								
4.	Dr. RPCAU. Pusa, Bihar	12+(7 OBC)	4	2	25	1	1							
5.	GBPUA&T, Pantnagar, UK	16	3	2	21	1	1							
6.	MPUA&T, Udaipur, Raj.	5	1		6									
7.	PAU, Ludhiana, PB	7	1	1	9									
8.	PJTSAU, Telangana	5	1	1	7									
9.	SKRAU, Bikaner, Raj.	5	1		6									
10.	SKUAS&T of K, Srinagar, J&K							2			2			
11.	UAS, Bengaluru, Karnataka							3	1	1	5			
12.	VNMKV, Parbhani, MS	5	1		6									
	Total	72+(8 OBC)	16	8	104	3	2	5	1	1	7			

Sl. No.	Name of University	Agricultural Engineering						Dairy Technology					
		Gen	SC	ST	Total	PC	UPS	Gen	SC	ST	Total	PC	UPS
1.	AAU, Anand, Gujarat	5	1		6			8	1	1	10	1	
2.	ANGRAU, Guntur, AP	8	1		9								
3.	BAU Sabour, Bhagalpur, Bihar							3	1		4		
4.	CAU, Imphal, Manipur	4+(2 OBC)	1	1	8								
5.	CCSHAU, Hisar, Haryana	5	1		6								
6.	CKV, Anjora, Durg, MP							7	1	1	9		
7.	Dr BSKKV, Dapoli, MS	8	1	1	10								
8.	Dr. RPCAU. Pusa, Bihar	12+(7 OBC)	4	2	25	2	1						
9.	GBPUA&T, Pantnagar, UK	6	1		7								
10.	GADVASU, Ludhiana, Punjab							3	1		4		
11.	JAU, Junagadh, Gujarat	10	2	1	13	1	1						
12.	JNKVV, Jabalpur, MP	8	2	1	11	1	1						
13.	KAU, Thrissur, Kerala	6	1		7								
14.	KVAFSU, Bidar, MS							4	1		5		
15.	MPKV, Rahuri, MS	7	2	1	10								
16.	MPUA&T, Udaipur, Raj.	6	1	1	8								
17.	NDRI, Karnal, Haryana							20+(11 OBC)	6	3	40	1	1
18.	OUA&T, Bhubaneswar, Odisha	7	2	1	10								
19.	PAU, Ludhiana, PB	9	2	1	12	1	1						
20.	SKUAS&T of K, Srinagar, J&K	3	1		4								
21.	UAS, Bengaluru, Karnataka	8	1	1	10								
22.	UAS, Raichur, Karnataka	8	2	1	11	1							
23.	VNMKV, Parbhani, MS	8	1	1	10								
	Total	128+(9 OBC)	27	13	177	6	4	45+(11 OBC)	11	5	72	2	1

Sl. No.	Name of University	Food Technology						Biotechnology					
		Gen	SC	ST	Total	PC	UPS	Gen	SC	ST	Total	PC	UPS
1.	AAU, Anand, Gujarat	5	1		6								
2.	Dr. RPCAU. Pusa, Bihar							15+(8 OBC)	5	2	30	1	1
3.	TNVASU, Chennai	3			3								
4.	UAS, Bengaluru, Karnataka	8	1	1	10	1		8	1	1	10		
5.	VNMKV, Parbhani, MS	7	2	1	10		1						
	Total	23	4	2	29	1	1	23+(8 OBC)	6	3	40	1	1

NOTE:

- The admission would be granted under accredited programme(s) of an accredited college(s) under an accredited university except for RLBCAU, Jhansi and Dr. RPCAU, Pusa.
- The number of seats given above is indicative only and may change on account of 1. above. The final seat position would be known only at the time of counseling.
- Reservation of seats for OBC would be as per Government of India directives and as per seat positions communicated by the Universities before counseling. Seats reserved for OBC (NCL) will be applicable to Central Government Institutions for Higher Education namely, NDRI Karnal, BHU Varanasi, CAU Imphal, Dr. RPCAU, Pusa, RLBCAU Jhansi, SASARD Medziphema and ViswaBharati (PSB,VB) Shriniketan Universities.
- The seats reserved for PC/UPS categories will be provided to the candidates (horizontally) against the categories, i.e. Gen/SC/ST/OBC to which they belong. If the seat is not available in respective category then it would be drawn from Gen. Category, if available.

SCHEDULED CASTE/ TRIBE CERTIFICATE-FORMAT

Format of certificate to be produced by the candidate belonging to SC / ST in support of reservation claim

CASTE CERTIFICATE

1. This is to certify that Shri/ Smt/ Kumari..... son/daughter of..... of village/town..... in district/Division of State/Union Territory.....belongs to the Caste/Tribe which is recognized as SC/ST under the Constitution (Scheduled Caste) Order, 1950; the Constitution (Scheduled Tribe) Order, 1950; the Constitution (Scheduled Caste) Union Territories Order, 1951; the Constitution (Scheduled Tribes) Union Territories Order, 1951, as amended by the SCs and STs List (Modification) Order, 1950; the Bombay Reorganization Act, 1960; the Punjab Reorganization Act, 1966; the State of HP Act, 1970; the North Eastern Areas (Reorganization) Act, 1971 and the SCs and STs Order (Amendment) Act, 1976; the Constitution (Jammu & Kashmir) SC Order, 1956; the Constitution (Andaman & Nicobar islands) SC Order 1959 as amended by SCs and STs Order (Amendment) Act, 1976; the Constitution (Dadra and Nagar Haveli) SCs Order, 1962; the Constitution (Dadra and Nagar Haveli) STs Order, 1962; the Constitution (Pondicherry) SCs Order, 1964; the Constitution Scheduled Tribes (Uttar Pradesh) Order, 1967; the Constitution (Goa, Daman & Diu) SCs Order, 1968; the Constitution (Nagaland) STs Order, 1970; the Constitution (Sikkim) SCs Order, 1968 or any such Govt. of India directive applicable at the time of counseling.
2. Applicable in the case of SC/ST persons who have migrated from State/Union Territory Administration to another State/Union Territory. The certificate is issued on the basis of the SC/ST certificate to Shri/Smt. father/mother of Shri/Smt/Kumari..... of village/town..... in district/division..... of the State/Union Territory who belongs to the Scheduled Caste/Scheduled Tribe in the State/Union Territory issued by the (name of the prescribed authority) vide their No dated.....
3. Shri/Smt/Kumari.....and/or his/her family ordinarily reside(s) in village/town..... of district.....of State/Union Territory of

Signature

Designation (with seal of office)

Place (State/Union Territory)

Date

*Please delete the words which are not applicable. Please quote the specific Presidential Order.

NOTE: The term "Ordinarily reside(s)" used here will have the same meaning as in Section 20 of the Representation of the People's Act, 1950.

Authorities empowered to issue SC/ST certificates

1. District Magistrate/Additional District Magistrate/Deputy Commissioner/Additional Deputy Commissioner/ Deputy Collector/First Class Stipendiary Magistrate/City Magistrate/Sub-divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner not below the rank of First Class Stipendiary Magistrate.
2. Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate
3. Revenue Officers, not below the rank of Tehsildar
4. Sub-divisional Officer of the area where the candidate and/or his family normally resides
5. Administrator/Secretary to Administrator/Development Officer (Lakshadweep Islands)

CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES-NON CREAMY LAYER (OBC-NCL) APPLYING FOR ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER THE GOVERNMENT OF INDIA

This is to certify that Shri/Smt./Kum.Son/Daughter of Shri/Smt. of Village/Town.....District/Divisionin the State belongs to theCommunity which is recognized as a backward class under:

- (i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No186 dated 13/09/93.
- (ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- (iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- (iv) Resolution No. 12011/96/94-BCC dated 9/03/96.
- (v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- (vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- (vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- (viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- (ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- (x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- (xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- (xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- (xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- (xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- (xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006.
- (xvi) Resolution No. 12011/14/2004-BCC dated 12/03/ 2007.
- (xvii) Resolution No.12011/16/2007-BCC dated 12/10/2007; Resolution No.12018/6/2005-BCC dated 30/07/2010; Resolution No. 12015/2/2007-BCC dated 18/08/2010; ResolutionNo. 12015/15/2008-BCC dated 16/06/2011; ResolutionNo.12015/13/2010-BC-II dated 08/12/2011; ResolutionNo.12015/5/2011-BC-II dated 17/02/2014; ResolutionNo. 20012/129/2009-BC-II dated 04/03/2014.

Shri/Smt./Kum.and/or his family ordinarily reside(s) in theDistrict/Division ofState. This is also to certify that he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/1/2013 Estt.(Res.) dated 27th May, 2013.

Dated:

District Magistrate/
Deputy Commissioner, etc.
Seal

NOTE:

- (a) The term 'Ordinarily' used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

- (b) The authorities competent to issue Caste Certificates are indicated below:
- (i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner/ Deputy Collector / Ist Class Stipendiary Magistrate / Sub-Divisional magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner (not below the rank of Ist Class Stipendiary Magistrate).
- (ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
- (iii) Revenue Officer not below the rank of Tehsildar' and
- (iv) Sub-Divisional Officer of the area where the candidate and / or his family resides.

Declaration/Undertaking - For OBC Candidates only

I,son/daughter of Shri.....resident of village/town/city..... districtState hereby declare that I belong to the..... community which is recognized as a backward class by the Government of India for the purpose of reservation as per orders contained in Department of Personnel and Training Office Memorandum No.36012/22/93-Estt.(SCT), dated 8/9/1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the above referred Office Memorandum, dated 8/9/1993, which is modified vide Department of Personnel and Training Office Memorandum No. 36033/1/2013 Estt.(Res.) dated 27th May, 2013.

Signature of the Candidate

Place:

Date:

- **Declaration/undertaking not signed by Candidate will be rejected.**
- **False declaration will render the applicant liable for termination of registration at any time**

Creamy Layer Definition

OBC Creamy layer is defined comprehensively at <http://ncbc.nic.in/html/creamyayer.html>

All candidates for the OBC reserved seats should make sure that they do not satisfy any of the creamy layer criteria as listed in the website. Some general exclusion for quick reference (no way comprehensive) are as follows.

1. Any of the parents holds a constitutional position in Govt. of India.
2. Any one of the parents is a Class I officer.
3. Both the parents are Class II officers.
4. Any one of the parents is employed in an equivalent rank to Class I officer or both parents equivalent to Class II officer in a public sector, insurance companies, banks, universities or in other organizations.
5. Land holdings on irrigated land is 85% or more of the statutory ceiling area.
6. Parents income is more than ` 6 Lakhs per year or Government of India directives applicable at the time of counseling.

EXAMINATION CITY CENTRES AND NODAL OFFICERS' CONTACT ADDRESSES

Examination City Centre (Code No.)	Name of Examination City Centre	Contact Phone No. of Nodal Officer	Address of Nodal Officers
01	Anand	02692-271602	Director & Project Co-ordinator, ICAR-Directorate of Medicinal & Aromatic Plants Research, Boriavi-387310, Anand, Gujarat
02	Bengaluru	080-28466353	Director, ICAR-Indian Institute of Horticultural Research, Hessaraghatta Lake, Bangalore-560 089, Karnataka
04	Bhubaneswar	0674-2300060	Director, ICAR-Water Technology Centre for Eastern Region, Chandrasekharapur, Bhubaneswar-751 023, Odisha.
06	Bikaner	0151-2250147	Director, ICAR-Central Institute for Arid Horticulture, 10th Mile Stone, SriGanganagar Highway, Beechwal Industrial, Bikaner-334 006, Rajasthan
07	Chennai	044-24610565, 24618817	Director, ICAR-Central Institute of Brackish Water Aquaculture, (CIBA), No. 75, Santhome High Road, R.A. Puram, Chennai-600 028, TN
08	Cochin	0484-2394867	Director, Central Marine Fisheries Research Institute, Ernakulam North, Cochin-682 018, Kerala
09	Coimbatore	0422-2472986	Director, ICAR-Sugarcane Breeding Institute, Coimbatore-641 007, TN
10	Delhi	011-25843382 09818756899	Dr. V.K. Branwal, Professor, Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, Pusa, New Delhi-110 012
11	Dharwad	0836-2792180	Dean (Agri.), University of Agricultural Sciences, Dharwad-580005, Karnataka.
12	Gangtok	03592-231030, 232125	Joint Director, ICAR- National Organic Farming Research Institute, (Formerly- ICAR Research Complex to NEH Region, Sikkim Centre), Tadong, Gangtok-737 102, Sikkim
13	Guwahati	0361-2337700	Dean, Faculty of Veterinary Sciences, Assam Agricultural University, P.O. Box – 12, Khanapara, Guwahati - 781 022, Assam
14	Hisar	01662-275787	Director, ICAR-National Research Centre on Equines, Sirsa Road, Hisar-125 001, Haryana
15	Hyderabad	040 -24581222	Admn. Officer , ICAR-National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500 030, Telangana
16	Imphal	0385-2410644	Central Agricultural University, P.B. No.-23, Lamphel, P.O. Imphal-795004, Manipur
17	Jaipur	0141-2550229	Director, ICAR-Rajasthan Agricultural Research Institute, Durgapura, Jaipur-302018, Rajasthan
18	Indore	0731-2476188	Director, ICAR-National Research Centre for Soybean, Khandwa Road, Indore-452 017, Madhya Pradesh
19	Jabalpur	0761-2353138, 2353001	Director, ICAR-National Research Centre for Weed Science, Adhartal, Jabalpur-482 004
20	Jammu	0191-2262012	Registrar, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Chatha, Jammu-180009 (J&K)
21	Karnal	0184-2259002, 2252800, 2259004	Acting Director, ICAR-NDRI, Karnal-132001, Haryana
22	Kolkata	033- 24212115/16/17	Director, ICAR- NIRJAFT, 12 Regent Park, Kolkata-700 040, West Bengal
23	Kota	0744-2462642	Pr. Scientist & Head, ICAR-Central Soil & Water Conservation Research and Training Institute Research Centre, Dadwara, Kota-324 002, Rajasthan
24	Lucknow	0522-2480726	Director, ICAR-Indian Institute of Sugarcane Research, Lucknow-226 002, UP
25	Ludhiana	0161-2313163, 2313101	Director, ICAR-Central Institute of Post Harvest Engg. & Technology, P.O. PAU Campus, Ludhiana-141 004, Punjab

26	Mannuthy	0487-2370344, 2370451	Dean, College of Veterinary Sciences, KAU, Mannuthy, Distt. Thrissur-680651, Kerala
27	Mohanpur	033-25878338 09433984631	Dean, Faculty of Agriculture, BCKV, Mohanpur, P.O. KrishiVishwaVidyalaya, Distt. Nadia-741252, WB
29	Nagpur	07103-275536	Director, ICAR-Central Institute for Cotton Research, Nagpur-440 010, Maharashtra
30	Palampur	01894-230408	Dean, PGS, CSKHPKV, Palampur-176062, Himachal Pradesh
31	Pantnagar	05944-233407	Co-ordinator Admissions, GBPUA&T, Pantnagar, Distt. Udham Singh Nagar-263145, Uttarakhand
32	Patna	0612- 2223962	Director, ICAR Research Complex for Eastern Region, ICAR Parisar, P.O. Bihar Veterinary College, Patna- 800 014, Bihar
33	Port Blair	03192-250436	Director, Central Island Agricultural Research Institute, Post Box No. 181, Port Blair – 744 101 (Andaman & Nicobar Island)
34	Pune	020-25538489	Associate Dean, College of Agriculture, Shivajinagar, Pune-411005, (Maharashtra)
35	Pusa (Bihar)	06274-240239	Registrar, Dr. RajendraPrasad Central Agricultural University, Pusa (Samastipur)-848125, Bihar
36	Raipur	0771-2970217	Dean, College of Agriculture, IGKV, Raipur-492012, Chhattisgarh
37	Ranchi	0651-2261156	Director, ICAR-Indian Institute of Natural Resins & Gums, Namkum, Ranchi-834 010, Jharkhand
38	Shillong	0364-2570649	Principal Scientist & Head, ICAR Research Complex for NEH Region, Umroi Road, Umiam-793103. Meghalaya
39	Solan	01792-252344	Dean, Dr. YSPUH&F, Nauni, Solan-173230, Himachal Pradesh
40	Srinagar (Kashmir)	0194-2305116	Director, ICAR-Central Institute of Temperate Horticulture, Old Air Field, Rangreth, Srinagar-190 007, J&K
41	Tirupati	0877-2249787	Dean, Faculty of Veterinary Science, Sri Venkateswara Veterinary University, Dr. Y.S.R. Bhavan, Tirupati-517 502, AP
42	Thiruvananthapuram	0471-2598551/52/53/54	Director, ICAR-Central Tuber Crops Research Institute, Sreekariyam, Thiruvananthapuram – 695 017, Kerala
43	Udaipur	0294-2418976, 02429710	Dean, Rajasthan College of Agriculture, Guru Govind Singh Marg, Udaipur-313001, Rajasthan
44	Varanasi	0542-2635247	Director, ICAR-Indian Institute of Vegetable Research, P.B. No. – 1, P.O. Jakhini, Shahanshapur, Varanasi – 221 305, U.P.
45	Mathura	0565-2471706	Controller of Examination, UP PanditDeenDayalUpadhayaPashuChikitsaVigyanVishwaVidyalayaEvam Go AnusandhanSansthan, Mathura-281001, UP
46	Bareilly	0581-2301757 09457257425	Head, Division of Biological Standardization, ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly-243122, UP
47	Jodhpur	0291-2786584	Director, ICAR-Central Arid Zone Research Institute, Jodhpur-342003, Rajasthan
48	Kozhikode	0495-2730294 0495-2731187	Principal Scientist, ICAR-Indian Institute of Spices Research, P.B. No. 1701, Marikunnu (P.O.) Kozhikode-673012, Kerala
49	Parbhani	02452-233007	Associate Dean & Principal, College of Agriculture, VNMKV, Parbhani-431402, Maharashtra
50	Jhalawar	07432-241155 07432-242155	Dean, College of Horticulture & Forestry, P.O. Jhalarpattan city, Jhalawar-326 023, Rajasthan
51	Ajmer	0145-2684400 0145-2684413	Director, ICAR National Research Centre on Seed Spices, Tabiji, Ajmer-305206, Rajasthan
52	Bhagalpur	0641-2452614	Registrar, Bihar Agricultural University, Sabour, Bhagalpur-813210, Bihar

NOTE:

1. The exact name/location of Examination venue in the Examination city centre will be notified later along with the Roll Number in accordance with the Application Number and Date of Birth and shall be available on ICAR website www.icar.org.in last week of May, 2017 or it can be seen with the above Nodal Officers two days before the date of examination.
2. **ICAR may change/shift the examination city center opted by the candidate to another nearby centre, if number of candidates are more at any city center.**

DOMICILE STATE CODES

Sl. No.	Name of the State/UT	Code Number
1.	Andaman & Nicobar Islands (U.T.)	01
2.	Andhra Pradesh	02
3.	Arunachal Pradesh	03
4.	Assam	04
5.	Bihar	05
6.	Chandigarh (U.T.)	06
7.	Chhattisgarh	07
8.	Dadra & Nagar Haveli (U.T.)	08
9.	Daman & Diu (U.T.)	09
10.	Delhi (U.T.)	10
11.	Goa	11
12.	Gujarat	12
13.	Haryana	13
14.	Himachal Pradesh	14
15.	Jammu & Kashmir	15
16.	Jharkhand	16
17.	Karnataka	17
18.	Kerala	18
19.	Lakshadweep (U.T.)	19
20.	Madhya Pradesh	20
21.	Maharashtra	21
22.	Manipur	22
23.	Meghalaya	23
24.	Mizoram	24
25.	Nagaland	25
26.	Odisha	26
27.	Puducherry (U.T.)	27
28.	Punjab	28
29.	Rajasthan	29
30.	Sikkim	30
31.	Tamil Nadu	31
32.	Tripura	32
33.	Uttarakhand	33
34.	Uttar Pradesh	34
35.	West Bengal	35
36.	Telangana	36

NUMERIC CODES FOR CLASS XII SCHOOL EDUCATION BOARDS/COUNCIL

S.No.	Education Boards/Council	Code
1.	Andhra Pradesh Board of Intermediate Education	01
2.	Assam Higher Secondary Education Council	02
3.	Bihar Intermediate Education Council	03
4.	Central Board of Secondary Education	04
5.	ChhattisgarhMadhyamikShikshaMandal	05
6.	Council for the Indian School Certificate Examinations	06
7.	Goa Board of Secondary and Higher Secondary Education	07
8.	Gujarat Secondary Education Board	08
9.	Haryana Board of School Education	09
10.	H.P. Board of School Education	10
11.	J&K State Board of School Education	11
12.	Jharkhand Academic Council	12
13.	Karnataka Board of School Education	13
14.	Kerala Board of Public Examinations	14
15.	Madhya Pradesh Board of Secondary Education	15
16.	Maharashtra State Board of Secondary and Higher Secondary Education	16
17.	Manipur Council of Higher Secondary Education	17
18.	Meghalaya Board of Secondary Education	18
19.	Mizoram Board of School Education	19
20.	Nagaland Board of School Education	20
21.	Orissa Council of Higher Secondary Education	21
22.	Punjab School Education Board	22
23.	Rajasthan Board of Secondary Education	23
24.	Tamil Nadu Board of Higher Secondary Education	24
25.	Tripura Board of Secondary Education	25
26.	U.P. Board of High School & Intermediate Education	26
27.	Uttarakhand Board of High School & Intermediate Education	27
28.	West Bengal Council of Higher Secondary Education	28
29.	National Open School	29
30.	Other Boards (Not specified above)	30

Note: In case any particular Board is not recognized or has been derecognized by some University, ICAR will not be responsible for admitting students of that Board in the Universities not willing to admit such candidates.

ANNEXURE-VIII

**UNIVERSITIES (TENTATIVE) FOR ADMISSION IN BACHELOR DEGREE PROGRAMMES IN
AGRICULTURE AND ALLIED SCIENCE SUBJECTS THROUGH
AIEEA-UG-2017, ADDRESSES AND CONTACT NUMBERS**

Cod eNo.	Name & Address of University	Tel. No. of Registrar with STD code	Fax No. of Registrar
1.	Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad-500 030 (A. P.)	040-24015 122	040- 24018653
2.	Assam Agricultural University, Jorhat-785 013 (Assam)	0376-2340 008	0376-2340 001
3.	Bihar Agricultural University, Sabour, Distt. Bhagalpur-813210. Bihar.	0641-2452614	0641- 2452604
4.	Ch. Sarwan Kumar Himachal Pradesh KrishiVishvaVidyalaya, Palampur-176 062 (H. P.)	01894-230 383	01894-230 511
5.	C.S. Azad University of Agri. & Technology, Kanpur- 208 002 (U. P.)	0512-2533 704	0512-2533 808
6.	Ch. Charan Singh Haryana Agricultural University, Hisar-125 004 (Haryana)	01662-234 613	01662- 284304
7.	Chhattisgarh KamdhenuVishwavidyalaya, Anjora, Durg-491 001 (C.G.)	0771-2103471	0771- 4223614
8.	Dr. Yashwant Singh Parmar Univ. of Horticulture & Forestry, Solan, Nauni-173 230 (H. P.)	01792-252 219	01792-252 009
9.	Dr. YSR Horticultural University, Venkataramannagudem, West Godavari-534 101 (A.P.)	07382-633678	07382- 633678
10.	G.B. Pant University of Agri. & Technology, Pantnagar, Distt. Udham Singh Nagar-263 145 (Uttarakhand)	05944-233 640	05944- 233640
11.	Guru AngadDev Veterinary & Animal Sciences University, Ludhiana-141 004 (Punjab)	0161-2553 343	0161- 2553342
12.	Indira Gandhi KrishiVishwavidyalaya, Krishak Nagar, Raipur-492 012 (Chhattisgarh)	0771-2442 537	0771- 2442302 0771- 2443939
13.	Jawaharlal Nehru KrishiViswaVidyalaya, Adhartal, Jabalpur-482 004 (M. P.)	0761-2681 778	0761-2681 778
14.	Junagadh Agricultural University, Junagadh-362 001 (Gujarat)	0285-2672 346	0285-2672 482
15.	Karnataka Veterinary Animal & Fisheries Sciences University, Bidar. (Karnataka)	08482-245 241	08482-245 360

Cod eNo.	Name & Address of University	Tel. No. of Registrar with STD code	Fax No. of Registrar
16.	Kerala Agricultural University, Vellanikkara, Thrissur-680 656 (Kerala)	0487-2438011	0487-2371619
17.	MaharanaPratap University of Agriculture & Technology, Udaipur-313 001 (Rajasthan)	0294-2471302	0294-2471302
18.	ICAR-National Dairy Research Institute, Karnal-132 001 (Haryana)	0184-2272392	0184-2272392
19.	Orissa University of Agriculture & Technology, Bhubaneshwar-751 003 (Odisha)	0674-2397424	0674-2397424
20.	Punjab Agricultural University, Ludhiana-141 004 (Punjab)	0161-2400 955	0161-2400 955
21.	Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur-848 125 (Bihar)	06274-240239	06274-240277
22.	RajmataVijayarajeScindiaKrishiVishwaVidyalaya, Race Course Road, Gwalior-474 002 (M.P.)	0751-2467066	0751-2467066
23.	Sher-E-Kashmir Univ. of Agril. Sciences & Technology of Kashmir, Shalimar Campus, Srinagar-191 121 (J&K)	0194-2461271	0194-2461271
24.	Swami Keshwanand Rajasthan Agricultural University, Bikaner-334 006 (Rajasthan)	0151-2250025	0151-2250025
25.	University of Agricultural Sciences, GKVK, Bangalore-560 065 (Karnataka)	080-23330 984	080-23330277
26.	University of Agricultural Sciences, Raichur-584102. (Karnataka)	08532-220157	08532-220360
27.	University of Horticultural Sciences, Sector No. 60, Navanagar, Bagalkot-587102. (Karnataka).	08354-201354	08354-235152
28.	Uttar BangaKrishiViswavidyalaya, PO Pundibari, Dist. Cooch Behar-736 165 (West Bengal)	03582-270 588	03582-270 143
29.	Central Agricultural University, PO Box 23, Imphal-795 004 (Manipur)	0385-2415196	0385-2412944

Cod eNo.	Name & Address of University	Tel. No. of Registrar with STD code	Fax No. of Registrar
30.	Banaras Hindu University (Institute of Agricultural Sciences)Varanasi-221 005 (UP)	0542-2368 558	0542-2369425
31.	Nagaland University, School of Agricultural Sciences &Rural Development(SASARD), Medziphema-797 106 (Nagaland)	03862-247255	03862-274113
32.	VisvaBharati, (PalliSikshaBhavana), P.O. Srineketan-731 236, Birbhum (W.B.)	03463-261531 03463-264779	03463-261156
33.	Rani Lakshmi Bai Central Agricultural University, Near Pahuj Dam, Gwalior Road, Jhansi - 284 003 (UP)	0510-2730666	0510-2730833
34.	Prof. Jayashankar Telangana State Agricultural University, Hyderabad-500030 (Telangana)	040-24015226	040-24016688
35.	Sri KondaLaxman Telangana State Horticultural UniversityRajendranagar, Hyderabad - 500030, (Telangana)	040-2401 4301	040-2401 4312
36.	Agriculture University, Kota Borkhera, Baran Road, Post Box Number 20 Kota : 324001, Rajasthan	0744-2321205	0744-2321205
37.	Anand Agricultural University, Anand-388110 (Gujarat)	02692-261310	02692-261310
38.	Bidhan Chandra KrishiViswavidyalaya, Po.-KrishiViswavidyalaya, Mohanpur, Distt.- Nadia, (West Bengal) -741252	033-2587-8163/ 033-25870523	03473-222277
39.	Birsa Agricultural University, Kanke, Ranchi-834 006 (Jharkhand)	0651-2450 832	0651-2450 832
40.	Dr. BalasahebSawantKonkanKrishiVidyapeeth, Dapoli, Distt. Ratnagiri-415 712 (Maharashtra)	02358-282 065	02358-283065
41.	Dr. PanjabraoDeshmukhKrishiVidyapeeth, Krushinagar, Akola-444 104 (Maharashtra)	0724-2258 372	0724-2258 372
42.	Mahatma PhuleKrishiVidyapeeth, Rahuri-413 722 (Maharashtra)	02426-243 216	02426-243 216
43.	SardarVallabhBhai Patel Univ. of Agriculture & Technology, Modipuram, Meerut-250 110 (U. P.)	0121-2888502	0121-2888525
44.	SKN, Agriculture University, Jobner-303329, Distt. Jaipur (Rajasthan)	01425-254022	01425-254022
45.	Tamil Nadu Fisheries University, First Line Beach Road Nagapattinam – 611 001 (Tamil Nadu)	04365-241444	04365–240087
46.	Tamil Nadu Veterinary & Animal Sciences University, Chennai-600 051 (Tamil Nadu)	044-25551 584	044-25551585
47.	University of Agricultural and Horticultural Sciences, Shimoga (Karnataka)	08182-270705	08182-2777295 08182-279263
48.	VasandraoNaikMarathwadaKrishiVidyapeeth, Parbhani-431 402 (Maharashtra)	02452-229 755	02452-229 755
49.	West Bengal University of Animal & Fishery Sciences, 68 KB Sarani, Kolkata-700 037 (West Bengal)	033-25563123	033-270249

50.	Maharashtra Animal & Fishery Sciences University Futala Lake Road, Nagpur - 440 001	0712-2511784 0712-2511785 0712-2511787	0712-2511273
51.	Banda University of Agriculture and Technology, Banda- 210001, Uttar Pradesh	05192-232312	5192-232305
52.	Tamil Nadu Agricultural University, Coimbatore-641 003 (Tamil Nadu)	0422-6611201	0422-2431821
53.	Sher-E-Kashmir University of Agril. Sciences & Technology, Railway Road, Jammu-180 012 (J&K)	0191-2262012	0191-2262012
54.	Navsari Agricultural University, Eru Char Rasta, Vijalpore, Navsari-396 450 (Gujarat)	02637-282 823	02637-283794
55.	Kerala Veterinary and Animal Sciences University, Pookode, Wayanad, Kerala	04936-209209	04936-256382

INSTRUCTIONS FOR SUBMITTING COMPUTER GENERATED HARD COPY OF ONLINE APPLICATION FORM

Candidates are advised to read the following instructions carefully while submitting the hard copy of the online Application:

- (i) ICAR will not be held responsible for any incorrect information filled in by the applicant in the online application form. Candidates are advised to keep a photocopy of the hard copy of computer generated confirmation page of the application, the Post Office Speed-Post/Registry receipt of posting the hard copy of computer generated confirmation page and fee payment proof for future correspondence, if any.
- (ii) While filling the online form, candidate should upload soft copy of his /her clear, recent, colour photograph with name and date, thumb impression (his left/ her right hand) and signature and send its computer generated hard copy, after completing declaration in his/her own handwriting, to COE (Agril. Edn.) by post at the given address.
- (iii) The candidates must ensure that they satisfy the eligibility requirements for appearing in the examination/admission in *toto* as contained at item 3.0 in the Information Bulletin.
- (iv) It should carefully be noted by the candidate who has been punished at any time in his/her earlier academic career for having taken part in the activities of indiscipline or use of unfair means in any of the examination that he/she shall not be eligible for admission. In case it is detected at any stage that the candidate has secured admission by concealing such facts or through oversight of the admitting university, the admission will be liable to be cancelled with immediate effect.
- (v) ***In the event of rejection of the application due to late receipt, non-payment/underpayment of the application fee or any other reason(s) specified elsewhere in the Information Bulletin, the application fee paid shall not be refunded.***
- (vi) The hard copy of the computer generated confirmation page of online application, complete in all respects, packed and sealed in the envelope and superscribed as under should be submitted by Speed/Registered-post or may be deposited personally on any working day between 10.00 A.M. to 5.00 P.M. by the specified last date of receiving of application:

AIEEA-UG-2017

REGISTERED/SPEED- POST

APPLICATION FOR 22nd ALL INDIA ENTRANCE EXAMINATION FOR ADMISSION (AIEEA-UG-2017) DURING ACADEMIC SESSION 2017-18.

**ICAR
KAB - II**

To
 THE CONTROLLER OF EXAMINATIONS (AGRIL. EDN.)
 EXAMINATION CELL
 AGRICULTURAL EDUCATION DIVISION
 INDIAN COUNCIL OF AGRICULTURAL RESEARCH, ROOM NO. 216
 KRISHIANUSANDHAN BHAVAN-II, PUSA
 NEW DELHI-110012

From:.....

e-ADMIT CARD

Application No.

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH
KrishiAnusandhanBhavan-II, Pusa, New Delhi-110012**

All India Entrance Examination to pursue Bachelor Degree Programme in Agriculture & Allied Sciences [AIEEA-UG-2017]

Roll No:

Recent
passport size
colour
photograph
same as
uploaded on
online
Application
Form

Aadhaar No. or 28 digit Aadhaar Enrolment ID No. or in case of candidates from J&K, Assam & Meghalaya, the passport / ration card / bank passbook or any other valid Govt. Identity card No. as applicable:

Name and Address of Candidate

.....
.....
.....

Date of Exam: 10.06.2017 (Saturday)

Duration: 10:00 AM to 12:30 PM (2¹/₂ hrs)

Reporting Time: 09.30 A.M.

No Entry After: 10.30 A.M.

Cannot leave before 12:30 P.M.

Name of Exam City Centre:

Code of Exam City Centre:

Venue :

Thumb Impression :

After downloading e-Admit Card, the candidate should put his (left)/her(right) thumb impression in this box

Signature of the Candidate :

Controller of Exams (Agril. Edn)

See reverse for important instructions

INSTRUCTIONS FOR CANDIDATES

1. This e-Admit Card allows admission of candidate in the examination hall subject to the condition that if ineligibility is detected at any stage, the candidature will be cancelled.
2. Entry to the Examination Hall without both e-Admit Card and Aadhaar card or 28 digit Aadhaar Enrolment ID proof or in case of candidates from J&K, Assam & Meghalaya, passport /ration card /bank passbook or any other valid Govt. Identity card, as applicable, is not permitted.
3. Particulars in the e-Admit Card must be checked carefully. Errors, if any, must be reported immediately to the Examination Cell, ICAR/concerned Nodal Officer.
4. No paper other than indicated above at Sl. No. 2 should be brought inside the examination hall. Cell phones, calculators, tablets or any other electronic device, etc. and any pre-written material are strictly prohibited in the Examination hall.
5. Candidate will not be permitted entry 30 minutes after the actual time of start of examination. No extra time will be given to candidates entering after the actual time of start of examination.
6. Bring a clear colour self-attested photograph (same as uploaded at the time of filling-up of online Application) to be handed over to the invigilator in case it is demanded. ICAR reserves all rights to verify the identity and genuineness of each candidate by any means that is considered appropriate.
7. Bring at least one black/blue ball-point pen for writing/marking responses.
8. Do not attempt to give/obtain assistance of any kind. Any improper conduct of the candidate in the examination hall will entail forfeiture of candidature besides other legal action desirable.
9. Impersonation or attempt to impersonate would invite forfeiture of the candidature.
10. Any attempt to remove pages from the Question Booklet or noting down questions will result in forfeiture of candidature.
11. Do not put stray marks on the OMR answer sheet. Change of OMR Answer sheet is not permitted. Please ensure that you do not spoil the answer sheet.
12. To answer questions, darken the corresponding circle/bubble which is most appropriate in your opinion.
13. For each correct response, 4 marks will be awarded. For each incorrect response, 1 mark will be deducted. No marks will be deducted for questions not attempted. More than one answer will be taken as incorrect response and negatively marked.
14. e-Admit Card and hardcopy of online application must be preserved for bringing at the time of admission or any further identity verification by the admitting University.
15. Failure to comply with these instructions will entail expulsion/cancellation of candidature and may invite further legal action.
16. The city of examination as filled by the candidate in the Online application shall not be changed. ICAR may change/shift the examination city center opted by the candidate to another nearby centre, if number of candidates are more at any city center.

SCHEDULE FOR ONLINE COUNSELING OF QUALIFIED CANDIDATES FOR ADMISSION TO BACHELOR DEGREE COURSES IN AGRICULTURE AND ALLIED SUBJECTS OTHER THAN VETERINARY SCIENCE - AIEEA-UG-2017

The time schedule for online counseling alongwith related instructions will be known after the declaration of result. Qualified candidates are advised to remain in regular touch with ICAR website www.icar.org.in in this regard.

1. For online counseling, candidates will be charged one time Registration fee of Rs.2000/- by the ICAR which will be non-refundable to the candidates. For those candidates who will finally take admissions in the Universities, the concerned university shall send a list of admitted candidates with a request to ICAR to transfer this money to the University for the adjustment against the admission fee to be paid by the admitted candidates. The balance amount of fee as prescribed by the university would have to be deposited by the candidate to the University on the date of admission. Failure to deposit the requisite admission fee and certificates to the allocated University will forfeit his/her claim for admission.
2. Reserved category candidates must produce the required cast certificates in original and in the prescribed format at the time of admission.
3. Any temporary or permanent withdrawal of original certificates will be governed as per the concerned University rules. ICAR has no objection if certificates are returned to the candidate after verification.
4. In case of OBC candidates availing the benefits of reservation in Central Educational Institutions/Universities, the candidate will also be required to produce a Central OBC certificate (**Annexure-IV**) issued by the competent authority and satisfy following criteria:
 - Sub-caste must tally with the Central list of OBC.
 - Candidate should not belong to creamy layer.

The proof of non-creamy layer shall be verified by the University authority before their admission (Original certificate has to be produced). Therefore, candidates while going for admission in the allotted university need to carry with them all the required documents(please also see 9.1.iii) in original as well as photocopies thereof along with prescribed fee etc.

5. No claim or compensation for problems (if any) encountered or cost incurred in counseling/admission will be entertained by the ICAR/ Universities. Before registering for online counseling, candidate must ensure that all the eligibility conditions laid down in the Information Bulletin are fulfilled including the age limit, final result in hand, percentage of marks, relevant certificates etc. ICAR/ University will not be held responsible for denial of admission to non-eligible candidates.
6. Candidates are advised to remain in touch with ICAR website for any change in schedule/notices/circulars etc. In case the letters are issued and not received by the candidates due to postal delay or any other reasons in time, ICAR shall not be held responsible for it. For counseling, the qualified candidates should download the counseling letter from ICAR website.

PLEASE NOTE

The seat positions notified in this Information Bulletin are likely to change on account of accreditation and final position will be known at the time of counselling. The candidates are advised to remain in constant touch with the ICAR website (www.icar.org.in) for any change in counseling schedule/notices/circulars etc., related to this examination.