



Recruitment Notice for Guest Lecturer

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 Lecturer (Diploma Program). The venue for theory demo will be Audio Visual Room (AV Room) of the Institute and practical skill test will be conducted by the concerned departments.

S. No	Details of requirement	Educational Qualification	Date and time	
			Practical	Theory
1	Guest Lecturer (EE)	First class B.E./B.Tech., from recognized university in relevant course	03.08.2024 9:00 am to 12:00 noon	03.08.2024 02:00 pm to 03:00 pm
2	Guest Lecturer (CO/IT)			
3	Guest Lecturer (Maths)	-----		
4	Guest Lecturer (Physics)	03.08.2024 9:00 am to 12:00 noon		


Dean (Academics)

DR. B R AMBEDKAR INSTITUTE OF TECHNOLOGY, PORT BLAIR

DEMO TOPICS FOR GUEST FACULTY SELECTION PROCESS FOR THE SESSION 2024-25 (ODD SEM)

S.NO.	DEPARTMENT	DEMO TOPIC	
		THEORY	PRACTICAL
1	EE (GL)	Mesh/ Nodal Analysis	Verification of Kirchoff's laws
		RLC series circuit & circuit resonance	Measurement of power in single phase AC circuit
		Measurement of single phase power using dynamometer wattmeter	Measurement of three phase power by two wattmeter method
		Construction and working principle of transformer	Determine the magnetising characteristic of an alternator at different loads
		parallel operation of transformer	Open circuit and short circuit test of single phase transformer to determine efficiency
		SF6 Circuit Breaker	Load test on three phase induction motor to determine efficiency
		Construction and working of Buchholz Relay	Perform an experiment to reverse the direction of DC Shunt motor
		Different types of line insulators in transmission & distribution system	Staircase wiring & Go down wiring
		Different types of single phase induction motors	Wiring of electrical circuit to control lamp, fan and socket on wiring practice board
		Over current and earth fault protection of alternators	Starting and running of single phase induction motor in forward & reverse direction
2	CO/IT (GL)	DATABASE MANAGEMENT Concept of Normalization (a) Functional Dependency (b) Database Anomaly (c) Normalization types	(a) Create & execute DDL commands (b) Create & execute DML commands (c) Solve queries using operator, function etc. (d) Implement programs in C++ using array of object (e) Implement programs in C++ using constructor and destructor (f) Shell programming using if, else, for statement (g) Implement programs in C using array (h) Implement programs in C using linked list
		Entity & Relationship Model (a) Entities (b) Relationship (c) Attributes	
		Transaction in DBMS (a) ACID properties (b) States of transaction (c) Database backup	
		COMPUTER GRAPHICS Line Drawing Algorithm (a) DDA algorithm (b) Bresenham's algorithm	
		2-D Transformation 3-D Transformation	
		OOPs (a) Constructors and Destructors (b) Classes and Objects	
		OPERATING SYSTEM CPU Scheduling Algorithm (a) FCFS (b) SJF (c) Priority (d) Round Robin	
		DATA STRUCTURE (a) Concept of ADT. (b) Array (c) Linked List	
3	MATHS (GL)	1. Differentiation of implicit function	
		2. Lagrange method of undetermined multipliers	
		3. Area by double integration and volume by triple integration	
		4. First order linear differential equations	
		5. Partial fraction of proper and improper fraction.	
		6. Reduction of quadratic form into conical by orthogonal transformation	
		7. Expansion of periodic function into Fourier series	
		8. Solutions of linear simultaneous in the three variables by crammers rule.	
		9. Point of intersection of two lines, equation of line passing through point of intersection with given condition	
		10. Fourier's Transforms and its transverse	
4	Physics (GL)	1. Ultrasonic Wave Production	1. To study the coefficient of thermal conductivity of bad conductor by using Lee's disc method/
		2. Lasers and fibre optics	2. Determination of thickness of given piece of sample by airwedge method
		3. Air wedge- Michelson's interferometer	3. Determination of wavelength of monochromatic light by using diffraction grating
		4. concept of double refraction	4. Determination of elasticity of a metallic wire by using searle's apparatus
		5. Nanomaterials- its synthesis, Properties and Application	5. Determination of law resistance by using meter bridge\ (determination of velocity of sound by resonance column
		6. Non destructive testing of materials	6. To determine the radius of curvature of a planoconvex lens using newton's ring apparatus
		7. Nuclear Reactor	7. To determine the refractive index of glass prism by using Pin method
		8. Application of Hall effect in the semiconductor	8. To determine the buoyancy force on solid immersed in liquid(Archemedies principle)
		9. Super conductors and its application	9. To determine the internal resistance of primary cell by using potentiometer
		10. Magnetic field and magnetic field Intensity	10. To calculate the magnetic moment and polestrength of a bar magnet by using vibration magnetometer.