



Indian Institute of Technology (ISM) Dhanbad
Office of the Dean (Research & Development)

Sanction No and Date: PSF-IH-4Y-TD-134, 25 th May 2026	IIT (ISM) Project No. SRDP 1320 G	Date: 24/09/2026
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Project Staff (JRF/SRF/RA/Project Assistant/Project Associate) position under TexMiN Foundation

Applications are invited under the sponsored project. The details of the project are as under:

Position	Junior Research Fellow (JRF)
Number of Position (s)	01
Title of The Project	AI-Empowered Multiscale Framework for Sustainable Rare-Earth Element Recovery from Secondary Resources
Principal Investigator	Dr. Madhulika Gupta, Assistant Professor, Department of Chemistry and Chemical Biology, IIT(ISM) Dhanbad
Tenure of Project	Eighteen Months, or until the completion of the project, whichever comes earlier. <i>(The position may be converted into a regular JRF of the institute at any point, subject to the IIT(ISM) rule)</i>
Job Description (in maximum 100 words)	The research project focuses on developing an AI-enabled multiscale framework for the sustainable recovery of rare earth elements (REEs) from secondary resources (e.g., mine tailings, fly ash, industrial residues, and electronic waste). The work involves data collection and curation, machine learning model development, DFT and Molecular dynamics simulations, along with experimental validation for resource characterisation and process optimisation, and multiscale modelling of extraction mechanisms. The project aims to enhance REE recovery efficiency, reduce environmental impacts, and support circular economy initiatives by integrating artificial intelligence and computational modelling.
Essential Qualification	- M.E/M.Tech/M.S/ Integrated M.Tech or B.E/B.Tech. in Metallurgical/Chemical /Mineral/ Environmental/Computer Science or its related discipline OR M.Sc or M.Sc.Tech in Chemistry/ Environmental Science or equivalent degree - The candidates must have qualified GATE/CSIR-UGC NET examination.
Desirable Qualification	Experience in machine learning, data analytics, and programming (Python, MATLAB) in the relevant field
Age and Relaxation (if any)	As per the norms of the Govt. of India
Fellowship	Rs. 37,000/- +HRA (as applicable) per month
Last Date & Time	- Interested candidates should mail a single PDF containing (i) CV (ii) GATE/NET score card (iii) self-attested copies of all mark sheets and certificates from class 10th (iv) proof of work experience (if any) to PI madhulikagupta@iitism.ac.in by 4th October 2026. <u>Candidate should write “Application for the position of JRF under TEXMiN Project SRDP 1320 G” in the subject of the email.</u>

Shortlisted candidates will be informed on the date of interview. Mere possession of the minimum qualification does not guarantee an invitation to the interview. Candidates will be shortlisted based on their merit and as per the requirements of the project. All candidates should make their own arrangements for their stay at Dhanbad, if required. No TA/DA will be paid to attend the interview.