



## Notice for Admission to Ph.D. Programme 2024 in the Department of Seed Science and Technology, Institute of Agricultural Science, University of Calcutta

Applications are invited for the admission to the Ph.D. programme in the Department of Seed Science and Technology, University of Calcutta for the year 2024. Eligible candidates (criteria for eligibility are given below) can apply in the prescribed Application form attached herewith:

- 1. Eligibility:** M. Sc. (Ag.) in Seed Science and Technology.
- 2. Number of vacancies:** 5 (Five) vacancies exist in the Department of Seed Science and Technology for admission to Ph.D. considering the strength and availability of faculty members.
- 3. Reservation:** Reservation policy in admission will be followed as per the West Bengal State Higher Educational Institutions (Reservation in Admission) rules, 2013.
- 4. Requirement of Ph.D. Entrance Test:** Candidates for admission to the Ph.D. programme shall have a M. Sc. (Ag.) degree in Seed Science and Technology with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) are eligible to apply. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-abled and other categories of candidates as per UGC Ph.D. Regulations, 2016.
- 5. The entrance test will be of 50 marks. The question pattern will be of objective type or short answer type. The Duration of the entrance test will be one hour. (Qualifying Marks for the Ph.D. Entrance Test will be 50%).**
- 6. Exemption from Ph.D. Entrance Test:** Those who have qualified in NET/GATE/ or have obtained DST INSPIRE Fellowship would be exempted from the Ph.D. entrance test. They may directly submit a statement of purpose or research in brief and appear in the interview.
- 7. Details of Ph.D. Entrance Test and Interview:**

**Date & Time:** Ph.D. Entrance test followed by an interview (**Research Eligibility Test**) for Ph.D. programme in Seed Science and Technology will be held on 3<sup>rd</sup> April, 2024 at 1 p.m. and same day at 4 p.m. respectively.

**Details of interview:** An interview will be held on 3<sup>rd</sup> April, 2024 at 4 p.m. for entrance test qualified candidates as well as candidates having NET/GATE/or have obtained DST Fellowship.

Successful candidates will be eligible to register for their Ph.D. in Department of Seed Science and Technology.

**Venue:** Department of Seed Science and Technology, Institute of Agricultural Science, University of Calcutta, 51/2, Hazra Road, Ballygunge, Kolkata, West Bengal- 700019.

All candidates are requested to download the Application Form from University website ([www.caluniv.ac.in](http://www.caluniv.ac.in)) and submit the filled up Application Form, One passport size photo, Self-attested copy of relevant mark sheets, Proof of age and Certificate supporting reserve category, along with the receipt of deposition of **Application Fee of 100/- (One hundred only)** paid through a challan obtainable in the College Street cash counter of the University of Calcutta or through **State Bank Collect** online by-

- i) Click <https://www.onlinesbi.sbi/sbicollect/icollecthome.htm>
- ii) Type of corporate/institution- Educational Institutions; State of corporate/ institution- West Bengal.
- iii) Educational institute name- **CALCUTTA UNIVERSITY ONLINE PAYMENT.**
- iv) Select payment category- Entrance fees for PhD Program in Law.
- v) Remarks- **“Entrance fees for RET- 2024, SEED SCIENCE AND TECHNOLOGY”**

and send within the due date to the Institute office or H.O.D, Department of Seed Science and Technology, Institute of Agricultural Science, University of Calcutta by 28<sup>th</sup> March, 2024.

**Last date for submission of dully filled in application form (with copies of all relevant documents) is 28/03/2024.**

**The application form for admission is available below.**

**HEAD, Department of Seed Science and Technology**

**SYLLABUS FOR THE RESEARCH ELIGIBILITY TEST (RET) FOR Ph.D.  
PROGRAMME IN THE DEPARTMENT OF SEED SCIENCE AND TECHNOLOGY**

Principles & practices of seed production - concept of genetic purity of varieties, isolation distance, concept of nucleus, breeder, foundation and certified seeds, concept of hybrid seed production, agronomic management of seed production, seed production of forest tree seeds.

Synthesis of food reserves- polysaccharides, proteins and lipids, physiology of seed development, seed maturation and ripening, dormancy, photosynthesis, respiration, photoperiodism, thermoperiodicity, germination, breakdown of seed storage products during germination, seedling establishment, micropropagation.

Pollination, fertilization, seed and fruit development, polyembryony and apomixis, food reserve- storage protein, carbohydrate, polysaccharides, oil and fats, phytins, hormones and seed development, morphology of seeds for varietal identification, isozymes, RELP/RAPD, storage protein-banding pattern in cultivar identification.

Orthodox and recalcitrant seeds, seed viability, concept of seed vigour and its measurement; physiological, biochemical and cytological changes associated with seed deterioration, prediction of vigour of orthodox and recalcitrant seeds, seed storage, symptoms of seed deterioration, seed invigoration treatments, seed borne fungi and diseases, pre- and post-harvest effects on seed quality; seed pathology and seed entomology; seed testing and quality control, seed sampling, seedling evaluations, purity analysis, concept & classification of quality seeds, seed legislation, seed certification, development and operation of seed industry in India; developmental and germination physiology- physiology of fruit growth, effect of environment before harvesting, seed development and maturation, post-harvest physiology of fruit, climacteric rise, physiology of tuber and bulb formation, growth regulators - structure, biosynthesis, role and mechanism of action of auxin, gibberellin, cytokinin, ethylene and abscisic acid; seed priming, physiological and biochemical basis of priming; seed production in major field crops, vegetables and fruits.

**HEAD, Department of Seed Science and Technology**

UNIVERSITY OF CALCUTTA



Department of Seed Science and Technology, Institute of Agricultural Science,  
University of Calcutta  
Research (Ph.D.) Eligibility Test (RET)- 2024

Application Form for the Admission Test of the Ph.D. Programme in Seed Science  
and Technology

- 1) Name (in Block Letters): \_\_\_\_\_
- 2) Date of Birth: \_\_\_\_\_
- 3) Father's Name: \_\_\_\_\_
- 4) Marital Status: \_\_\_\_\_
- 5) Whether SC/OBC/ST/Physically Challenged: \_\_\_\_\_
- 6) Nationality: \_\_\_\_\_
- 7) Address for Communication: \_\_\_\_\_  
\_\_\_\_\_
- 8) Phone No (Residence & Mobile): \_\_\_\_\_
- 9) E-mail ID: \_\_\_\_\_
- 10) Academic Qualifications:

S. No.	Name of the Examinations	Year	Board /University	Subjects taken	Div./Class	% of Marks

- 11) Whether qualified in NET/GATE/equivalent examination: \_\_\_\_\_

.....  
**Signature of the applicant with date**

\* Candidates are requested to deposit application fee of Rs.100/- either by cash or DD through duly filled in C.U. Challan, endorsed by the Head of the Department or State Bank Collect within the due date.  
\*\* Attested photo-copies of the testimonials are to be submitted along with this form.  
\*\*\* Original documents may be asked for as and when required by the appropriate authority.