

Ph.D. ENTRANCE EXAMINATIONS–2024

For Admission to Doctorate Degree Programme in Agriculture and Allied Sciences in State Agriculture Universities of Rajasthan



GENERAL GUIDELINES

For Admission to

- Ph.D. Agriculture
- Ph.D. Horticulture
- Ph.D. Forestry
- Ph.D. Home Science/Community Science



Conducted by

AGRICULTURE UNIVERSITY JODHPUR
Jodhpur-342304, (Rajasthan)

ऑनलाइन आवेदन फॉर्म जमा करने की अन्तिम तिथि : 15 अप्रैल 2024

प्रवेश परीक्षा की तिथि : 02 जून 2024

For any kind of disputes/litigation, the jurisdiction relating to the admission process through JET/Pre-P.G./Ph.D. Entrance Examinations-2024 will be of Hon'ble Rajasthan High Court, Jodhpur.

INDEX

S. No.	Activities	Page No.
1	Online filling of application form	1
2	Eligibility criteria for admission	1
	2.1 Educational qualification	1-2
	2.2 Age Criteria	2
	2.3 Domicile criteria/Residential requirement	2-3
3	Reservation of seats	3
	3.1 Reservation for wards of Defence Personnel	3-4
	3.2 Eligibility & Instructions for Specially Abled Person (SAP) & TSP area candidates	4
4	Instructions for filling online application form	4-6
5	Admit card	6
6	Examinations scheme	6-7
7	Entrance examinations schedule	7
8	Instructions for written examinations	7
	8.1 Dress code	8
	8.2 Discipline and unfair means	8
	8.3 Question booklet/OMR Sheets	8-9
	8.4 Qualifying Marks	9
9	Eligibility for online option form	9
10	Filling the online option form for Main Online Counselling	9-10
11	Seat allotment	10
	11.1 Main Online Counselling	10
	11.2 Acceptance of Allotted seat and Upward Assessment	10-11
12	Reporting in the Institution	11
13	Filling the Option form for Final Online Counselling	11-12
Annex.I	Certificate for Defence wards/widows	13-15
Annex.II	Broad Outlines of Syllabus for Pre-Ph.D. Entrance Examinations-2024	16-25
Annex.III	Schedule of admission process through Pre-Ph.D. Entrance Examinations-2024	26

GENERAL GUIDELINES Ph.D. ENTRANCE EXAMINATIONS-2024

The Ph.D. Entrance Examinations is conducted for admission to different Doctorate Degree Programme in Agriculture and Allied Science offered by State Agriculture Universities of Rajasthan (SKRAU, Bikaner; MPUAT, Udaipur; SKNAU, Jobner; AU, Jodhpur and AU, Kota). Candidates are advised to read all the instructions of the Ph.D. guidelines before filling online application form.

1.0 ONLINE FILLING OF APPLICATION FORM

- Only online application form will be accepted through the official website of JET-2024 on <https://www.jetauj2024.com>
- The online application form can be filled as per schedule dates (**ANNEXURE-III**) of admission process and instructions given at point no. 4.0.
- There will be separate question paper for each subject and candidate has to select the subject of his/her eligibility. M.Sc. in respective subject is essential.
- The candidate can edit the application form before submission of the application form fees till prescribed date, except personal information viz., name, mobile number and email address. **NO correction will be accepted after submission of online application form fee.**
- **Do not disclose the password to any one so that no one can change your details and misuse it. The organizers will not be responsible for such changes and consequences thereon.**
- **Deposition of application fees:** The fee is Rs. 3700/- (excluding bank charges if any) for UR/OBC/MBC/EWS candidates and Rs. 2500/- (excluding bank charges if any) for SC/ST/SAP (40% and above disability) candidates. **Amount is to be deposited online only. This amount is not refundable/ transferable/ adjustable in any case.**
- Candidate are advised to fill the online application form by themselves or under the supervision/presence of own. In case application form is filled by e-mitra, coaching institute or any other person then candidates are advised to thoroughly check all the details/particulars of the application form very carefully and then only submit the application form. Candidate are also advised to keep the login credentials securely.

2.0 ELIGIBILITY CRITERIA FOR ADMISSION

- A candidate must ensure that he/she is eligible for admission to various courses before filling the online application form for Ph.D. Entrance Examinations as detailed in the booklet. Applying for Pre-Ph.D. Entrance Examinations, appearing in the Examinations, allotment of the college and qualifying for the same does not necessarily mean acceptance of eligibility. If a non-eligible candidate is admitted due to any reason, then the admission of such candidate will be cancelled as soon as the mistake is detected even at later stage. Various eligibility criteria for admission through entrance test are as under:

2.1 EDUCATIONAL QUALIFICATION:

- Only those candidates who have their Master's degree in respective faculty subject and fulfill the qualification as prescribed as under are eligible to apply.
- The candidates who have passed the M.Sc. in the respective subject from any State Agriculture Universities with 6.5 OGPA or equivalent. In case degree awarded below 6.5 OGPA by State Agriculture Universities, 5% relaxation will be allowed to candidate belonging to SC/ST/OBC (Non-creamy layer)/MBC/SAP/EWS category. **The candidates taking the advantage of 5% relaxation will not be considered in UR category.**
- Candidates who have appeared at any of the aforesaid qualifying Examinations and whose results have not been declared before the commencement of the entrance Examinations shall provisionally be allowed to appear in the Examinations. The result of the Examinations *i.e.* **Degree/ Provisional degree and Transcript is essential at the time of option filling and reporting in the college.**
- Candidates who have admitted in their PG Degree programme from 2019 onwards through Pre-PG / National level-CUET (ICAR)/ State level entrance examination (Conducted by government body only) are eligible for Pre-Ph.D. Entrance Examinations-2024. **If candidate having NO proof about**

entrance examination for admission in PG degree programme after year 2019, then he/she may submit proof/certificate from their Dean/Registrar/Controller of Examinations of his/her respective college/university that he/she has admitted through Pre-PG / National level-CUET (ICAR)/ State level entrance examination (Conducted by government body only). However, the candidate who have admitted before 2019 in PG degree programme are exempted from this condition. (As per guidelines and order क्रमांक: प. 3(2) शिक्षा-4/2017 dated 18.01.2018 and 05.03.2019 issued by Education Group-IV Department, GoR, Jaipur)

- The candidates must have completed **four-year UG and two-year PG degree programme** for admission in Ph.D. (Home Science) from any recognized university.

2.2 AGE CRITERIA

- The minimum age limit is 18 years as on 01.01.2024. **The date of birth as mentioned in the Secondary Examinations Marks Sheet/ Certificate issued by competent authority will be considered as authentic.**

2.3 DOMICILE CRITERIA/RESIDENTIAL REQUIREMENT

The Examinations is open to the candidate fulfilling one of the following Domicile Criteria:

- **CRITERIA I** – Candidates having domicile certificate of Rajasthan.
OR
- **CRITERIA II** - The candidate must have studied for the last three years continuously as a regular student in recognized institution in Rajasthan i.e. passed 10th, 11th and 12th (in the qualifying subjects) from schools located in Rajasthan.
OR
- **CRITERIA III** - Natural Father/Mother of the candidate has been continuously residing in Rajasthan for a period of last 10 years and the candidate has studied for at least 5 years during this period in the recognized educational institution in Rajasthan.
OR
- **CRITERIA IV** - The candidate must be a bonafide resident of Rajasthan. He/ She may be presently studying in any of the state other than Rajasthan.
OR
- **CRITERIA V** - The candidate is a son/daughter of a serving or retired employee of (a) Government of Rajasthan and Officer of All India Services of the State Cadre of Rajasthan or (b) Undertaking/ Corporation/ Improvement Trust/ Municipal Bodies duly constituted by the Government of Rajasthan by an act of Law or (c) any of the State Universities in Rajasthan or Board of Secondary Education, Rajasthan provided that the employee has worked in Rajasthan for three years preceding the last date of submission of the application.
OR
- **CRITERIA VI** - Candidate is a son/daughter of a permanent serving or retired employee of Indian Defence Service (Army/Navy/Air force) either of Rajasthan origin irrespective of his/her place of posting or is posted in Rajasthan at the time of last date of the submission of application for admission. Provided that in case the Defence personnel of Rajasthan origin, a Certificate has to be submitted by him/her from the employer to the effect that his/her State of origin is Rajasthan at the time of entry in to the service.
OR
- **CRITERIA VII** - Candidate is a son/daughter of serving/retired employee of Para-Military Forces of India and the employee is either of Rajasthan origin irrespective of his/her place of posting or is posted in Rajasthan at the time of last date of application for admission provided that in case of Para-Military Personnel from the Rajasthan origin, a certificate has to be submitted by him/her from the employer to the effect that his/her State of origin is Rajasthan at the time of entry into service.
OR
- **CRITERIA VIII** - Candidate is a son/daughter/ wife of serving/ retired employee of Rajasthan Police of Rajasthan origin irrespective of his/her place of posting at the time of last date of application for admission. A certificate has to be submitted by him/her from the employer to the effect that his/her State of origin is Rajasthan at the time of entry into service.

Note:

- The relevant original documents/certificates which are the basis of eligibility of the candidate are to be

furnished by the candidate at the time of registration in the college along with one self- attested set of above documents and photograph.

- The certificate of bonafide resident of Rajasthan will have to be duly signed by the District Magistrate of the concerned District or officer authorized by him, and must bear the authenticated photograph of the candidate.
- In case of serving personnel, where in-service conditions have resulted into eligibility, a certificate of the employer will have to be submitted by the candidate, with appropriate authentication, identification and verification.

3.0 RESERVATION OF SEATS

- The reservation of seats for various categories will be as per the rules of Government of Rajasthan and subsequently adopted by **State Agricultural Universities**.
- The caste certificate must bear the photograph of candidate and must be issued by the competent authority.
- **In case of OBC/MBC/EWS, the certificate should not be older than One Year and it must clearly indicate non creamy layer in case of OBC candidates.** Such certificate along with affidavit should not be earlier than three years at the time of reporting in allotted college.
- **For TSP Area reservation only ST Category candidates will be eligible for reservation.**

3.1 RESERVATION FOR WARDS OF DEFENCE/ PARAMILITARY/ POLICE PERSONNEL

Reservation for wards of Defence/Paramilitary/Police personnel will be in the following priority order (On producing of certificate in format as per ANNEXURE-I or certificate having all details. Certificate with incomplete information will not be considered for Defence/Paramilitary/Police ward benefit), in pursuance to Deputy Secretary Agriculture (Gr. III) letter No. प-3(9)कृषि-3/2018 जयपुर दिनांक 03-07-2018 and Director General Rajasthan Police, Jaipur Letter No. क्रमांक-स6(159)आएवं क./सीडब्ल्यू आरक्षण/2021/3000 दिनांक 21.06.2022 :

Priority - I: Widows/Wards of Defence/Paramilitary/Police Personnel Killed in Action.

Priority- II: Wards of disabled in action and boarded out from Defence/Paramilitary/Police service.

Priority-III: Widows/Wards of Defence/Police Personnel who died while in service with death attributable to Defence/Paramilitary/Police service.

Priority-IV: Wards of disabled in Defence/Paramilitary/Police service and boarded out with disability attributable to Defence/Paramilitary/Police service.

Priority-V: Wards of Ex-Servicemen and Defence/Paramilitary/Police serving personnel who are in receipt of Gallantry Award: [i. Param Vir Chakra; ii. Ashok Chakra; iii. Maha Vir Chakra; iv. Kirti Chakra; v. Vir Chakra; vi. Shaurya Chakra; vii. Sena, Nau Sena, Vayu Sena Medal; viii. Mention-in-Dispatches].

Priority-VI: Wards of Ex-Servicemen of Defence/Paramilitary/Police.

Priority-VII: Wives of:

- i. Defence/Paramilitary/Police personnel disabled in action and boarded out from service;
- ii. Defence /Paramilitary/Police personnel disabled in service and boarded out with disability attributable to military/Paramilitary/Police service;
- iii. Ex-servicemen and Defence/Paramilitary/Police serving personnel who are in receipt of Gallantry Awards.

Priority-VIII: Wards of Defence/Paramilitary/Police Serving Personnel.

Priority- IX: Wives of Defence/Paramilitary/Police Serving Personnel.

Note:

- Apart from the above wards of Defence/Paramilitary/Police serving service persons and wards of non-domicile of Rajasthan Defence/Paramilitary/Police service persons are not entitled for reservation.
- The domicile requirement for the wards of the Defence/Paramilitary/Police personnel from the State of Rajasthan but serving in other States is waived off.
- For wards of Defence/Paramilitary/Police personnel from other States but serving in the State of Rajasthan, the domicile condition is waived off to enable them to be selected in general quota. However, they would not be eligible for the above-mentioned concessions.

- 50% of the reserved seats for Defence/Paramilitary/Police quota are earmarked for the girls. In case of non-utilization by girls, the vacancies would revert back to the boys category.
- **Wards/Widow of Serving Personnel of only Rajasthan Police Services will be eligible. Wards/Widows of other State Police Service Personnel are not eligible for this reservation.**
- Candidates are requested to upload the valid relation certificate issued by competent Army/Paramilitary/Police authority mentioning name & designation of the competent authority where priority should be clearly mentioned. (As sample certificate attached)
- **Please note that Army/Paramilitary/Police Canteen Cards or ID cards, PPO etc. will not be considered as valid document for Defence/Paramilitary/Police ward benefit.**

3.2 ELIGIBILITY & INSTRUCTIONS FOR SPECIALLY ABLED PERSON (SAP) & TSP AREA CANDIDATES

- An SAP candidate who desires to avail the services of a scribe need to opt for this during the filling of online application form. The minimum degree of disability should be 40% (Benchmark Disability) in order to be eligible for availing reservation for persons with specified disability.
- Compensatory time for SAP Candidates of 20 minutes for each hour examinations will be given, if required.
- If it is found at any stage that candidate has availed these services of a scribe and/or availed the compensatory time, but does not possess the extent of disability that warrants the use of scribe and/or grant of compensatory time, the candidate will be excluded from the process of evaluation, counseling, admission and his/ her candidature will be cancelled at the same time.
- No change is allowed in this category or sub- category after the submission of the online application form.
- Therefore, the candidates are advised to fill this very carefully.
- **For TSP Area reservation only ST Category candidates will be eligible for reservation.**

4.0 INSTRUCTIONS FOR FILLING ONLINE APPLICATION FORM

The application form will be accepted through online mode only. The process of online submission of application form will be available on the website <https://www.jetauj2024.com> link of this website will also be available on AU, Jodhpur website www.aujodhpur.ac.in.

Before filling and submitting the online application form, candidates should download the Pre-Ph.D. general guidelines and read them carefully. Candidate must follow all the instructions strictly as given in the Pre-Ph.D. general guidelines.

The Examinations schedule is given in ANNEXURE-III.

Note: Request for any changes in details filled in application form will NOT be accepted at any stage of the admission procedure.

- Date of commencement for filling the online application : 14.03.2024
- Last date for filling and online depositing the application forms without late fee : 15.04.2024
- Last date for filling & online depositing the application forms with late fee Rs. 500/- : 18.04.2024

Step-1: Preparation for filling the Online Application Form:

Candidates are advised to go through these instructions before filling of application form, he/ She must keep all relevant documents ready to avoid any reason for non-accepting the form by the system.

Ensure that **Photograph, Signature and Right-Hand Thumb Impression** are to be uploaded in the respective fields. The system will allow uploading of photograph with one face only by using the technique of face-detection.

- **Scan a passport size photograph showing the date and name of the candidate in jpg/jpeg/png/bmp/tif/gif format with minimum 80 pixels resolution.** The image size of photo should be in between 30 to 50 KB. Sample image is already given on website. The Photograph will be displayed after successful uploading. Photograph should not have cap or goggles. Spectacles are allowed if being used regularly. POLAROID and Computer-generated photos are not acceptable.

- Signature of the candidate should be clear and photo of signature should be in jpg/jpeg/png/bmp/tif/gif format with minimum 80 pixels per inch resolution. The image size of signature should be in between 10 to 30 KB. Sample image is already given on web site. The Signature image will be displayed after successful uploading.
- Right Hand Thumb impression (*if a candidate is not having thumb, then right-hand index finger impression, or left-hand thumb impression in case of without right hand*) of the candidate should be clear and image of thumb impression should be in jpg/jpeg/png/bmp/tif/gif format with minimum 80 pixels per inch resolution. The image size of Thumb impression should be in between 10 to 30 KB. Sample image is already given on web site. The Thumb impression image will be displayed after successful uploading. The uploaded thumb impression of the candidate will be verified by Scanning the Thumb at the Examinations Centre as well as at the College reporting.
- Applications not complying with these instructions or without clear photographs are liable to be rejected. Candidates may please note that if it is found that photograph affixed is fabricated i.e. de-shaped or seems to be manipulated or digitally edited, the form of the candidate will be rejected and the same would be considered as using unfair means and candidate would accordingly be dealt with as per the rules of unfair means.
- **It is mandatory for the candidate to bring his/her passport size (5H x 4W cm) photograph same as uploaded in application form duly pasted on the given format during the conduct of Pre-PG Entrance Examinations.**
- Photograph should have white background only.
- Fee concession certificate i.e. caste category and/or Specially Abled Person (SAP) certificate indicating 40% and above disability should be scanned in “PDF” format having size 100 to 200 KB.
- Scan mark sheets of X and XII Examinations and Degree/PDC (if passed already) of UG and PG in “PDF” format having size **100 to 200 KB**.
- It is **mandatory** for the candidates to provide **Aadhaar Number (last 4 digits)** in the application form.
- Candidate must fill his/her own active email-ID and mobile number or father’s or mother’s mobile number only in the online application form to get email and SMS, which must be active till admission process is completed.
- **Note:** Do not use email and mobile number of Coaching Centre and E-mitra as communication may be sent by JET office through e-mail or SMS.
- Candidate should not give the mobile number, e-mail ID or bank account details of coaching centre or e-mitra in the online application form. No change will be accepted afterwards once the application form is submitted by the candidate. However, a chance will be given to the candidates to correct/modify/edit some of the particulars of the application form via online mode only, through the editing window.
- **In case of non-availability of email and mobile number or change in email & mobile number or network problem, the candidate will not get the information at personal level and in such conditions the candidate has to check the website regularly for information. For above such conditions, the JET office will not bear any responsibility.**

Step-2: Depositing the fees

- Candidate must read the instructions given on the web site carefully.
- Ph. D application form fee is **Rs. 3700/- (excluding bank charges, if any)** for UR/ OBC/MBC/EWS candidates and **Rs. 2500/- (excluding bank charges, if any)** for SC/ST/SAP (40% and above disability) candidates. **Amount is to be deposited online only. This amount is not refundable/ transferable/ adjustable in any case.**
- Deposit the fees from your own **or** close relative account/credit/debit card and note down transaction detail including Bank account number, transaction ID and date for refund if any. Avoid the account **or** credit/debit card of E-Mitra **or** any other agency. If use in compulsion, then note down transaction details including Bank account number, transaction ID and date to avoid difficulty in case of refund, if any.
- Candidates are advised to keep the details of bank account viz., Name of the bank and branch, account holders’ name, number, type of the account etc. for ready reference in near future correspondence.

- The JET office will not provide bank details of refunded amount to the candidate, as the amount will be refunded in the bank account details mentioned in the application form.
- Candidates are required to submit their active personal account details during the filling of online application form, which will be used for the refund process (if applicable) (In case of not having personal account then fill the account details of the nearest relative *viz.* Father, Mother, Brother or Sister)
- **DO NOT FILL THE BANK ACCONT DETAILS OF E-MITRA OR COACHING INSTITUTES OR ANY OTHER AGENCIES.**

Step-3: Filling of Online Application Form

- The entries of online application form must be filled as required. Check all entries & spelling before final submission.
- Candidate should ensure that the photo, signature and thumb impression belong to the same person *i.e.* his/her only.
- The changes (if required) will be allowed in online application form only before submission of online application form fees. **Keep the password very safe so that no one can change your details and misuse it. Due to this, if any change occurs in your application form, then JET Office will not be responsible. Do not share the password details.**

Step-4: Printing of application form

- Click the Print button on the web portal and get print of application form. Keep this print for your record. If print application form option is not available, it means your application is not successfully submitted.
- **Candidates need not to send hard copy of application to the JET/Pre PG/Ph.D. Office.**

5.0 ADMIT CARD

- Admit card will be available on web site <https://www.jetauj2024.com> from given date in the schedule, till the commencement of exam. **No admit card will be sent by post or personally to the candidates.**
- **The Coordinator reserves the right not to issue the admit card to ineligible candidate after filling of application form.**
- **The Coordinator reserves the right to withdraw the permission granted by error to a candidate who is not eligible to appear in the Examinations even though the admission card has been issued and produced by the candidate before the center superintendent.**
- Issuance of admit card, however shall not necessarily mean acceptance of eligibility, which will be verified at the time of reporting at the allotted college.
- The candidates are advised to read the instructions on the admit card carefully and follow them during the conduct of the Examinations.

6.0 EXAMINATIONS SCHEME

- In the very nature of competitive Examinations, no syllabus can be prescribed. It is an exercise to pick up the best. However, a broad outline is given as appended in **ANNEXURE-II**. There would be a separate question paper for each subject and candidate must ensure the same.
- The Question Paper in the form of test booklet would be covering the entire subject studied in Post Graduate Degree Programme. Broad outline of subject content is given in the syllabus.
- The question paper will be only in English language consists of **100 multiple choice questions (MCQs)** from the Broad Outlines of Syllabus for Doctorate Degree Programme-2024 as per attached **ANNEXURE-II**.
- The candidates are required to choose the most appropriate option and blacken the corresponding circle with the black ball point pen in the OMR sheet (Details for filling answer sheet are given on back side of OMR sheet). The test booklet may be used by the candidates for rough work and the squares printed in it may be used for deciding the correct answer. Assessment will be made only on the basis of marking on the OMR sheet. At the end of Examinations candidates may carry question booklets with them.
- **Marking scheme:** There will be **FIVE OPTIONS FOR EACH QUESTION** in OMR Sheet. **If a candidate is attempting a question, he/she shall have to darken the appropriate circle A, B, C or**

D and if not attempting a question, then have to darken the corresponding circle E. Four marks will be awarded for every correct answer and one mark will be deducted for every wrong answer (**Negative marking will be there**). If more than one option is chosen, it will be treated as wrong answer.

- The merit list will be prepared on the basis of marks obtained in this test only.
- After obtaining the objections, if any question found ambiguous or having ambiguous answer (correct answer more than one or no correct answer) will be dropped and marks obtained will be used for preparation of merit on the basis of marks in remaining questions.

7.0 ENTRANCE EXAMINATIONS SCHEDULE:

Written Examinations will be conducted as per schedule from 11.00 AM to 1:10 PM on 02.06.2024

For those who are unable to appear on the schedule date and time of the Examinations for any reason, re-Examinations shall not be held by the JET under any circumstances.

The schedule of the test will be:

- | | |
|--|----------|
| • Candidate should report to the examination centre | 09:30 AM |
| • No candidate will be permitted after | 10:30 AM |
| • Commencement of the examination | 11:00 AM |
| • Candidate will not be allowed to leave the examination hall before completion of examinations at | 01:10 PM |

NOTE: Information regarding college wise number of seats, filling of option form etc. for seeking admission will be displayed after declaration of result.

8.0 INSTRUCTIONS FOR WRITTEN EXAMINATIONS

- To avoid delay in reaching to center on the day of Examinations, candidates are advised to visit center and confirm the address of center and mode of transport one day prior to the Examinations.
- The center will be allotted to the candidate mentioned in the application form.
- Request for change in Examinations center will not be considered.
- The Examinations will be held as per the programme given as above mention. The doors of Examinations Centre will be opened at **09.30 AM**.
- The candidate should ensure that he/she occupies the allotted seat at allotted place well in time only
- Any candidate occupying the seat of another candidate or change the place shall be treated as case of unfair means and his/her candidature will not be considered for admission
- **Candidates should bring the following documents/items at the time of Examinations**
 - i. The admit card downloaded from the website <https://www.jetauj2024.com> for your entry in the Examinations center and hall.
 - ii. **Original recent photo ID: One photo ID in original along with one passport size photo same as uploaded in application form otherwise he/she will not be allowed to appear in Examinations. Photo ID preferably (Aadhar card/PAN card/Driving license/Passport/Voter ID).**
 - iii. Use only '**Black Ball Point Pen**' provided at the center for marking the answers.
 - iv. **Marking scheme:** There will be **FIVE OPTIONS FOR EACH QUESTION** in OMR Sheet. **If a candidate is attempting a question, he/she shall have to darken the appropriate circle A, B, C or D and if not attempting a question, then have to darken the corresponding circle E.** Four marks will be awarded for every correct answer and one mark will be deducted for every wrong answer (**Negative marking will be there**). If more than one option is chosen, it will be treated as wrong answer.
- Candidates should not bring any text-book or notes, log tables, calculators, cell phone, purse/bag, watch, jewellery, any electronic gadget by which communication is possible and any other objectionable material with them in the Examinations Hall. **Any kinds of electronic devices are not allowed in the campus of Examinations center.** Having any electronic device, paper, book or purse with you in exam hall, talking with any other person in Examinations Hall or showing question booklet/ OMR/answers to others, removing any page from question booklet, seating at other than allotted seat and disobeying the instruction will be treated as unfair means.

8.1 Dress Code: -

- Half sleeves shirt/ T- shirt (Boys), Half sleeves kurta / top (girls), Sandal or sleeper in feet. Wearing shoes, shocks, wrist watch, ear or nose pins, lockets in chain or any kind of ornament will not be allowed during Examinations. Wearing of specific dress of any coaching institute should be avoided.
- All Jewelry should be removed at the home so that no problem may arise at Examinations center, to remove the same and theft if any, Centers shall not be responsible for security of belongings of candidates. With jewelry candidate will not be allowed in Examinations center.

8.2 DISCIPLINE AND UNFAIR MEANS

- During the course of Examinations, the candidate shall be under the discipline and control of the Centre Superintendent and shall abide by the instructions issued during the Examinations by the invigilators or the Centre Superintendent from time to time.
- Candidate found acting in a manner, which in the opinion of the invigilator, is liable to give unfair advantage to another candidate, shall be treated as case of unfair means and his/her candidature will be cancelled.
- The Invigilators, Flying Squad and Centre Superintendent shall be competent to take search of any candidate. A candidate possessing objectionable material or resisting search shall be punishable as per rules of unfair means and lose his/her candidature.
- Candidate resorting to use of unfair-means shall be turned out of the Examinations Hall/room and his Examinations shall be treated as cancelled. The Centre Superintendent shall be the judge to determine whether unfair-means have been resorted to. The center superintendent will submit the report stating full facts of the case of unfair-means to the JET/Pre-PG/Ph.D. Coordinator for further necessary action, required if any.
- Examiners can use only the urinals available in the center and earmarked for them. For this the candidate shall not leave the Examinations room without the permission of the invigilator and escort. Permissible only in case of emergency.
- Smoking and consumption of other in toxicants by the candidates are strictly prohibited in the Examinations Hall/room/center and will be treated as unfair means.

8.3 QUESTION BOOKLET/ OMR SHEETS

- Candidates should carefully read the instructions given in the question paper booklet and OMR before they begin to mark their answers.
- The question paper will be only in English language.
- Soon after the question booklet is given to the candidate, he/she should ensure before writing his role number that it is sealed and contains all the pages and no question is missing.
- No guarantee is given to the candidates regarding the order of the questions in question paper.
- Entry of booklet number and series code on OMR should be done only after getting proper question booklet and satisfying yourself.
- Question booklet/OMR sheet shall be replaced to candidate only when there is any printing defect/torn condition within 10 minutes *i.e.*, up to **11:10 AM**.
- Do not use Eraser, Correcting Fluid or Blade to make any correction in OMR.
- Before attempting the answers, the candidate shall write his/her Roll number and other details at the place provided for the purpose on the test booklet and OMR sheet. The candidate should indicate the right answer on the OMR by blackening the circle with **black ball point pen** provided for the purpose, otherwise his/her answer will not be evaluated. Avoid any stray mark in the circle else it will be treated as more than one answer is given for that particular question. Candidate must ensure before submission that their OMR has been duly signed by the Invigilator.
- The candidate should not write his/her name or any sign/mark at any place on the OMR sheet, which may disclose his/her identity else their candidature will be cancelled.
- There will be **FIVE OPTIONS FOR EACH QUESTION** in OMR Sheet as per RSMSSB/RPSC new guidelines through the notice issued on 5th October 2023.
- **If a candidate is attempting a question, he/she shall have to darken the appropriate circle A, B, C or D and if not attempting a question, then have to darken the corresponding circle E.**
- Four marks will be awarded for every correct answer and one mark will be deducted for every wrong

answer (**Negative marking will be there**). If more than one option is chosen, it will be treated as wrong answer.

- The OMR sheets will be evaluated and marks will be displayed as per schedule date given in **ANNEXURE-III**.
- **Candidate should note that there will be no re-evaluation of the OMR sheet.** Candidate can challenge the answer key as per given schedule (objection on any question) by paying Rs. 500/- towards processing fees per question, the fees can be paid online through Debit/Credit/Net Banking etc. Candidate should note that the fee paid will be refunded if the challenge is found correct and forfeited if incorrect. However, no challenge will be entertained without receipt of processing fees.
- **After obtaining the objections, if any question found ambiguous or having ambiguous answer, correct answer more than one, no correct answer will be dropped and merit will be prepared accordingly.**
- Revised marks will be updated and filling the option form will be allowed as per schedule in **ANNEXURE-III**.
- **Carbon Copy of OMR sheet**
 - i. At the end of the examination, candidates are required to hand over their OMR sheet to the examiner. Candidate are also requested to darken the circle/option darker so that they get imprinted on the carbon copy as well.
 - ii. The examiner will keep the original copy and provide a carbon copy to the examinee/candidate, which they can take with them. Candidates must keep this carbon copy safe until the admission process is completed.

NOTE: Information regarding college wise number of seats, filling of option form *etc.* for seeking admission will be displayed after declaration of result. The result of the test will be declared on specified date. No enquiries by email, telephone or post concerning the result will be attended by the Office of the JET Coordinator.

8.4 QUALIFYING MARKS

- **In this entrance examination, Candidates securing zero or negative marks will not be eligible for counselling process.**

9.0 ELIGIBILITY FOR ONLINE OPTION FORM

- Candidates appeared in Ph.D. Entrance Examinations-2024 and have secured positive marks in the examinations will be eligible for filling online option form during the admission process. **Candidates securing zero or negative marks will not be eligible for counselling process.**

10.0 FILLING THE ONLINE OPTION FORM

- Fee Details:
 - To fill online option form, fee of Rs. 5000/- (Rs. Five thousand) + bank charges (if any) will be charged.
 - If candidate is allotted any college, then candidate has to pay the Acceptance Fees of Rs. 1200/- (Rs. One Thousand) + bank charges (if any) to accept that college.
 - Out of this total Fees of Rs. 6200/- deposited online, Rs. 5000/- will be adjusted in college fees and Rs. 1200/- (Non-Refundable) will be with JET office as counselling fee of the candidate.
 - In case of not depositing remaining fee or not accepting allotted college, Rs. 5000/- will be forfeited i.e., neither it will be refunded to the candidate nor transferred to the institute where candidate admitted provisionally.
 - In case of not reporting in college at prescribed date and time this total amount of Rs. 6200/- (5000+1200) will be forfeited i.e. neither it will be refunded to the candidate nor transferred to the institute where candidate admitted provisionally.
- **Candidate must read the instructions and Schedule in ANNEXURE-III very carefully before filling up the option form to avoid any mistake.**
- Candidate must keep ready the information and list of subjects along with colleges with order

of choice on a separate paper and mark sheets or desired certificates if any.

- **There will be no provision for any change/modification after final submission of the option form however candidate may edit the option up to stipulated date.**
- Candidate willing to seek admission **on payment seat** should also fill the option for the same with appropriate number of choices. These seats will also be filled from the same merit.
- Details about college, fees and hostel facility may be obtained from the web site or he/ she may contact to the college directly.
- **Candidate is advised to check the correctness of information before submitting the option form. In case of any wrong information the admission will be cancelled at college level and candidate will be treated as not reported and this seat will be allotted to another candidate in next counseling and option form fee will be forfeited.**
- **If any candidate will not get admission in any of the institute filled in option form the fee of Rs. 5000/- will be refunded in the bank account details mentioned in the application form.**

11.0 SEAT ALLOTMENT

- Seat in college and universities will be allotted on the basis of marks obtained in Ph. D Entrance Examinations, choice filled by candidate in option form and reservation policy. The roster will start from next point where admission was stopped last year.
- In case of any tie, the tie will be broken on the basis of higher marks obtained in PG then in UG followed by 12th & 10th, and then more in age will be given priority.
- Through above option form, three times seats will be allotted.
- The reserve seats will be allotted to reserve candidates only based on merit, 200-point roster and candidate choice, if option form of those category candidates is available. Else, the seat will be allotted of respective reserve seats followed same pattern of merit, 200-point roster and candidate choice, where from that seat get reserve. If reserved candidate is not available than seat will be allotted to UR candidate.
- Seats of not-reported reserved category candidates will be filled from remaining candidates of same category who have filled the option form. In case of non-availability of candidates in the same category then the vacant seats will be filled as per the reservation policy.
- **Candidate has to deposit remaining college fee (excluding option form fee) of allotted college at the respective college at the time of reporting** along with all original documents and their self-attested copies.

11.1 MAIN ONLINE COUNSELING

- All the candidates will be arranged in a queue for seat allotment following the reservation roster and marks obtained in Ph.D. Entrance. Ph.D. Entrance score Tie (if any) will be broken on the basis of marks obtained in PG, UG, 12th followed by in 10th and age. Higher marks and age will be given priority.
- Option form of candidate stand at the top in the queue will be assessed and institution in the order of priority given by the candidate will be allotted subject to availability of seats.
- In case of non-availability of horizontal reservation category candidate, the seat will be filled by vertical reservation candidate and then by the candidate stand in the merit.
- In the three rounds of the main online counseling, three times the provisional allotment letter will be displayed in the candidate login with the following two options: -
 - 1 **Upward Assessment (option available for only 1st and 2nd allotment)**
 - 2 **Accepting the seat**
- There may be case that no seat allotted to the candidate as per the candidate marks, merit, college choice and other options filled in the application form.

11.2 Acceptance and Upward Assessment

- During the process of seat allotment, Candidate has to either accept the college by depositing the acceptance fees of Rs. 1200/- (non-refundable) online or apply for upward assessment after paying non- refundable fee of Rs. 1100/-.
- The candidates who fail to deposit acceptance or upward fees on time will be treated as not reported candidates and their seats will be filled by the remaining eligible candidates.

- The upward assessment fee is Rs. 1100/- for each upward assessment and it is non-refundable, whether the candidate gets better choice from the option form or not.
- **If a candidate applies for Upward Assessment, then it is not necessary that he/she will get any above choice (filled by candidate). During the Upward process, Candidate can only get any above choice in case any seat is found vacant due to non-acceptance of the seat allotted to the other candidate.**

11.2.1 First allotment/upward assessment:

- Candidate getting institution in first allotment, has to either accept the allotted college by depositing the acceptance fees of Rs. 1200/- (non-refundable)—online or apply for upward assessment after paying non-refundable fee of Rs. 1100/- in case he/she wants to change the institution up to stipulated date. Else, will be treated as not reported.

11.2.2 Second allotment/upward assessment:

- Candidate getting institution in second allotment, has to either accept the allotted college by depositing the acceptance fees of Rs. 1200/- (non-refundable) online or apply for upward assessment after paying non-refundable fee of Rs. 1100/- in case he/she wants to change the institution up to stipulated date. Else, will be treated as not reported.

11.2.3 Third allotment assessment:

- Candidates getting seat in third allotment have only one choice that is to accept the college by depositing the acceptance fees of Rs. 1200/- (non-refundable) online. Else, will be treated as not reported.
- **After upward assessment if he/she gets any other college or allotment remain unchanged, he or she will be required to accept final allotment and deposit the requisite fee of allotted college otherwise the admission will be treated as cancelled and amount of Rs. 6100/- along with option form will be forfeited.**

12.0 REPORTING IN THE INSTITUTION

- All original documents are to be submitted to the allotted college at the time of registration.
- Candidate accepted the allotment and deposited online fee has to report in the institution on the schedule date along with all original documents and their self-attested copies viz. 10th, 12th mark sheets and certificates, PDC/degree of UG & PG and their transcript, domicile certificate, reservation certificate, self-declaration (in case of OBC) certificate, recent income certificate and fee deposition receipt, etc.
- Failing to report on the given date or lacking any document will be treated as not reported candidate and the option form fees and acceptance fees of total Rs. 6200/- will be forfeited. Vacant seat will be filled by other candidate in next counselling.
- **The responsibility for the verification of the genuineness of all documents including caste certificate, domicile certificate, EWS, Degree etc. will be of the concerned colleges where the candidate has been granted admission on the basis of counseling.**
- The documents/ certificates/ caste category/ eligibility criteria and other essentials documents etc., shall be verified at the time of reporting at the admitted colleges. In case the candidate is found not eligible at any stage, his/her candidature would be rejected and admission will be cancelled. If candidate provide incorrect information or the identity is proved to be false at any time in the future, the candidate shall face penal action as per the law.

13.0 FILLING THE OPTION FORM FOR FINAL ONLINE COUNSELLING

- If the seats remain vacant after above reporting same will be filled through final online counseling online option form will be invited as per the schedule in **ANNEXURE-III**
- Candidates who did not get admission or not reported candidates will be eligible for final online option form. Candidates reported in the institutions will not be eligible.
- Online option form for counselling may be filled after paying **Rs. 5000/- + the bank charges.**

- Candidate who did not get seat through previous option form, need not to pay the option form fee again but, have to fill the fresh option form.
- Vacant seats will be filled by the category candidates if available else from the candidates where from the seat get reserves using merit and above option form.
- Candidate has to deposit the fee of allotted college online and report in the college on given date along with all original documents and their self-attested copies.
- Seats of not reported candidates will be filled from remaining candidates filled the option form by the category candidates if available else from the candidates wherefrom the seat get reserve.
- Candidate has to deposit the fee of allotted college online and report in the college on given date along with all original documents and their self-attested copies.
- Candidate has to report in the college on given date. The admission process will be closed with this process even seat remains vacant. The last date of admission process is **28-08-2024**.

Note: Candidates are advised to visit the website for changes in dates, system, or any other information from time to time. The JET office will not be responsible for not reaching the changes to the candidate in time.

CERTIFICATE FOR DEFENCE/PARAMILITARY/POLICE WARDS/WIDOWS

This is to certify that Mr./Ms./Widow (Name of candidate).....born on dated.....son/daughter/widow of (Father's/Mother's/Husband's Name) worked in the(Army/Navy/Airforce/Paramilitary/Police). He/She belongs to Defence/Paramilitary/Police **Priority** (I/ II/ III/ IV/ V/ VI/ VII/ VIII/ IX).

Priority -I: Widows/Wards of Defence/Paramilitary/Police Personnel killed in Action.

Priority-II: Wards of disabled in action and boarded out from service of Defence/Paramilitary/Police Personnel.

Priority-III: Widows/Wards of Defence/Paramilitary/Police Personnel who died while in service with death attributable to military service/Paramilitary/Police Service.

Priority-IV: Wards of disabled in service and boarded out with disability attributable to Defence/Paramilitary/Police service.

Priority-V: Wards of Ex-Servicemen and serving personnel who are in receipt of Gallantry Award under service of Defence/Paramilitary/Police Personnel: [i. Param Vir Chakra; ii. Ashok Chakra; iii. Maha Vir Chakra; iv. Kirti Chakra; v. Vir Chakra; vi. Shaurya Chakra; vii. Sena, Nau Sena, Vayu Sena Medal; viii. Mention-in-Despatches].

Priority-VI: Wards of Ex-Servicemen under service of Defence/Paramilitary/Police Personnel.

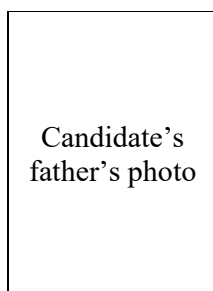
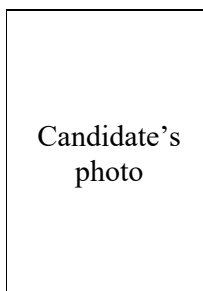
Priority-VII: Wives of (i. Defence/Paramilitary/Police Personnel disabled in action and boarded out from service; ii. Defence/Paramilitary/Police Personnel disabled in service and boarded out with disability attributable to military service; iii. ex-servicemen and serving personnel of Defence/Paramilitary/Police who are in receipt of Gallantry Awards).

Priority-VIII: Wards of Serving Personnel of Defence/Paramilitary/Police.

Priority- IX: Wives of Serving Personnel of Defence/Paramilitary/Police.

Note:

- **50% of the reserved seats of the Defence/Paramilitary/Police quota are earmarked for girls.**
- **Wards/Widow of Serving Personnel of only Rajasthan Police Services will be eligible. Wards/Widows of other State Police Service Personnel are not eligible for this certificate.**



← **Both the Photos must be attested by competent authority with seal**

Signature of competent Authority with Seal

रक्षा/अर्द्धसैनिक/पुलिस कर्मियों के बच्चों/विधवाओं के लिए प्रमाण पत्र

यह प्रमाणित किया जाता है कि श्री/सुश्री/विधवा (अभ्यर्थी का नाम)जन्म तिथिपुत्र/पुत्री/विधवा (पिता/माता/पति का नाम)ने सेना की (थलसेना/नौसेना/वायुसेना/अर्द्धसैनिक/पुलिस).....में काम किया है। ये सैन्य सेवा/अर्द्धसैनिक/पुलिस सेवा के लाभ हेतू प्राथमिकता..... (I/ II/ III/ IV/ V/ VI/ VII/ VIII/ IX) से संबंधित हैं।

प्राथमिकता-I: सैन्य कार्यवाही के दौरान शहीद हुए रक्षा/अर्द्धसैनिक/पुलिस कर्मियों की विधवाएं/बच्चे

प्राथमिकता-II: सैन्य कार्यवाही/अर्द्धसैनिक/पुलिस के दौरान दिव्यांग होने पर सेवा से बाहर हुए रक्षा/अर्द्धसैनिक/पुलिस कर्मियों के बच्चे

प्राथमिकता-III: सेवा काल के दौरान सैन्य सेवा/अर्द्धसैनिक/पुलिस कारणों से मृत्यु होने वाले रक्षा/अर्द्धसैनिक/पुलिस कर्मियों की विधवाएं/बच्चे

प्राथमिकता-IV: सेवा काल के दौरान सैन्य सेवा कारणों से दिव्यांग होने पर सेवा से बाहर हुए रक्षा/अर्द्धसैनिक/पुलिस कर्मियों के बच्चे

प्राथमिकता-V: गैलेंट्री अवार्ड प्राप्त पूर्व एवं सेवारत रक्षा/अर्द्धसैनिक/पुलिस कर्मियों के बच्चे:

- [i. परम वीर चक्र, ii. अशोक चक्र, iii. महा वीर चक्र, iv. कीर्ति चक्र, v. वीर चक्र, vi. शौर्य चक्र, vii. सेना, नौ सेना, वायु सेना मेडल, viii. मेन्सन-इन-डिस्पैचेज]

प्राथमिकता-VI: पूर्व रक्षा/अर्द्धसैनिक/पुलिस कर्मियों के बच्चे

प्राथमिकता-VII: उन रक्षा/अर्द्धसैनिक/पुलिस कर्मियों की पत्नियाँ जो-

- i. सैन्य/अर्द्धसैनिक/पुलिस कार्यवाही के दौरान दिव्यांग हो जाने पर सेवा से बाहर हुए रक्षा/अर्द्धसैनिक/पुलिस कर्मी,
ii. सेवा काल के दौरान सैन्य सेवा कारणों से दिव्यांग हो जाने के कारण सेवा से बाहर हुए रक्षा/अर्द्धसैनिक/पुलिस कर्मी,
iii. गैलेंट्री अवार्ड प्राप्त पूर्व एवं सेवारत रक्षा/अर्द्धसैनिक/पुलिस कर्मी।

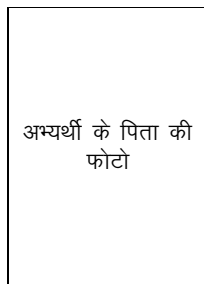
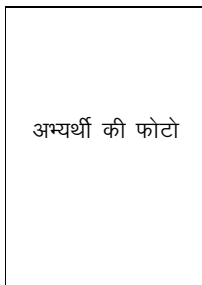
प्राथमिकता-VIII: सेवारत रक्षा/अर्द्धसैनिक/पुलिस कर्मियों के बच्चे

प्राथमिकता-IX: सेवारत रक्षा/अर्द्धसैनिक/पुलिस कर्मियों की पत्नियाँ

नोट:

- सैन्य/अर्द्धसैनिक/पुलिस कोटे की आरक्षित 50 प्रतिशत सीटें बालिकाओं के लिये चिंहित की गई हैं।
- केवल राजस्थान पुलिस सेवाओं के सेवारत कर्मियों के वार्ड/विधवा पात्र होंगे। अन्य राज्य पुलिस सेवा कर्मियों के वार्ड/विधवा इस प्रमाण पत्र के लिए पात्र नहीं हैं।

दोनों तस्वीरें सक्षम प्राधिकारी द्वारा मुहर सहित सत्यापित होनी चाहिए



दोनों तस्वीरें सक्षम अधिकारी द्वारा मुहर सहित सत्यापित होनी चाहिए

सक्षम अधिकारी के हस्ताक्षर मय सील

ANNEXURE -I
CERTIFICATE FOR DEFENCE WARDS/WIDOWS

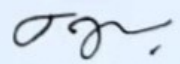
This is to certified that Mr./Ms./Widow (Name of candidate).....born on dated.....son/daughter/widow of (Father's/Mother's/Husband's Name).....worked in theARMY.....(Army/Navy/Airforce). He/SheARMY.....belong to defence priority ..M... (I/II/III/IV/V/VI/VII/VIII/IX).

- Priority - I** : Widows/Wards of Defence Personnel Killed in Action.
Priority- II : Wards of disabled in action and boarded out from service.
Priority-III : Widows/Wards of Defence Personnel who died while in service with death attributable to military service.
Priority-IV : Wards of disabled in service and boarded out with disability attributable to military service.
Priority-V : Wards of Ex-Servicemen and serving personnel who are in receipt of Gallantry Award: [i. Param Vir Chakra; ii. Ashok Chakra; iii. Maha Vir Chakra; iv. Kirti Chakra; v. Vir Chakra; vi. Shaurya Chakra; vii. Sena, Nau Sena, Vayu Sena Medal; viii. Mention-in-Despatches].
 Priority-VI : Wards of Ex-Servicemen.
Priority-VII : Wives of (i. defence personnel disabled in action and boarded out from service; ii. defence personnel disabled in service and boarded out with disability attributable to military service; iii. ex-servicemen and serving personnel who are in receipt of Gallantry Awards).
Priority-VIII : Wards of Serving Personnel.
Priority- IX : Wives of Serving Personnel.

50% of the reserved seats of defence quota will be earmarked for the girls.


जिला सैनिक कल्याण अधिकारी
डुन्डुनू (राज०)


जिला सैनिक कल्याण अधिकारी
डुन्डुनू (राज०)


Signature of competent Authority with seal
जिला सैनिक कल्याण अधिकारी
डुन्डुनू (राज०)



Broad Outlines of Syllabus for Doctorate Degree Programme Entrance Exam- 2024

SYLLABUS:

Objective of such type of Entrance Test is to select the best candidates; therefore, no syllabus can be prescribed, however, broad outlines are given as follows:

AGRICULTURE

1. AGRICULTURAL ECONOMICS

Basic concepts in economics, theory of consumer demand, theory of production, market classification, theory of perfect and imperfect competition, theory of distribution, national income accounting, classical and Keynesian theories of income determination, money-concepts, functions, theories of demand for money, supply of money; general equilibrium of product and money markets; IS and LM functions; monetary and fiscal policies, banking - central and commercial, functions and problems of recent macroeconomic, policies of Government of India; research methodology, steps in agricultural economics research, data collection, analysis and report writing; simultaneous linear equations, linear programming, statistical inference, correlation and regression analysis, time series analysis and theory of index numbers. Nature and scope of agricultural production economics *vis-a-vis* farm management; farm business analysis, farm records and farm cost accounting; farm planning and budgeting, production function and resource allocation; assumptions of production function and different form of production functions, cost, profit and supply functions; nature and analysis of risk in farming; systems approach in farming; role of credit in agriculture, principles of agricultural finance, farm financial management, supply and demand for farm credit; recent innovations in the extension of credit to agriculture, theory and practice of cooperation; problems of cooperatives, management of co-operative institutions; cost-benefit analysis of agricultural projects. Scope of marketing in a developing economy; practice and problems of marketing agricultural inputs and outputs; functions and channels of marketing, co-operative marketing; agricultural price analysis; demand analysis; problems and prospects of storage and processing of agricultural products; agricultural exports -problems and prospects. Market intermediaries and their role, marketable & marketed surplus estimation, marketing efficiency, market integration, APMC regulated markets - Direct marketing, contract farming and retailing - Supply chain management, role of information technology, telecommunication in marketing of agricultural commodities. Theory of growth and growth models; agricultural policy, planning and development in India, interregional variations in agricultural development, agricultural technology and income distribution; agrarian reforms and output and input price policies; infrastructure and institutions for agricultural development, equity and ecological consideration in agricultural development. OLS and their properties, multi-collinearity, heteroscedasticity and autocorrelation. Concepts, classification and problems of natural resource economics- Economy Environment interaction, Resource scarcity - Limits to Growth - Measuring and mitigation natural resource scarcity, common property rights, sustainability, environmental pollution.

2. AGRONOMY

Principles of crop production, crop plants in relation to environment, concepts involved in growth analysis; quantitative agro-biological principles and their validity; classification of climate, agro-climatic zones of India and Rajasthan, their characteristic features; physiological limits of crop yield and variability in relation to the agro-ecological optimum; types of tillage - concepts and practices; resource conservation technology. Weed ecology & physiology; crop-weed interference; methods of weed control; principles

and practices of weed management in crops and cropping systems; herbicide- formulations, classification, selectivity and mode of action; adjuvants; integrated weed management; herbicide resistance, fate of herbicides. Agro-meteorology in relation to crop environment; solar radiation utilization & photosynthesis; air temperature and humidity; monsoon characterization; weatherforecasting; climate change: its impact on agriculture, mitigation and adaptation. Introduction, origin, history, production, distribution, cultural practices, varieties, quality, biomass production and bioenergetics of major field crops, forage, spices and condiment crops. Soil fertility and its management; essential plant nutrients, their functions and deficiency symptoms in plants; dynamics of major plant nutrients; organic manures, chemical and biofertilizers and fertilizer uses; integrated plant nutrient management; precision farming & site-specific nutrient management; organic farming: concept, principles & components, quality parameters, labeling, certification & accreditation process. History of irrigated agriculture, soil-water-plant relationship, soil moisture constants and soil water availability to plants, soil moisture stress and plant growth; drought resistance in crops, mechanisms of drought tolerance, and crop adaptability, soil and plant moisture conservation techniques, water harvesting and other agro techniques for dryland agriculture; measurement of soil moisture, methods of scheduling irrigation, methods of irrigation for crop plants, quality of irrigation water; watershed management concepts; management of excess soil water, agricultural drainage, principles and practices; problem soils- saline, alkali, saline-alkali and acid soils, soil erosion and its control. Cropping systems - principles and practices and assessment; changing cropping patterns in different agro-climatic zones; crop diversification, IFS, Sustainability - concept and practices; agro-forestry systems - concepts and practices. Principles of experimental designs, analysis and interpretation of data, methods of statistical analysis and statistical designs.

3. ENTOMOLOGY

Position of insects in animal kingdom - their origin, phylogeny and distribution; history and basis of insect classification; distinguishing characters of insect Orders and economically important families; concept of species and speciation; rules and regulations of zoological nomenclature; morphology - external and internal; embryonic and post-embryonic development. Insect ecology - biotic potential, biotic and abiotic resistance, effect of temperature, humidity and light on insect development and population dynamics; diapause, food chain, migration and dispersal. Life table concept, survivorship curves, degree-day model, predator prey relationship, diversity indices (index). Fundamentals of insect physiology, different systems, their structure and function, metabolism, sense organs, insect behavior, host plant relationship, ecosystems, horticultural crops, host parasite relationship. Social and other beneficial insects; pests of field crops and stored food; principles of pest control; classification, mode of action and metabolism of insecticides; insecticidal residues; resistance and resurgence; parasites, predators and pathogenic microorganisms of crop pests, biological control. Antifeedants, hormones, growth regulators, semiochemicals, host-plant resistance and genetic manipulation, insect quarantine; concept of integrated pest management; non-insect pests and their control. Principles of experimental designs, analysis and interpretation of data, methods of statistical analysis and statistical designs.

4. EXTENSION EDUCATION

Objectives, philosophy and principles of extension education; extension role of agricultural universities; comparative studies of extension education system in selected developed and developing countries; different models of organizing agricultural extension, particularly tools and methodology; agricultural information (knowledge) system; teaching and learning processes; principles of adult learning; audio visual aids and their classification; modern communication and information technology; application of PERT/CPM, principles of programme planning process; agricultural and rural development

programmes in India, namely CD, Panchayati raj System, IADP, IRDP, SGSY, PMGSY, DPAP, KVK, ATIC, ATMA, IVLP, ICDS, NREGP, Farmers Field School, Kisan Call Centre. Principles of extension management, different theories of management processes and functions of management organizational set-up for extension services in India including the T & V system; types of training programmes for extension personnel and farmers; model of modern training, modern technologies, experimental learning methods, entrepreneurial development process; factors affecting extension training. Participatory extension approaches (RRA, PRA, PLA, AEA, PAR, FPR); Participatory tools and techniques; Participatory technology development and dissemination. Scope and importance of psychology in extension education, concept of human society; characteristics of rural people; socio-psychological basis of human behavior, socio-psychological factors in transfer of technology; social structure; social interactions and processes; values and norms of rural social systems; rural institutions; role of leadership; process of diffusion and adoption; consequences of adoption of innovations; communication process and elements of communication; theories of communication, fundamentals of farm journalism; role of mass media; modern electronic media. Process of scientific research; research designs; data collection devices; validity and reliability of measuring devices; methods of observation and data collection; techniques of tabulation; analysis of data and report writing; methods of statistical analysis; statistical designs.

5. GENETICS AND PLANT BREEDING

Structure and function of cell and cell organelles, cell cycle; mitosis and meiosis; nucleic acids – their structure; Mendelian principles; gene interaction, multiple alleles, chromosome structure and organization; types of chromosomes; chromosome function; linkage and crossing over - theories and molecular mechanism; recombination and gene mapping in diploids, fungi, bacteria and human; ploidy variations - euploids and aneuploids; chromosomal aberrations; extra chromosomal inheritance; gene mutation-mechanism, induction; gene concept; complementation, genetic code, information transfer and protein synthesis, gene regulation and gene manipulation; gene transfer technology; origin and evolution of important crop plants like wheat, rice, maize, sugarcane, potato, brassica, cotton, etc. Genetic basis of plant breeding; pure line selection; male sterility and incompatibility and their use in plant breeding; principles and methods for self and cross pollinated crops and vegetatively propagated crops; heterosis; plant introduction and exploration and their role in plant breeding; breeding for disease, insect and pest resistance; role of interspecific and intergenetic hybridization; combining ability and its relationship with the components of gene action; seed production techniques; PBR, IPR, PPV&FR act 2001, farmers rights: changes in gene frequencies; mutation and its role in breeding; use of biotechnology in plant breeding. Molecular markers and their applications in genetic analysis and plant breeding. Genetic engineering & its tools, QTL and marker assisted selection. Inheritance of quantitative traits, polygenes, continuous variation, components of genetic variation, heritability and genetic advance, GxE interaction stability analysis, gene action, combining ability & its estimation, parent offspring regression. Principles of experimental designs, analysis and interpretation of data, methods of statistical analysis and statistical designs.

6. HORTICULTURE

Importance scope, area and production of major horticultural crops. Recent trends in planting systems, cropping systems, improved varieties, canopy management, nutrient management, water management, fertigation, role of bioregulators, biotic and abiotic factors limiting fruit production, physiology of flowering, pollination fruit set and development, physiological disorders, insect pest and diseases, maturity indices, harvesting, grading, packing, storage and ripening techniques of fruit crops – mango, banana, citrus, guava, grapes, pomegranate, papaya, sapota, custard apple, aonla, phalsa, ber, apple, pear, peach,

plum, strawberry, wood apple, bael, litchi. Propagation, tissue culture and nursery management of fruit plants. Biodiversity, germplasms conservation, gene centers, intellectual property rights of fruits crops. Introduction, botany and taxonomy, climatic and soil requirements, commercial varieties/hybrids, sowing/planting times and methods, seed rate and seed treatment, nutritional and irrigation requirements, intercultural operations, weed control, mulching, physiological disorders, harvesting, post-harvest management, plant protection measures of vegetables- tomato, brinjal, chilli, okra, cucurbitaceous vegetables, beans, sweet potato, yam, cole crops, root crops, peas, leafy vegetables, bulb crops. Introduction, importance of spice crops-historical accent, present status - national and international, future prospects, botany and taxonomy, climatic and soil requirements, commercial varieties/hybrids, site selection, sowing/planting times and methods, nutritional and irrigation requirements, pharmaceutical significance, plant protection measures , physiological disorders - black pepper, cardamom, clove, cinnamon and nutmeg, turmeric, ginger and garlic, coriander, fenugreek, cumin, fennel, ajwain, Scope and global scenario of cut flowers in global trade, varietal wealth and diversity, Patent rights, nursery management, influence of environmental parameters, light, temperature, moisture, humidity and CO₂ on growth and flowering. Cut flower standards and grades, harvest indices, Water and nutrient management, fertigation, weed management, rationing, training and pruning, disbudding, special horticultural practices, use of growth regulators, physiological disorders and remedies, IPM and IDM in crop- rose, chrysanthemum, carnation, gerbera, gladioli, tuberose, orchids, anthurium, aster, liliiums, dahlia, gypsophilla. Landscape designs, types of gardens, Styles of garden, Urban landscaping, Landscaping for specific situations, Garden plant components, Lawns, Establishment and maintenance, Bio-aesthetic planning, eco-tourism, theme parks, indoor gardening, therapeutic gardening, non-plant components, water scaping. Cacti, succulents, trees, shrubs, climbers, alpine and annual flower plants in landscaping. Important landscape gardens in India. Maturity indices, harvesting practices for specific market requirements, Physiology and biochemistry of fruit ripening, pre-cooling, Methods of storage ventilated, refrigerated, MAS, CA storage, physical injuries and disorders. Packing methods and transport, principles and methods of preservation, food processing, canning, fruit juices, beverages, pickles, jam, jellies, candies. Dried and dehydrated products, Role of photoperiod, vernalization, dormancy, respiration, transpiration, photosynthesis and senescence in plants. Essential plant nutrients and their uptake in horticultural crops. Principles of experimental designs, analysis and interpretation of data, methods of statistical analysis and statistical designs.

7. LIVESTOCK PRODUCTION AND MANAGEMENT

Livestock and poultry - population and production dynamics and economic importance, Advances in housing management of livestock and poultry in various agroclimatic zones of India. Feeding, breeding and health management of cattle and buffaloes. Establishing Dairy Cattle Enterprise. Milking practices & clean milk production. Numbers and distribution of milch and dual-purpose breeds of cattle and buffaloes. Small ruminants farming in India, important breeds and importance in national economy. Feeding, breeding and health management of goat and sheep, housing practices and requirement for goat and sheep, production systems, feeding practices, nutrient deficiencies in forages. Selection of breeding stock and breeding problems in sheep and goat. Present development programmes in sheep and goat production. Present and future of Swine production systems in India and production policies adopted in advanced countries. importance and limitation of rabbits for meat and fur production. Feeding, breeding and housing management and breeds of camel. Common breeds and strains of poultry. Utilization and disposal of animal waste. Health hazards, waste utilization, technologies for processing and treatment of animal waste. Role of climatic factors in production and health of animals. Climate resilient livestock production systems. Principle of animal experimentation. Planning and designing of experiments. Integration of

Research in various disciplines of animal production. Scientific writing research papers, reviews and reports etc. and their presentation. Principles of experimental designs, analysis and interpretation of data, methods of statistical analysis and statistical designs.

8. MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Structure and organization of prokaryotic and eukaryotic cells; Cytoskeletal elements; organization and expression of prokaryotic and eukaryotic genome; concept of gene; quantitative trait loci, mutation; genetic recombination; transformation; transduction; conjugation; structure, function and regulation of genes in prokaryotes and eukaryotes; transcription and translation; recombinant DNA, restriction enzymes, vectors, plasmids, cosmids and bacteriophages, expression vectors, cloning strategies, construction and screening of genomic and cDNA libraries, nucleic acid hybridization and DNA sequencing; restriction fragment length polymorphism; monoclonal antibodies and their application; enzyme engineering; genetic transformation of eukaryotes; crop improvement through genetic engineering; role of tissue culture in crop improvement; microbes in agriculture and industry; structure and function of proteins, nucleic acids, carbohydrates, lipids, enzymes; metabolism, glycolysis, citric acid cycle; respiration, bioenergetics; nucleic acid and protein biosynthesis; photosynthesis, nitrogen fixation. PR in Biotechnology. Biosafety and Bioethics issues. Cell division and regulation of Cell cycle; Membrane transport; Signal transduction; Protein targeting; Molecular marker and its application in Agriculture; Genomics, Proteomics and metabolomics; Properties of nanomaterials and characterization, Synthesis and Application of nanomaterials. Introduction to Bioinformatics and Biological database. BLAST and FASTA.

9. NEMATOLOGY

Nematode and its characteristics, History and development of Nematology in India and abroad, Nematode habitats and diversity - Plant, animal, human parasites and entomo-pathogenic nematodes, Economic importance of nematodes in Agriculture, Extraction of nematodes from soil and plant material, Staining nematodes in plant tissues, Estimation of population densities, Killing, fixing and preservation of nematodes, Preparation of permanent and semi-permanent mounts, perineal patterns and vulval cone of nematodes, Isolation and culture techniques of nematodes, Organization of nematode body, Morphology of plant parasitic nematodes - Body Wall, digestive, reproductive, excretory and nervous system, Principles of nematode taxonomy and its importance, Placement of nematodes in Animal Kingdom and comparison with related organisms, Phylum- Nematoda and its classes, Classification and characteristics of important Tylenchid, Aphelenchid and Dorylaimid nematodes. Biology and ecology of nematodes, Patterns of Nematode life cycle, Distribution and dispersal of nematodes. Types of nematode parasitism, Nematode behavior - Hatching, moulting, host finding, feeding and reproduction, Survival strategies of nematodes in adverse environmental conditions, Effect of abiotic and biotic factors on nematodes, Chemical composition of nematodes, hydrolytic enzymes, pseudocoelom and its function, Plant nematode relationships, Cellular responses to infection by important plant parasitic nematodes, Interaction of plant parasitic nematodes with other micro-organisms (Fungi, Bacteria, Viruses etc.), Nature of damage and symptomatology, Nematode diseases of Cereals, Pulses, Oil seed, Vegetables, Fruit, Ornamental, Fiber and Plantation crops, Nematode problems of protected cultivation, Crop loss estimation, ecological and socio-economic aspects, pest risk analysis of important nematodes, Principles and practices of nematode management - Physical, cultural, host resistance, biological, chemical and regulatory methods with their advantage and disadvantages, Integrated nematode management, Nematode management under protected cultivation, Nematode as biological models, Application of molecular techniques in Nematology.

10. PLANT PATHOLOGY

Landmarks and pioneers of plant pathology; theory of microscopy and staining; morphology of fungi, bacteria, rickettsia's, phytoplasma and spiroplasma, viruses and viroids; principles of culturing and preservation of pathogens; characteristic symptoms; host-parasite relationships and its basis; symbiosis; economically important diseases of crop plants induced by fungi, bacteria, rickettsia's, phytoplasma and spiroplasma, viruses and viroids; phanerogamic parasites, non-parasitic diseases; nutrition, growth, reproduction, lifecycle, ultra-structure, genetics and classification of microorganisms; Molecular methods for detection and diagnosis of Pathogenic microbes like fungi, bacteria and viruses.; beneficial microorganisms including mycorrhiza; variation in phytopathogens and their ecology; introductory epidemiology. Principle of disease management, disease resistance, plant quarantine, seed and soil health. Disease forecasting. Important statistical designs; methods of their statistical analysis.

11. SOIL SCIENCE AND AGRICULTURAL CHEMISTRY

Rocks and minerals; mineral weathering and soil formation; classification of soils, major soils of India; Soil texture, structure, soil water, soil temperature, soil air and their management, principal silicate structures; nature and properties of organic and inorganic constituents of soils, ion exchange phenomenon; activity of ions in soil system; fixation and release of nutrients. Soil fertility evaluation; movement of water; problematic soils, soil-related constraints in crop production and remedial measures, soil amendments; soil and water conservation; sampling and analytical procedures for soils, plants, water, manures, fertilizers and soil amendments; quality of irrigation water; fertilizer recommendations; soil organic matter, soil micro flora; carbon, nitrogen and phosphorus cycles; biofertilizers; phosphate solubilization; Darcy's law; Ficks law, steady and transient state diffusion in soils. Essential plant nutrients; manures; utilization of organic wastes and industrial by-products; fertilizers and their production, properties and usage; secondary and micronutrients. Microbial transformation of N, P, S, Fe & Mn; land capability classification, chemistry of submerged soil, soil & water pollution, fertilizer control order. Principles of experimental designs, analysis and interpretation of data, methods of statistical analysis and statistical designs

HORTICULTURE

1. FRUIT SCIENCE

Importance scope, area and production of fruits, classification of fruit crops, climatic and soil requirement, Recent trends in planting systems, cropping systems, rejuvenation, climatic requirement for fruit crops, improved varieties, principles of pruning and training, canopy management, nutrient management, fertigation, use of bio-fertilizers, weed control, water management, nursery management of fruit plants, modern methods of propagation including root stock and micro propagation, high density orcharding, use of growth regulators in fruit crops; biotic and abiotic factors limiting fruit production, physiology of flowering, pollination, fruit set and development, insect pest and diseases management, physiological disorders & it's management. Cultivation practices of major fruit crops like mango, citrus, banana, grape, papaya, guava, pineapple, sapota, strawberry, litchi, loquat, phalsa, jackfruit, mangosteen, cashew nut, ber. pomegranate, date palm, aonla, wood apple, bael, custard apple and temperate fruits like apple, pear, peach, almond, plum, apricot and cherry. Arid fruit crops and underutilized fruit crops. Maturity indices, harvesting, pre-cooling, grading, packing methods and transport, methods of storage; ventilated, refrigerated, MAS, CA storage, physical injuries and disorders, physiology and biochemistry of fruit ripening, ripening techniques of fruit crops, major methods of preservation and processing of fruit crops. Biodiversity, germplasms conservation, gene centers, intellectual property rights of fruits crops. Role of photoperiod, vernalization, dormancy, respiration, transpiration, photosynthesis and senescence in plants. Essential plant nutrients and their uptake in fruit crops. Important statistical designs; methods of their statistical analysis.

2. VEGETABLE SCIENCE

Introduction, botany and taxonomy, climatic and soil requirements, commercial varieties/hybrids, sowing/planting times and methods, seed rate and seed treatment, nutritional and irrigation requirements, intercultural operations, weed control, mulching, physiological disorders, harvesting, post-harvest management, plant protection measures, economics of crop production and seed production of warm season vegetables (tomato, eggplant, hot and sweet peppers, okra, beans and cowpea, cucurbitaceous crops, tapioca and sweet potato, green leafy vegetables), cool season vegetables (potato, cabbage, cauliflower, knoll kohl, sprouting broccoli, brussels sprout, root crops: carrot, radish, turnip and beetroot. bulb crops: onion and garlic, peas and broad bean, green leafy vegetables), under exploited vegetables (Asparagus, artichoke and leek, brussels's sprout, chinese cabbage, broccoli, kale and artichoke, amaranth, celery, parsley, parsnip, lettuce, rhubarb, spinach, basella, bathu (chenopods) and chekurmanis. elephant foot yam, lima bean, winged bean, vegetable pigeon pea, jack bean and sword bean, sweet gourd, spine gourd, pointed gourd, oriental pickling melon and little gourd).

Introduction, importance of spice crops-historical accent, present status - national and international, future prospects, botany and taxonomy, climatic and soil requirements, commercial varieties/hybrids, site selection, layout, sowing/planting times and methods, seed rate and seed treatment, nutritional and irrigation requirements, intercropping, mixed cropping, intercultural operations, weed control, mulching, physiological disorders, harvesting, post-harvest management, plant protection measures and seed planting material and micro-propagation, precision farming, organic resource management, organic certification, quality control, pharmaceutical significance and protected cultivation of black pepper, cardamom, clove, cinnamon and nutmeg, allspice, turmeric, ginger and garlic, coriander, fenugreek, cumin, fennel, ajowain, dill. celery, tamarind, garcinia and vanilla.

Origin, botany, taxonomy, cytogenetics, genetics, breeding objectives, breeding methods (introduction, selection, hybridization, mutation), varieties and varietal characterization, resistance breeding for biotic and abiotic stress, quality improvement, molecular marker, genomics, marker assisted breeding and QTLs, biotechnology, issue of patenting, PPVFR act and their use in breeding in vegetable crops like Potato and tomato. Eggplant, hot pepper, sweet pepper and okra, Peas and beans, amaranth, chenopods and lettuce, Gourds, melons. pumpkins and squashes. Cabbage, cauliflower, carrot, beetroot, radish, sweet potato and tapioca.

Definition of seed and its quality, new seed policies; DUS test, scope of vegetable seed industry in India. Genetical and agronomical principles of seed production; methods of seed production; use of growth regulators and chemicals in vegetable seed production; floral biology, pollination, breeding behavior, seed development and maturation; methods of hybrid seed production. Categories of seed; maintenance of nucleus, foundation and certified seed; seed certification, seed standards; seed act and law enforcement, plant quarantine and quality control. Physiological maturity, seed harvesting, extraction, curing, drying, grading, seed processing, seed coating and pelleting, packaging (containers/packets), storage and cryopreservation of seeds, synthetic seed technology. Agro-techniques for seed production in solanaceous vegetables, cucurbits, leguminous vegetables, cole crops, bulb crops, leafy vegetables, okra, vegetatively propagated vegetables.

3. FLORICULTURE AND LANDSCAPING

History, importance and scope of Floriculture and landscape gardening in India, commercial floriculture, cut flowers and loose flower production technology.

Breeding: Various breeding methods suitable for sexually and asexually propagated flower crops and ornamental plants for varietal development. Production of hybrids, male sterility, incompatibility problems in commercial flower crops. Breeding constrains and achievements made in ornamental plants. Introduction and

selection of plants for waterscaping and xeriscaping.

Production Technology of cut flowers: Scope and importance of cut flowers in India, Global Scenario of cut flower production. Varietal wealth and diversity. Area under cut flowers and production problems in India. Protected cultivation technology of cut flower production with soil, media, water, nutritional and environmental parameters. Use of growth regulators, plant protection measures, Flowers forcing and year-round flowering through physiological interventions. Cut flowers standards, grades, harvesting indices, harvesting techniques, post-harvest handling, storage, various uses and marketing and exporting of cut flowers. Crops: Cut rose, chrysanthemum, carnation, gerbera, gladiolus, tuberose, orchids, anthurium, aster, lilies, birds of paradise, heliconia, alstroemeria, cut foliage, etc.

Production technology for loose flowers: Scope of loose flowers trade, Significance in the domestic/export market, varietal wealth and diversity. Propagation techniques, sexual and asexual propagation methods, Propagation in mist chambers, tissue culture, soil less media, advanced nursery technology, its management, pro-tray nursery under shade nets, transplanting techniques, precision farming techniques. Water and nutrient management, weed management, training and pruning, pinching, disbudding and special horticultural practices, use of growth regulator, physiological disorders, plant protection measures. Flower forcing and year-round flower production for special occasions through physiological interventions chemical regulation, harvesting, harvesting techniques, post-harvest handling and grading packing and storage, value edition, concrete and essential oil extraction, export potential of loose flowers, production technology for Jasmine, Scented rose, chrysanthemum, marigold, gaillardia, tuberose, crossandra and non-traditional flowers.

Landscaping: Landscape designs, styles of garden, formal informal and free style gardens, types Of gardens, English, Mughal, Japanese Persian, Spanish, Italian, Vanas, Buddha garden, urban landscaping, landscaping for specific situation like institutional, industrial, residential. public and private gardens, principles and special features of Landscape gardens, various plants and non-plant components of landscape gardens, arboretum, shrubbery, fernery, arches, and pergolas, edge, hedges, climbers, creepers. Annual flowers, shrubs, bonsai. Special types of gardens, vertical gardens, use and maintenance of garden machinery tools, Lawn establishment and maintenance.

Protected Floriculture: Protected floriculture in India. Types of protected structures, design, structural components, suitable flower crops for protected cultivation. Different systems used in protected cultivation. Factor and components of protected cultivation.

Value Addition and floral arrangement: Global scenario, production and export. Types of value-added products, flower arrangements, floral decorations, types and techniques.

HOME SCIENCE

1. FOOD SCIENCE AND NUTRITION/ FOOD AND NUTRITION

Overview of macro and micro nutrients; Basis of requirement, protein turn over, methods of assessing protein quality, Functions and role of dietary fibre in various physiological disorders. Chemistry, distribution, functions, absorption, transport, metabolism, deficiency manifestations, toxicity of vitamins and minerals; Sensory evaluation; Effect of cooking on their nutritive value of foods; Nutritional requirements during life cycle; Therapeutic nutrition; Nutritional status at individual, household and institutional level; National nutritional programmes and policies; Nutritional surveillance; Food and nutrition security at national and household level; Food product development.

2. HUMAN DEVELOPMENT AND FAMILY STUDIES

Introduction to child/human development- meaning, concept, principles, prenatal development (conception to child birth), care of new born, pre-natal and post-natal care of mother, development of child in early and late

childhood, adolescence, marriage and family dynamics, meaning, definition of family life cycle, family welfare programmes in India, child studies methods. Meaning, types and functions of theory, theoretical perspectives- biological, environmental, interactional and cultural; Integrated view of development from a life span perspective- recent research trends in human development issues. Gender issues in Human Development and Family Studies (socialization, family roles, responsibilities and family adjustment). Need, Importance and approaches for parent and community education. Types of developmentally challenged children and concept of special education, ethical issues in the assessment of human development., Guidance and counselling- concept, aims, need, nature and scope of guidance and counselling, Impact of aging on physical, psychological, socio-emotional aspects. Orientation to the supportive and substitutive services related to the welfare of families. Meaning area and scope of marital and family therapy.

3. EXTENSION EDUCATION AND COMMUNICATION MANAGEMENT

Extension efforts after independence :Community Development Programme; Panchayati Raj Institutions; Area and target oriented programme; Special programme for poor, women and children; ICAR research and extension systems- KVK, NATP, IVLP, ATIC, NAIP, AICRP; NITI Aayog; Extension Approaches to rural development; Communication skills; Development communication; Recent advances in communication- print and electronic, ; e-Governance; Participatory planning; Project management techniques - PERT, CPM, SWOT analysis; Implementation, monitoring and evaluation of extension programme; SHGs; Types of training; Experiential Learning Cycle; Participatory training methods; Designing, management and delivery of training programme; HRD- concept and techniques; Role of multimedia in communication; Administration and management of extension organizations; Various formats of scientific communication.

4. TEXTILE AND APPAREL DESIGNING

Chemistry of polymers; Structure of textile fibres cotton, viscose rayon, silk, wool, linen, polyester, acrylic, spandex and minor fibres; action of heat, light, bleach and micro-organisms on different fibres; commercial processes of fibres, High performance fibres; Functions of ISI and other standards, National and international organizations for standards. Textile Quality Analysis - fibres, Yarn and Fabric testing; Shuttle less looms; Complex & fancy structures; Advanced techniques of pattern making and draping; Pattern grading and fitting; Government Textile & Clothing policies.

5. RESOURCE MANAGEMENT AND CONSUMER SCIENCE

Management-concept, system approach to management, motivating factors, motivation theories; Functions of management-planning, supervision, controlling, organizing, evaluation; Resources- classification, characteristics; Scientific Management; Biomechanics and application of biomechanics to movement; Ergonomics Tools and techniques to assess and control ergonomic hazards at work; Family dynamics, Human rights ; Economic and psychological cost of gainful employment of women in the family.; Significance of product design and need for creative approach; Globalization, Liberalization and Privatization- its impact on consumer behaviour; Consumer and protection; Characteristics and status of people with special needs; Management of natural resources; Sustainable development; Environment and health hazards; Entrepreneurship development.

FORESTRY

1. SILVICULTURE AND AGROFORESTRY

Forest ecosystem concept, stand dynamics-forest succession, productivity and vegetation forms and natural/artificial regeneration of tree species. Tree measurements, forest inventory and yield concepts. Forest management, ecosystem management, site quality evaluation, stand density and forest valuation.

Forest protection through diseases and pest management. Seed development in tropical, sub- tropical and temperate region, testing and certification.

Soil and water management in Agroforestry including biogeochemical cycling of nutrients. Nutrient and Weed Management and Management of Insect-Pests and Diseases in Nursery and Plantation, various aspects of production, integrated nutrient and irrigation management and ecological factors in raising forest plantations. Plantations of Neem, Casuarina, Poplars, Eucalyptus, Terminalias, Acacias, Pine, Oak, Gmelina, Teak, Sandal, Bamboo, etc.

Modern nursery techniques about types of nurseries, vegetative propagation, use of green house, mist chamber and fertilizer use. Scope and advantages of using and raising bio-energy plantations. Concept and objectives of agroforestry, community forestry and social forestry, land use including diagnosis and design methodologies.

Major Agroforestry practices in different agro ecological zones of India- arid and semi-arid regions- agroforestry practices for wasteland reclamation, salt affected soils, wetlands and waterlogged areas. Non-wood forest products-based agroforestry. Recent trends in Agroforestry systems research and development. National Agroforestry Policy 2014, National and International organizations in Agroforestry. Climate change risk on farming and forests, in agroforestry systems. Principles of economics and use of economic tools in appraisal of the agroforestry systems.

Interactions between tree and livestock including their management, principles of crops and fodder production in Agroforestry. Fodder from trees/shrubs and their nutritive value/ propagation techniques. Woody elements in agro-forestry systems, their role in biomass production. Suitability of species for different purposes. Multipurpose trees in agro-forestry systems. Fruits crop and their need and relevance in Agroforestry fruit tree species suitable for various assemblage and then planting plan in different agro climatic situation and Agroforestry systems. Role of nitrogen fixing trees/ shrubs. Choice of species for various agro climatic zones for the production of timber, fodder, fuel wood, fiber, fruits, medicinal and aromatic plants. Generic and specific characters of tree and shrubs for Agroforestry. Generic and specific characters of trees and shrubs for agro-forestry. Importance of rangeland, components of rangeland their characteristics and distribution, major types of rangelands in world and their characteristics, types of grasslands in India. Importance Remote sensing, components of Digital image processing, image analysis and classification, Use of GIS and GPS. Use of GIS software in Forestry. Forest soils and land reclamation, Watershed management practices. Probability distribution, Measurement of central tendency, Standard error and deviation, Correlation and regression, Tests of Significance- large and small sample test, ANOVA, Sampling and experimental designs-CRD, RBD, LSD, SPD and Factorial experiments.

TENTATIVE SCHEDULE OF ADMISSION PROCESS THROUGH Pre-Ph.D. 2024

S. No.	Activities	Proposed Date & Day	
1.	Issuing notification	09.03.2024	Saturday
2.	Date of commencement for filling the online application form	14.03.2024	Thursday
3.	Last date for filling and depositing the online application form without late fee	15.04.2024 12:00 Midnight	Monday
4.	Last date for filling & depositing the online application form with late fee of Rs. 500/-	18.04.2024 12:00 Midnight	Thursday
5.	Availability of admit cards in candidate login ID	27.05.2024	Monday
6.	Date of Entrance Examination	02.06.2024	Sunday
7.	Display of answer key	07.06.2024	Friday
8.	Last date for objections, if any	10.06.2024 12:00 Midnight	Monday
9.	Declaration of result	19.06.2024	Wednesday
10.	Opening of Option Form for Main Online Counselling	01.07.2024	Monday
11.	Last date for depositing fee for the Online Option Form	07.07.2024 12:00 Midnight	Sunday
12.	Display of 1 st Provisional Allotment List	16.07.2024	Tuesday
13.	Last date for accepting allotment and depositing the fee or submitting request for 1 st upward assessment (Online)	19.07.2024 12:00 Midnight	Friday
14.	Display of 2 nd Provisional Allotment List	22.07.2024	Monday
15.	Last date for accepting allotment and depositing the fee or submitting request for 2 nd upward assessment (Online)	24.07.2024 12:00 Midnight	Wednesday
16.	Display of 3 rd Provisional Allotment List	27.07.2024	Saturday
17.	Last date for accepting allotment and depositing fee (Online)	29.07.2024 12:00 Midnight	Monday
18.	Reporting with original documents in respective college (up to 5:00 PM)	02.08.2024	Friday
	If seats remain vacant		
19.	Opening of Option Form for Final Online Counselling	08.08.2024	Thursday
20.	Last date for depositing fee for the Online Option Form	12.08.2024 12:00 Midnight	Monday
21.	Display of 1 st Provisional Allotment List	15.08.2024	Thursday
22.	Last date for accepting allotment and depositing fee (Online)	17.08.2024 12:00 Midnight	Saturday
23.	Reporting with original documents in the College	21.08.2024	Wednesday
24.	Display of 2 nd Provisional Allotment List	23.08.2024	Friday
25.	Last date for accepting allotment and depositing fee (Online)	25.08.2024 12:00 Midnight	Sunday
26.	Reporting with original documents in the respective College	28.08.2024	Wednesday

Note: Candidates are advised to visit the website for changes in dates, system, or any other information from time to time. The coordinator Office will not be responsible for not reaching the changes to the candidate in time.

Admission process for 2024 will be over by **28.08.2024**. Although, JET Coordinator reserves the right to change the dates and schedule.

The record of JET 2024 Examinations would be available up to 90 days from the date of final counseling. The same would be weeded out thereafter. If any kind of dispute/litigation arises, the jurisdiction related to the admission through JET-2024 Entrance Examinations will be of Hon'ble Rajasthan High Court, Jodhpur. Further, any legal question arising out of the examinations shall be entertained only when raised within 120 days from the declaration of result.

Contact Details:JET Landline number: **02912948573**Bank Contact number: **8003698791**JET Mobile Number.: **8441882024**Bank email id.: **virendra.sardiwal@jcicibank.com**Support email id: **jet2024@aujodhpur.ac.in**

Help Line: Between 10.00 am and 5.00 pm on working days.

COORDINATOR,**JET/Pre-PG/Ph.D. Entrance Examinations - 2024**