

(A Institute of National Importance under the Ministry of Education, Government of India)

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Advertisement for the Post of Project Technical Support - III

Advt. No.: IIITDMK/PR/PTSIII/A31/2026

Date: 15th September 2026

Applications are invited for the following post. The post is purely on a contractual basis.

Name of Position	Project Technical Support - III
Number of Positions	One
Nature of Work	Research and Development
Duration of the Position	The post is purely on a contractual basis and till 01 st June 2027.
Stipend	₹ 28,000 + 30% HRA <i>Note: 30% HRA will be paid if no accommodation is provided by the Institute.</i>
Title of the Sponsored Project	Development of a transvaginal probe-based dermatoscope with automated AI-enabled decision support for detection of cancers and infections
Funding Agency	ICMR
P.I / Co-P.I	Dr. Uttam Mrinal Pal
Department	Department of Electronics and Communication Engineering
Educational Qualification	Essential: 1. First-class postgraduate degree, including the integrated PG degrees. 2. Second Class Post Graduate Degree, including the integrated PG degrees with PhD 3. For Engineering– First Class Graduate Degree of Four Years
Additional Qualification (Desirable, if any)	1. Proficiency in 3D modeling and mechanical design using SolidWorks and/or Autodesk Fusion 360 to prototype ergonomic, clinically safe medical imaging probes. Familiarity with rapid prototyping workflows (e.g., 3D printing and slicing software). 2. Experience using Simulation Tools such as COMSOL Multiphysics or ANSYS for structural, thermal, or optomechanical simulations to validate the design, safety, and reliability of the probe. 3. Ability to design precision mounts and enclosures for optical components (lenses, sensors, lighting), factoring in spatial constraints for field of view and working distances. 4. Experience in electronics circuits and PCB Design, Prior experience in

	hardware implementation of industrial computer/machine vision system would be additional advantage. 5. Well versant in Python libraries: OpenCV, MediaPipe, Tkinter and integration of real-time AI model with industrial machine vision cameras will be an additional advantage.
Age Limit	35 years as on Last date of receiving the application (Age relaxation is applicable as per Gol norms)
Walk-in interview	Date: 05 th October 2026 (Monday) at 9.30 am, Seminar Hall, Administration Building, IIITDM Kancheepuram

How to Apply and Selection Procedure:

1. Interested candidates are requested take print of the application form, fill, sign, and submit the hard copy at the time of Interview.
2. Candidates should be present physically at IIITDM Kancheepuram located at Chennai - 600127 for the written test and/or interview.
3. Candidates should produce all educational and experience certificates at the time of interview for verification.
4. No TA/DA will be paid for attending the interview.
5. The selection process consists of written test followed by Interview.
6. The Syllabus for the written test is enclosed.

For any clarification regarding the application process, the candidate may contact the PI. email: uttampal@iiitdm.ac.in

Sd/x

Dean (SR)



Appl. No.:
(will be filled by Office)

APPLICATION FOR THE POSITION OF PROJECT STAFF

Candidates Photo
to be pasted here

1. Advertisement Number:
2. Name of the Post:
3. Candidate's Full Name (As per SSLC Mark sheet):
4. Father's Name of the Candidate:
5. Date of Birth of the Candidate:
6. Nationality:
7. Gender:
8. Category (Gen / OBC / SC / ST):
(For age relaxation only)
9. Address for Communication:
10. Permanent Address:
11. Contact Phone / Mobile Number(s):

12. Email Address:

13. Educational Qualifications Starting from Xth / SSLC:

Sl. No.	Degree & Branch	Institute / University	Year of Entry & leaving	Percentage / CGPA & Class	Mode (Regular / Part-time / etc.)

14. Academic Record: GATE/ CSIR - NET qualification details with percent marks / Rank, year of qualifying, etc.:

15. Names and addresses of two referees along with phone numbers and e-mail addresses:

a)

b)

16. Are you currently working in Central / State / Semi-Govt / PSU / Autonomous Bodies of the Govt.? (If yes, please submit NOC issued by your present employer):

17. Present Position / Designation:

18. Work Experience (in reverse chronological order including post held at present):

Sl. No.	Organization	Designation	Start Date & End Date	Pay Scale / Total Pay

19. If selected, time required to join:

20. Any other information you wish to mention:

UNDERTAKING

I hereby declare that I have carefully read and understood the instructions given in the Advertisement. All information furnished in this form as well as the attached documents are true and correct to the best of my knowledge and belief. I fully understand that if it is found at a later date that any information given in the application is incorrect / false or if I do not satisfy the eligibility criteria, my candidature / appointment is liable to be canceled / terminated.

Signature of the Applicant

Date:

Syllabus for the Project Technical Support - III

Name of the Research Project: Development of a transvaginal probe-based dermatoscope with automated AI-enabled decision support for detection of cancers and infections

Engineering Mathematics:

Linear Algebra: Vector space, basis, linear dependence and independence, matrix algebra, Eigen values and eigen vectors, rank, solution of linear equations- existence and uniqueness.

Calculus: Mean value theorems, theorems of integral calculus, evaluation of definite and improper integrals, partial derivatives, maxima and minima, multiple integrals, line, surface and volume integrals, Taylor series.

Differential Equations: First order equations (linear and nonlinear), higher order linear differential equations, Cauchy's and Euler's equations, methods of solution using variation of parameters, complementary function and particular integral, partial differential equations, variable separable method, initial and boundary value problems.

Complex Analysis: Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, sequences, series, convergence tests, Taylor and Laurent series, residue theorem.

Probability and Statistics: Mean, median, mode, standard deviation, combinatorial probability, probability distributions, binomial distribution, Poisson distribution, exponential distribution, normal distribution, joint and conditional probability.

Additive Manufacturing: Principles of different types of additive manufacturing processes for engineering materials; Additively manufactured products – advantages, limitations, and applications.

Engineering Mechanics: Free-body diagrams and equilibrium; friction and its applications including rolling resistance, belt-pulley, brakes, clutches, screw jack, wedge, vehicles, etc.; plane trusses and frames; virtual work; kinematics and dynamics of rigid bodies in plane motion; impulse and momentum (linear and angular) and energy formulations.

Theory of Machines: Displacement, velocity and acceleration analysis of plane mechanisms; dynamic analysis of linkages; cams; gears and gear trains; flywheels and governors; balancing of reciprocating and rotating masses; gyroscope.

Machine Design: Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram; principles and design of machine elements such as bolted, riveted and welded joints; shafts, gears, belt drives, rolling and sliding contact bearings, brakes and clutches, springs.

Engineering Materials: Crystal structure of common metals, phase diagrams, heat treatment; Properties and applications of engineering materials - metals and alloys, polymers, composites and ceramics; Engineering and true stress-strain diagrams.

Casting, Forming and Joining Processes: Different types of casting processes; Patterns, moulds and core; Solidification and cooling, riser and gating design, casting defects; Plastic deformation and yield criteria; Hot working and cold working; Principles of bulk forming and sheet forming processes and estimation of

load in these processes; Fundamentals of powder metallurgy and its applications; Principles of welding, brazing, soldering; Solid-state welding processes, adhesive bonding; Non-destructive testing methods.

Machining and Machine Tool Operations: Basic machining operations and machine tools; Single-point and multipoint cutting tools; Geometry of single-point turning tools - ASA and ORS systems; Mechanics of machining; Cutting tool materials, tool life and tool wear; Economics of machining; Abrasive machining processes; Principles and applications of non-traditional machining processes; Principles of work holding, jigs and fixtures.

Computer Aided Manufacturing and Automation: Basic concepts of CAD/CAM and their integration tools; NC/CNC machines and CNC programming; Pneumatic, electro-pneumatic, and hydraulic actuators for automation; Programmable logic controllers.