

## ADMISSION GUIDELINES PhD PROGRAM

NIFTEM offers PhD programmes in the following departments and areas.

### Areas of Research:

**a) Agriculture and Environmental Sciences:** (Post Harvest Management and Processing of fruits and vegetables, Environmental issues in Food Sector)

**b) Basic and Applied Sciences :** (Food Safety, Food Microbiology, Food diagnostics, Lipid Oxidation, Food fortification, Prebiotics, Biosensors, Active Packaging, Green Energy Technology, Smart materials and nano-composites, Mathematical Biology, Queuing Theory, Studies for setting up of MRL values for various toxicants in food products, Analytical instrumentation & New Analytical method development & validation, Shelf life studies, Risk Assessment studies for various toxicants in food products, Packaging compatibility studies, Structure-Activity correlation, Bio-availability & ADME studies, Nutraceuticals & Functional food, Quality standardization, Harmonization of standards, Calibration for Quality Assurance, Food Quality Systems, Food Regulation & Policies)

Note: All research work undertaken would be related to their application in the Food Sector.

**c) Food Engineering:** Process modelling and simulation, Bio Conversion technology, Design and development of processing equipment, Renewable energy in Food Processing, Unit operations of Food Engg, Food Packaging Technologies, Drying and Storage Technologies, Novel Food Processing Technologies, Food by products / food processing industry waste management, Operational design in food industries

**d) Food Business Management and Entrepreneurship Development:** Marketing, CSR, Statistics, Quantitative Techniques, Operations Research, Management Science, Banking, Financial Services, Entrepreneurship, Supply Chain Management, Agribusiness Management, General Management, Sustainability, IPR, Banking, Entrepreneurship, General Management, Capital Marketing, Banking & Finance, General Management, Entrepreneurship, Business Strategy, Marketing, Entrepreneurship Development, General Management, Organisation Behaviour, Operations Management, Work Study, Operations Research, Supply Chain, Quality Management

**e) Food Science and Technology :** Food Technology, Waste Utilization, Value addition, New Product Development, Food Safety and Toxicity evaluation, in vitro and in vivo Toxicity and Safety studies of developed food/food ingredient, Risk Assessment of various contaminants/toxicants in food/Bio-availability & ADME studies, in vitro and in vivo digestibility studies, Safety/Migration studies of packaging material/components, Nutraceuticals & Functional food, Nutrition, Dietetics, Nutritional Biochemistry, Nutraceuticals and Functional Foods, Food designing etc.

### A. SELECTION PROCESS

**Eligibility Criteria:** M. Tech. /Master Degree in a relevant discipline with at least 60% marks at Masters. Candidates can apply ONLY IN ONE DEPARTMENT.

***A relaxation of 5% of marks (from 60% to 55%) shall be allowed for the candidates belonging to SC/ST/OBC (Non-Creamy layers)/Differently-abled category in the entrance examination conducted by the Universities.***

*Provided further that, if in spite of the above relaxation, the seats allotted for SC/ST/OBC(Non Creamy layer)/Differently-abled categories remain unfilled, the concerned Universities shall launch a Special Admission Drive, for that particular category within one month from the date of closure of admissions of General Category. The concerned University will devise its own admission procedure, along with eligibility conditions to ensure that most of the seats under these categories are filled.”*

<b>Department</b>	<b>Essential Qualification</b>
Agriculture and Environment Sciences (AES)	M. Tech. in Food Science/ Food Technology and Management/Food Safety and Quality Management/ Food Supply Chain Management/ Biotechnology/ Biochemical Engineering/ Nanotechnology/Post Harvest Technology OR M. Sc. Degree in Food Science & Technology/ /Microbiology/ Biotechnology/ Life Science/Agriculture Science/ Horticulture/ Postharvest Management/Postharvest Technology/Cold Chain Management/Environmental Science/Environmental and Allied area from recognized Institute/University
Basic and Applied Sciences (BAS)	M. Tech. in Food Science/ Food Technology and Management/ Food Technology/Dairy and Food Technology/ Process Engineering and Management/Food Biotechnology/Food Safety and Quality Management/Food Supply Chain Management from a recognized University / Institute. In addition or Masters degree in Food Science and Technology/Biochemistry /Microbiology/ Chemistry/ Biotechnology/ Food biotechnology/Food and nutrition/ Life Science/ Agriculture Science/ Environmental Science/ Mathematics/ Statistics/ Operational Research/ Physics/Materials Science from a recognized University / Institute
Food Business Management and Entrepreneurship Development (FBM) & ED	MBA, PGDBM (all areas) (Two years program), M.Com, CA, ICWA, M.Tech. (Operations/Food Plant Operations/Industrial Engineering) or its equivalent from a recognized University/Institute.

Food Engineering (FE)	M.Tech in / Food Technology and Management / Food Process Engineering and Management/ Food Technology/ Food Process Engineering/ Food Engineering / Dairy Engineering/ Dairy technology /Agriculture and Food Engineering/ Mechanical Engineering/ Automation & Robotics engineering / Chemical Engineering / Biochemical Engineering/ Food and Bio Process Engg / Dairy and Food Engg/Post Harvest Process and Food Engg and Management /Food Technology and Management/Farm machinery and power Engg
Food Science and Technology (FST)	<p>M.Tech. Food Science / Food Technology and Management / Food Safety and Quality Management / Food Supply Chain Management/ Food Technology / Food Process Engineering / Food Process Engineering and Management/ Food Engineering / Dairy Engineering / Dairy Technology / Agriculture Process Engineering / Agriculture &amp; Food Engineering/ Food Biotech/ Food and Fermentation/MTech in Food and Bioprocess Engineering, Process and Food Engineering, Nanoscience and Technology/Biochemical Engineering from a recognized university / institute.</p> <p>In addition, M.Sc./Master's degree in Food Technology / Food Science &amp; Technology / Nutritional biochemistry/Food Science &amp; Nutrition /Clinical Nutrition and Dietetics/Toxicology/Vet. Pharmacology &amp; Toxicology/Nanotechnology/Nanoscience and Technology/Meat Science/ Meat Technology/ Animal Product Technology/Livestock Product Technology are eligible for admission.</p> <p>Candidate may be required to go deficiency courses as per requirement.</p>

**Selection & Mode of Programme:** Candidates who have qualified UGC-NET (including JRF)/UGC-CSIR NET (including JRF)/ICAR-NET (including JRF/SRF)/Other JRF holding candidates, shall be exempted from Research Entrance Test (RET) in line with clause 5.1 of UGC (Minimum Standards and Procedure for Awards of M. Phil and PhD Degrees) Regulations 2016. Other candidates (including part time) will have to appear for RET. DST (INSPIRE) candidates would be allowed to appear in the interview directly. In case DST INSPIRE candidate gets selected, he/she should produce confirmation of fellowship from DST failing which his/her admission will be cancelled

JRF/SRF candidates already working in the externally funded projects of the NIFTEM can be enrolled as PhD students provided they qualify RET and interview. Such candidates will get fellowship/JRF from the project till the end of the project. After project is finished, such candidates will get NIFTEM PhD fellowship, provided he/she has secured NIFTEM PhD fellowship at the time of admission 2020 as well as it will be as per NIFTEM PhD regulations.

**Due to prevailing COVID-19 circumstances, RET and Interview can be conducted by NIFTEM either online/offline (Details to be uploaded on NIFTEM website).**

Both NET (including JRF) qualified and RET qualified candidates will appear for interview /presentation where the candidates would be required to discuss their research areas/interest before the interview panel. *For selection of candidates, a weightage of 70% to the entrance test and 30% to the performance in the interview/viva-voce shall be given.* Candidates holding fellowship appearing directly for interview, marks obtained out of 30 to be first converted to 100 and then Normalization of scores (for both type of candidates, i.e., fellowship holders and non-fellowship holders) will be done before preparing final merit list.

Separate department-wise (subject specific) merit lists to be prepared. Separate merit list (department wise) will be prepared for part-time candidates.

### **SEATS AND FELLOWSHIPS**

❖ PhD Seats under full time and part time mode for the academic session 2020-21 are given below. Only 02 candidates per department will get NIFTEM PhD fellowship based on merit for the year 2020-21. Part Time candidates will NOT get NIFTEM PhD fellowship. Fellowship would be extended beyond 3<sup>rd</sup> year as per NIFTEM PhD regulations.

#### **Seat matrix and reservation:**

<b>Department</b>	<b>UR</b>	<b>SC</b>	<b>ST</b>	<b>OBC</b>	<b>EWS</b>	<b>Total</b>
<b>FST</b>	2 + 1 (PT)	1	-	1	1	6
<b>AES</b>	2 + 1 (PT)	1	1	1	-	6
<b>BAS</b>	2 + 1 (PT)	1	-	2	1	7
<b>FBM</b>	2	1	-	2 + 1 (PT)	-	6
<b>FE</b>	1 (PT)	1	1	1	1	5
<b>Total</b>						<b>30</b>

#### **RET Syllabus and Interview:**

❖ .As per entrance paper choice, the syllabus of the Entrance Test (RET) shall consist of 50% of research methodology and 50% shall be subject specific. **There shall be NO negative marking for wrong answer.** Syllabus for the entrance exam will be uploaded on NIFTEM website.

❖ Interview scheme: Each department will carry out interview. The pattern of interview will be as follows

<b>UG marks</b>	<b>PG marks</b>	<b>Fellowship</b>	<b>Publications</b>	<b>Interview</b>
2 (Proportionate to 100%)	3 (Proportionate to 100%)	8 (to be given to student if he/she possesses any kind of fellowship as mentioned above to pursue PhD	2 (Each SCI journal paper to have 1 mark subject to max. of 2 marks	15 (Based on Student's scientific & research ability in particular area of research

### **Important points for Part time applicants**

1. The candidate will have to undergo stipulated course work along with regular students. No weekend classes will be conducted for such students.
2. The student will have to submit synopsis immediately after course work and get it approved as per due procedure. Once synopsis is approved, student may be allowed to pursue rest part of PhD at their parent organisation
3. Student will have to propose a co-guide from the place of work (Industry/academic organization). The proposed co-guide should be a PhD and need to be recognized by institute through DRC. In case no PhD person is available, a person of high authority in parent organization can be considered as advisory committee member
4. Student will have to compulsorily present progress of research work in NIFTEM else registration to next semester may not be considered.
5. The student will have to follow all other regulations of NIFTEM as other students.
6. Permission from parent institute relieving candidate for pursuing Part-time PhD and leave granted shall be produced at the time of interview can be mentioned in "important points for Part time applicants.