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

ISO 9001
BUREAU VERITAS
Certification

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.

S. No.	Details of requirement	Course	Educational Qualification	Date and time	
				Practical	Theory
1	Guest AP (Civil Engineering)	Degree	B.E./B.Tech., and M.E.,/M.Tech., Civil Engg. from recognized university with first class or equivalent either in B.E.,/B.Tech., or M.E.,/M.Tech.	22/03/2022 09:30 to 11:30 AM	22/03/2022 01:30 to 01:45 PM
2	Guest AP (Electronics and communication Engineering)			22/03/2022 09:30 to 11:30 AM	22/03/2022 01:45 to 02:00 PM
3	Guest Lecturer (Electronics and communication Engineering)	Diploma	First class B.E./B.Tech., from recognized university in relevant course	22/03/2022 09:30 to 11:30 AM	22/03/2022 02:00 to 02:15 PM
4	Guest Lecturer (Civil Engineering)			22/03/2022 09:30 to 11:30 AM	23/03/2022 01:30 to 01:45 PM
5	Guest Lecturer (Computer Science / Information Technology)			22/03/2022 09:30 to 11:30 AM	23/03/2022 01:45 to 02:00 PM
6	Guest Lecturer (Management)		First class Master's Degree in appropriate subject with first class or equivalent at Bachelor's or Master's level	-----	23/03/2022 02:00 to 02:15 PM
7	Part time Instructors (CO/IT/ECE/)	Degree & Diploma	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	22/03/2022 09:30 AM to 11:30 AM	
8	Part time Instructors (Physics)		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	22/03/2022 09:30 AM to 11:30 AM	

Dean (Academics)

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DEMO TOPICS FOR GUEST AP, GUEST LECTURER AND PART TIME INSTRUCTOR DBRAIT 2021-2022
(EVEN SEMESTER)

DEPARTMENT	THEORY (DEGREE)	PRACTICAL (DEGREE)	THEORY (DIPLOMA)	PRACTICAL (DIPLOMA)	PTI
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 Network's ring method. 7. To determine the refractive index of a glass prism by using pin method. 8. Vibration magnetometer-calculation of magnetic moment and 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)
Management			1. Prepration of balance sheet and profit-loss statement. 2. Function of Management. 3. Capital generation and 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.		
Computer Engineering			**1. Emerging Trends in Computer and Information**	**1. PHP**	**<u>Diploma Programme:</u>** 1. Set up Wifi

			Technology Concept of AI, Scope, Component, Types of AI, Applications of AI, Concept of Machine Learning and Deep Learning. **2. Java Programming** Exception handling in Java, Multithreading in Java, Java Applets. **3. Software Engineering** Requirement Engineering, Software requirement Specification. **4. Data Communication and Computer Network** Error Correction and detection, Reference Model. **5. Database Management** Transactions and concurrency control in DBMS, joins, Types of Join, Cursor and Triggers in Plsql.	• Design webpage using from controls and add data validation. • Develop Applications to enter data in to Database and retrieve data from database. **2. Java Programming** Exception handling for Java, Java Applets. **3. Data Communication and Computer Network** Cabling, Share Files, Folders, Printer in a network. **4. Computer Peripheral and Hardware Maintenance** Assemble and Dissemble of computer System. **5. Webpage Designing with HTML** Designing of Website. **6. Database Management** Cursor and Triggers in Plsql. **7. Programming in 'C'**	2. Assemble and dissemble of various part of Computer system 3. OS installation 4. C program on pointer, structures & file management 5. C++ program on class, overloading, inheritance 6. Data structure using C-tree traversal 7. Data structure using C-bubble sorting, radix sorting 8. Mail merge 9. Network cabling 10. Preparation of result sheet in excel. **Degree Programme:** 1. C programming lab 2. OS installations 3. Hardware & networking 4. Stack data structure 5. Queue data structure 6. Linked list 7. Dynamic memory allocation 8. Searching algorithm 9. Sorting algorithm 10. Tree data structure

			6. Computer Networks Host-to Host Layer protocol, Internet Layer protocol, Transport layer Protocol, Application Layer Protocol. **7. Programming in 'C'** Structure and pointer. **8. Mobile Application Development** • User Interface Components and Layout: a Components of Screen. b. Linear Layout c. Absolute layout d. Frame Layout e. Table layout f. absolute layout. • Design user interface with view: a.Text view b. Edit view c. Button view d. Radio button e. Check box f. Progress bar g) List view h) grid view I) Scroll view j)Custom toast.	Structure, Pointing, File handling. **8. GUI Application using VB.net** Fetch data from table and display in grid, Exception handling. **9. Mobile Application Development** Different Layout, Different views and button, Data and Time picker. **10. Programming with Python** Method overloading and Method Overriding, Inheritance.	

			• Time and Date Picker 9. **Programming with Python** Object oriented programming with python method overloading and overriding, inheritance and composition. **10. Network and Information security** Symmetric and Assymetric Cryptography, Cyber Crime.		
Civil	1. Bending stresses 2. Moment Distribution method 3. Environmental engg. Transportation of sewage 4. Activated sludge process 5. Flocculators 6. Contour surveying 7. Tachometric surveying 8. One dimensional consolidation	1. Determination of quality of water 2. Test on cement 3. Test on aggregate 4. Tachometric survey 5. Compass surveying 6. Levelling 7. Test of steel			

	9. Workability of concrete 10. Hydration of cement				
ECE	1. Explain DC load line and Q-point. 2. Design a voltage regulator using Op-Amp. 3. Explain Transient response of RC circuit. 4. Explain the Barkhausen criterion for sustained oscillations. 5. Describe Programmable Logic Array (PLA). 6. Explain Superheterodyne receivers. 7. Explain about the transition from IPv4 to IPv6. 8. Explain the Flag Registers of Microprocessor 8085.	1. To design and set up an astable multivibrator using Op-amp. 2. To develop a C-language program for interfacing a stepper motor with 8051 microcontroller. 3. To design and set up an integrator circuit using Op-amp. 4. Develop an ALP to convert BCD number into hexadecimal number for 8085 microprocessor. 5. Develop a MATLAB program to perform amplitude modulation. 6. To design and implement a 4-bit binary to gray code convertor. 7. To design and implement a 4-bit magnitude comparator. 8. Develop an assembly language program to transfer a	1. Full wave rectifier with filter 2. Clipper & clamper circuit 3. CE transistor characteristics 4. Wireless local loop architecture 5. GPRS architecture 6. LVDT & RVDT 7. Float type with linear & rotary potentiometer level measurement 8. Implement 4 bit ripple counter using 7476 9. Perform 8-bit addition 10. DC regulated power supply 11. PN junction & zener diode characteristics 12. Active & passive transducer 13. Contact and non-contact sensor 14. Addressing modes of 8051 8051 instruction set	1. Build/ test full wave rectifier. 2. Build/test combinational clipper circuit 3. Test the performance of FET drain characteristics transfer characteristics and calculate transductance. 4. Use AT commands to understand working of 3G networking using 3G mobile phone and trainer kit 5. Simulate the delta modulation using MAT LAB and Simulink 6. Use of strain guage to measure weights 7. Measure displacement using LVDT 8. 8051 architecture 9. Master slave JK flip-flop 10. 4 bit asynchronous counter	1. To design and set up an astable multivibrator using Op-amp. 2. To develop a C- language program for interfacing a stepper motor with 8051 microcontroller. 3. To design and set up an integrator circuit using Op-amp. 4. Develop an ALP to convert BCD number into hexadecimal number for 8085 microprocessor. 5. Develop a MATLAB program to perform amplitude modulation. 6. To design and implement a 4-bit binary to gray code convertor. 7. To design and implement a 4-bit magnitude comparator. 8. Develop an assembly language program to transfer a block of data from one memory to another location for 8085 microprocessor. 9. To design and set up a zero crossing detector circuit. 10. To design and set up an inverting amplifier circuit using Op-amp.

	9. Design an Astable multivibrator using 555 timer. 10. Explain the RSA algorithm.	block of data from one memory to another location for 8085 microprocessor. 9. To design and set up a zero crossing detector circuit. 10. To design and set up an inverting amplifier circuit using Op-amp.		11. Build/ test zener voltage regulator for the given voltage 12. Characteristics of zener diode 13. Perform 8-bit subtraction using microcontroller 14. Interface LCD with 8051 to displace the characteristics and demical number. 15. Simulate 4:1 mux 16. 3-bit adder 1:8 demultiplexer using EDA tool	
ME					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 caliper 7. Angular measurements by sine bar &slip gauge 8. Measure screw thread's parameters using profile projector 9. Determine the M.A, V.R, 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 M.A, V.R, efficiency, ideal effort & effort lost in friction. State & justify whether machine is reversible or not for a given Differential wheel & axle.

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DEPARTMENT OF CIVIL ENGINEERING

Diploma Demo (Theory)

1. Direct and bending stress in vertical members.(Theory of Structure)
2. Slope and deflection in beams.(Theory of Structure)
3. Varignons theorem. (Applied Mechanics)
4. Centre of gravity. (Applied Mechanics)
5. Optimum moisture content. (G-Tech)
6. Bearing Capacity of Soil. (G-Tech)
7. Test on damaged structures. (Maintenance & Repair of Structure)
8. Repair Techniques. (Maintenance & Repair of Structure)
9. Classification of solid waste. (Solid waste Management)
10. Methods of composting. (Solid waste Management)

Diploma Demo (Practical)

1.	CMTC Lab:	a) Test for cement and aggregate b) Test for steel
2.	Env. Engg Lab:	a) Test for Water quality.
3.	Survey Lab:	a) Compass survey b) Levelling/ Theodolite survey.
4.	G-Tech Lab:	a) Index Properties of soil.

These broad topics of practicals has more than 10 experiments

13/12/2024

Academic Coordinator
(Diploma Civil)