अंडमान तथा निकोबार प्रशासन
ANDAMAN & NICOBAR ADMINISTRATION
डॉ. भीमराव अंबेडकर प्रौद्योगिकी संस्थान
Dr. B.R. AMBEDKAR INSTITUTE OF TECHNOLOGY
(NAAC ACCREDITED)
पहाड़ गाँव पोर्ट ब्लेयर
अंडमान तथा निकोबार द्वीप समूह
PAHARGAON, PORT BLAIR- 744103
ANDAMAN & NICOBAR ISLANDS

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Recruitment Notice for Guest AP, Guest Lecturers, PTI

Selected candidates shall be eligible for an amount of Rs.1000/- per hr for theory and Rs.500/- per hr for practical classes not exceeding Rs.25,000/- per month for Guest AP (Degree Program) and Rs.250/- per hr for theory and Rs.125/- per hr for practical classes not exceeding Rs.10,000/- per month for Guest Lecturer (Diploma Program). For Part Time Instructor, Rs.150/- per hr for the practical classes not exceeding Rs.10,000/- per month. Selection will be based on the performance of the candidates in the Demo theory and practical class. The venue for theory demo will be AV Room of the Institute.

<table>
<tr><th rowspan="2">S. No.</th><th rowspan="2">Details of requirement</th><th rowspan="2">Educational Qualification</th><th colspan="2">Date and time</th></tr>
<tr><th>Practical</th><th>Theory</th></tr>
<tr><td>1</td><td>Guest Lecturer (Management & Accounts)</td><td>First class Master's Degree in appropriate subject with first class or equivalent at Bachelor's or Master's level</td><td>-----</td><td>12.07.2022
1:30 pm to
2:00 pm</td></tr>
<tr><td>2</td><td>Guest Lecturer (EE & ECE)</td><td rowspan="2">First class B.E./B.Tech., from recognized university in relevant course</td><td>12.07.2022
9:30 am to
11:30 am</td><td>12.07.2022
2:00 pm to
3:00 pm</td></tr>
<tr><td>3</td><td>Guest Lecturer (Civil & CO/IT)</td><td>12.07.2022
9:30 am to
11:30 am</td><td>13.07.2022
1:30 pm to
2:30 pm</td></tr>
<tr><td>4</td><td>Guest AP (ME)</td><td>B.E./B.Tech., and M.E.,/M.Tech., in relavant course from recognized university with first class or equivalent either in B.E./B.Tech., and M.E./M.Tech.</td><td>12.07.2022
9:30 am to
11:30 am</td><td>13.07.2022
2:30 pm to
3:00 pm</td></tr>
<tr><td>5</td><td>Guest Lecturer (Hotel Management)</td><td>First class Degree in Hotel Management & Catering Technology with 1 year Experience
Or
First class Diploma in Hotel Management and catering technology with 2 years' experience</td><td>12.07.2022
9:30 am to
11:30 am</td><td rowspan="2">13.07.2022
3:00 pm to
3:30 pm</td></tr>
<tr><td>6</td><td>Guest Lecturer (Hygiene and Nutrition)</td><td>First class Master's Degree in Hygiene and Nutrition</td><td>12.07.2022
9:30 am to
11:30 am</td></tr>
<tr><td>7</td><td>Guest AP (Maths)</td><td rowspan="4">First class Master's Degree in appropriate subject with first class or equivalent at Bachelor's or Master's level</td><td>-------</td><td>14.07.2022
1:30 pm to
2:00 pm</td></tr>
<tr><td>8</td><td>Guest AP (English)</td><td>-------</td><td>14.07.2022
2:00 pm to
2:30 pm</td></tr>
<tr><td>9</td><td>Guest AP (Chemistry)</td><td>13.07.2022
9:30 am to
11:30 am</td><td>14.07.2022
2:30 pm to
3:00 pm</td></tr>
<tr><td>10</td><td>Guest AP (Physics)</td><td>13.07.2022
9:30 am to
11:30 am</td><td>14.07.2022
3:00 pm to
3:30 pm</td></tr>
</table>

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11	Part time Instructors (CO/IT/ECE/ME/ CE/EE)	Bachelor Degree of Engineering in the respective field from a recognised University OR Diploma in respective field from a recognised Educational/Technical institution. OR Senior secondary pass(10+2) with vocational course certificate in an appropriate trade with 3 years practical experience OR 10th passed with ITI in the relevant field passed from a recognised Institute/ Board with 3 years' experience	15.07.2022 9:30 am to 11:30 am	-------
12	Part time Instructors (Physics/ Chemistry)	Bachelor Degree in Science from a recognised university OR Senior secondary pass(10+2) in Science subject from a recognised educational/ Technical Institution OR Senior secondary pass(10+2) with vocational course certificate in an appropriate trade with 3 years practical experience	15.07.2022 9:30 am to 11:30 am	--------

28/6/22
Dean (Academics)

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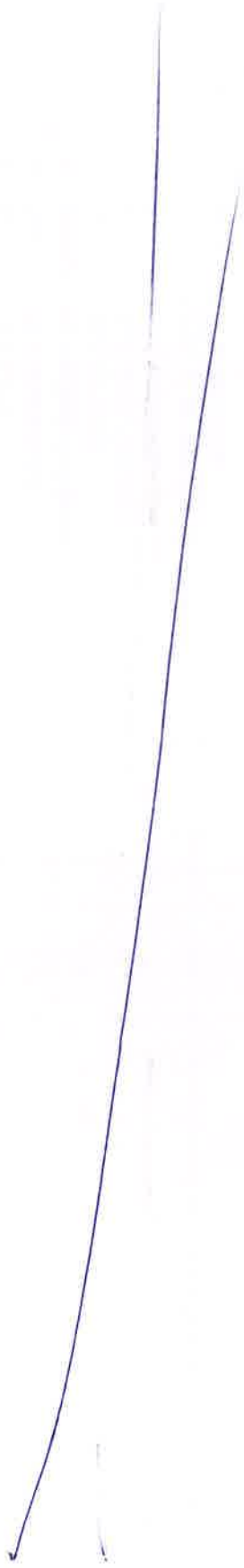
DEMO TOPICS FOR GUEST AP, GUEST LECTURER AND PART TIME INSTRUCTOR DBRAIT 2022-2023 (ODD SEMESTER)

DEPARTMENT	THEORY	PRACTICAL
GL (Management)	1. Preparation of balance sheet and profit-loss statement 2. Functions of management 3. Capital generation & management 4. Budgets & its types. 5. Total quality management 6. Straight line method of depreciation 7. Scientific management 8. Scope of engineering economics 9. Evaluation of public alternatives 10. Determination of economics life of asset	
GL (Accounts)	1. Principles of accounting 2. Types of capitals 3. Direct and indirect taxes 4. Ledger 5. Preparation of financial statement 6. Depreciation & causes of depreciation 7. Bank reconciliation statement 8. Visitors tabular charges 9. Methods of charging room rates 10. Guest weekly bill 11. Subsidiary books	
GL (EE)	1. Mesh & nodal analysis 2. RLC series circuit & circuit resonance 3. Measurement of single phase power using dynamometer wattmeter 4. Construction & working principle of transformer 5. Voltage regulation of alternator 6. Parallel operation of transformer	1. Verification of Krichoff's laws 2. Measurement of power in single phase AC circuit 3. Measurement of three phase power by two wattmeter method 4. Load test on single phase transformer 5. Open circuit & short circuit test of single phase transformer



	7. Construction & working of Buchholz relay 8. Different types of line insulators in transmission & distribution system 9. Different types of three phase induction motors 10. Over current and earth fault protection of alternators	6. Load test on three phase induction motor 7. Staircase wiring 8. Go down wiring 9. Straight joint & T-joint 10. Starting & running of single phase induction motor in forward & reverse direction
GL (ECE)	1. Boolean algebra laws, duality theorem, Demorgans theorem 2. Encoder/decoder, comparison (IC7447), BCD to 7 segment decoder/driver 3. SR flip flop, clocked SR flip flop with preset & clear, drawback of SR flip flop 4. Introduction & block diagram of embedded system 5. Harvard & Van-neuman architecture, RISC & CISC processor 6. Classification of embedded systems- small scale, medium scale, sophisticate, stand-alone reactive/real time 7. Introduction to data communication – process & its components, transmitter, receiver, medium, message 8. Real time OS – general & real time OS, features of RTOS, watchdog timer, semaphore 9. Multiplexing & switching- FDM, wavelength division multiplexing, Synchronous time division multiplexing 10. Spread spectrum – FHSS, DSSS 11. PN junction diode – symbol, construction, working, characteristics & application 12. Rectifier & its types – performance, construction, working, parameters, efficiency, ripple factor	1. Design full and half adder 2. Build/test function od SR flip flop using NAND gate 3. Construct SR, JK, D & T flip flop and verify its truth table 4. Identify pins of 8051 & AVR microcontroller 5. Execute 'C' program to perform following arithmetic operations on 8-bit data – addition , subtraction, multiplication & division 6. Develop & test a 'C' program to perform data transfer from source to destination (use internal memory locations) 7. Develop & test a 'C' program to turn ON LEDs with Key(s) press 8. Interface 89C51/AVR microcontroller & write C program to display string on given 16*2 LCD 9. Test the performance of PN junction diode 10. Test the performance of Zener diode 11. Identify the three terminals of transistors using digital multimeter
GL (Civil)	1. Highway engineering ➢ Geometric design components of highways ➢ Types of pavements 2. Advanced surveying	1. Surveying Lab – measurement of angle 2. CMTC lab – test for concrete 3. Soil mechanics lab – index properties of soil

	➢ Theodolite traversing for given conditions ➢ Methods of plane tabling for given situations 3. Public health engineering ➢ Water treatment processes ➢ Waste water treatment processes 4. Building construction ➢ Types of foundation ➢ Building communication & ventilation 5. Mechanics of structure ➢ Compute the shear force & bending moments to arrive at the Shear force diagram, bending moment diagram for the given beam & load conditions. Locate the point of contra shear & point of contra flexure for the given SFD & BMD ➢ Concept of compression member, short column, long column, effective length, radius of gyration, slenderness ratio, type of end conditions for columns, buckling of axially loaded columns	
GL (CO/IT)	1. Principle of database – normalization, ER model 2. Advanced java programming – socket programming, AWT 3. Client side scripting – function, cookies 4. Data structure – stack, queue 5. Computer graphics – windowing, clipping 6. Operating system – memory management 7. Software testing – test management, defect management 8. Object oriented programming using C++ - inheritance & its types 9. Advance computer network – IP addressing, transition from IPv4 to IPv6 10. Database management system – triggers, transaction processing	1. Advanced java programming – ➢ Write a program to implement chat server using Server Socket & Socket class ➢ Design form with components list, choice, label, checkbox, text field 2. Client side scripting – ➢ Develop java script o implement function ➢ Develop a webpage for creating session & persistent cookies 3. Applied multimedia techniques – ➢ Design wallpaper showing water drop effects of an image ➢ Design poster using different text effect

		➢ Develop webpage which shows animation with sound effect 4. Data structure – radix sort, binary searching 5. Computer graphics – DDA, Breshenham's algorithm 6. Operating system – CPU scheduling (FCFS) 7. Workshop practices – assemble & dissemble of various part of computer systems 8. Object oriented programming using C++ - ➢ Implementing the concept of multiple inheritances based on the given scenario ➢ Implement the concept of copy constructor 9. Advance computer network – ➢ Configure OSPF & RIP using packet tracer ➢ Establish a client-server architecture using IPv6 addressing in packet tracer 10. Database management system – ➢ Implementing trigger for insert, updating & deleting from the database ➢ Design a database based on the given requirement and execute required DML commands by following referential integrity constraints if required
GAP (ME)	1. Angle of projection (1st & 3rd) 2. Development of surfaces 3. Losses in pipeline flow 4. Mechanical drives systems 5. Theories of failures 6. Second law of thermodynamics 7. Working principle of differential unit 8. Working of electro discharge machining (EDM) 9. Basic mechatronics systems 10. Hydraulics & pneumatic systems	1. Conic sections 2. Isometric projections 3. Orthographic projection in Auto CAD 4. Verification of Bernoulli's theorem 5. Determination of friction factor 6. Linear measurement by Vernier Calliper 7. Angular measurements by sine bar & slip gauges 8. Measure screw thread's parameters using Profile projector

		9. Determine the MA, VR, efficiency, ideal effort & effort lost in friction. State & justify whether machine is reversible or not for a given single purchase crab winch 10. Determine the MA, VR, efficiency, ideal effort & effort lost in friction. State & justify whether machine is reversible or not for a given Differential wheel & axle
GL (HM)	1. Methods of cooking 2. Stocks & salads 3. Wines classification 4. Distillation 5. Function catering 6. Importance of selling & techniques 7. Interior designing 8. Housekeeping organization chart 9. Facility planning & management 10. Reservation modes & sources	1. Guest handling 2. Bed layout & check out 3. Room preparation 4. Lay a table for a 5 course continental menu 5. Plan and prepare a four course Indian menu
GL (Hygiene & Nutrition)	1. Malnutrition 2. Carbohydrates 3. Allergies 4. Personal hygiene 5. Food production 6. Food storage 7. Pest control 8. Garbage disposal 9. Protein	1. Food adulteration 2. Calculation of nutrition in given food items
GAP (Maths)	1. Differentiation of implicit function 2. Multiple integral & its application areas by double integration 3. Reduction of quadratic form into canonical for by orthogonal transformation 4. Eigen value & Eigen vector of a real matrix	

	5. Linear differential equations of higher order 6. Solve simultaneous equations in three variables using Cramer's rule 7. Definition of fraction, proper, improper fraction & partial fraction 8. Application of Laplace equation in differential equation & integral equation 9. Fourier transforms & its transverse 10. Gauss divergence theorem & stokes theorem	
GAP (English)	1. Strategies for effective communication 2. Comprehension of technical & non-technical materials 3. Basics of phonetics 4. Technical writing 5. Presentation skills 6. Office drafting 7. Tenses 8. Speeches- formulating speeches for welcome, farewell & vote of thanks 9. Use of articles in formulating sentences 10. Active & passive voice	
GAP (Chemistry)	1. Conducting polymers – classification & application 2. Protective coating & its types in terms of corrosion 3. Super conductivity 4. Dielectric polarisation & mechanism 5. Crystal structure (all 7 types) 6. Crystal lattice 7. Lattice point 8. Different types of crystal structures (with angles) 9. Qualitative idea of line, point, surface & volume defect 10. How to calculate coordination number & atomic radius of FCP & HCC unit cell	1. Determine the pH value of given solution using pH meter & universal indicator 2. Determine thinner content in oil paint 3. Determine total hardness, temporary hardness and permanent hardness of water sample by EDTA method 4. Standardization of KMnO4 solution using standard oxalic acid IV & determine the %age of iron present in given Hematite ore by KMnO4 solution 5. Determination of carbonates & bicarbonates in water 6. Determination of chloride content in a given sample of water

		7. Estimation of vinegar 8. Estimation of available chlorine in bleaching powder 9. Estimation of ferrous by permagnometry 10. Estimation of magnesium by EDTA
GAP (Physics)	1. Laser & fibre optics 2. Hall effect in semiconductors 3. Diffraction grating & its application 4. Thermal properties of matter 5. Nanomaterials – its synthesis, properties & application 6. Non-destructive testing of materials 7. Super conductors & its application 8. Double refraction & Huygen's theory of double refraction 9. Quantum theory of para magnetism & ferro magnetism 10. Polarisation & its properties	1. To study of co-efficient of thermal conductivity of a bad conductor by using Lee's disc method 2. Determination of diameter of a thin wire- air wedge method 3. To determine (a) the wavelength of sodium vapour light/ or (b) the radius of curvature of the surface of a Plano-convex lens, by forming Newton's rings 4. Determine the specific resistance of given wire 5. Use Searle's method to determine the Young's modulus of given wire 6. Determination of radius of curvature of a planoconvex lens by using Newton's ring method 7. To determine the refractive index of a glass prism by using pin method 8. Vibration magnetometer – calculation of magnetic moment & pole strength 9. To determine the co-efficient of viscosity of the given liquid by using stokes method 10. To determine the buoyancy force on solid immersed in liquid (Archemedies principle)

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Demo Topics for Part Time Instructors

DEPARTMENT	PRATICAL TOPICS
CO/IT	1. Network cabling 2. Setup WiFi 3. Assemble & dissemble of various part of computer system 4. OS installation 5. C program on pointer, structures & file management 6. C++ program on class, overloading, inheritance 7. Data structure using C – tree transversal 8. Data structure using C – bubble sorting, radix sorting 9. Mail merge 10. Preparation of result sheet in excel
ECE	1. Design full and half adder 2. Build/test function od SR flip flop using NAND gate 3. Construct SR, JK, D & T flip flop and verify its truth table 4. Identify pins of 8051 & AVR microcontroller 5. Execute 'C' program to perform following arithmetic operations on 8-bit data – addition , subtraction, multiplication & division 6. Develop & test a 'C' program to perform data transfer from source to destination (use internal memory locations) 7. Develop & test a 'C' program to turn ON LEDs with Key(s) press 8. Interface 89C51/AVR microcontroller & write C program to display string on given 16*2 LCD 9. Test the performance of PN junction diode 10. Test the performance of Zener diode 11. Identify the three terminals of transistors using digital multimeter
ME	1. Conic sections 2. Isometric projections 3. Orthographic projection in Auto CAD

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	4. Verification of Bernoulli's theorem 5. Determination of friction factor 6. Linear measurement by Vernier Calliper 7. Angular measurements by sine bar & slip gauges 8. Measure screw thread's parameters using Profile projector 9. Determine the MA, VR, efficiency, ideal effort & effort lost in friction. State & justify whether machine is reversible or not for a given single purchase crab winch 10. Determine the MA, VR, efficiency, ideal effort & effort lost in friction. State & justify whether machine is reversible or not for a given Differential wheel & axle
EE	1. Verification of Krichoff's laws 2. Measurement of power in single phase AC circuit 3. Measurement of three phase power by two wattmeter method 4. Load test on single phase transformer 5. Open circuit & short circuit test of single phase transformer 6. Load test on three phase induction motor 7. Staircase wiring 8. Go down wiring 9. Straight joint & T-joint 10. Starting & running of single phase induction motor in forward & reverse direction
Civil	1. Surveying Lab – measurement of angle 2. CMTC lab – test for concrete 3. Soil mechanics lab – index properties of soil
Physics	1. To study of co-efficient of thermal conductivity of a bad conductor by using Lee's disc method 2. Determination of diameter of a thin wire- air wedge method 3. To determine (a) the wavelength of sodium vapour light/ or (b) the radius of curvature of the surface of a Plano-convex lens, by forming Newton's rings 4. Determine the specific resistance of given wire 5. Use Searle's method to determine the Young's modulus of given wire

	6. Determination of radius of curvature of a planoconvex lens by using Newton's ring method 7. To determine the refractive index of a glass prism by using pin method 8. Vibration magnetometer – calculation of magnetic moment & pole strength 9. To determine the co-efficient of viscosity of the given liquid by using stokes method 10. To determine the buoyancy force on solid immersed in liquid (Archemedies principle)
Chemistry	1. Determine the pH value of given solution using pH meter & universal indicator 2. Determine thinner content in oil paint 3. Determine total hardness, temporary hardness and permanent hardness of water sample by EDTA method 4. Standardization of KMnO4 solution using standard oxalic acid IV & determine the %age of iron present in given Hematite ore by KMnO4 solution 5. Determination of carbonates & bicarbonates in water 6. Determination of chloride content in a given sample of water 7. Estimation of vinegar 8. Estimation of available chlorine in bleaching powder 9. Estimation of ferrous by permagnometry 10. Estimation of magnesium by EDTA

23/6/22

Dean (Academic)