



अंडमान और निकोबार प्रशासन
ANDAMAN & NICOBAR ADMINISTRATION
डॉ. भीमराव अंबेडकर प्रौद्योगिकी संस्थान
Dr. B.R. AMBEDKAR INSTITUTE OF TECHNOLOGY
पहाड़गांव, श्री विजयपुरम-७४४१०३
अंडमान और निकोबार द्वीपसमूह
PAHARGAON, SRI VIJAYAPURAM-744103
ANDAMAN & NICOBAR ISLANDS



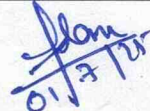
RECRUITMENT NOTICE FOR GAP, GL & PTI (2025-26 Odd) - GPD

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).

Selection will be based on the performance of the candidates in the Demo theory and practical class. **The venue for theory demo will be Audio Visual Room (AV Room) of DBRAIT and practical skill test will be conducted by the concerned departments of DBRAIT.**

S. No	Details of requirement	Educational Qualification	Date and time	
			Practical	Theory
1	Guest Lecturer (Civil)	First class B.E./B.Tech., from recognized university in relevant course	19.07.2025 9:30 am to 12:00 noon	21.07.2025 02:30 pm to 03:00 pm
2	Guest Lecturer (CO/IT)			21.07.2025 03:00 pm to 03:30 pm
3	Guest Lecturer (ECE)			21.07.2025 03:30 pm to 04:00 pm
4	Guest Lecturer (Maths)	First class Master's Degree in appropriate subject with first class or equivalent at Bachelor's or Master's level		21.07.2025 02:00 pm to 04:00 pm
5	Guest Lecturer (Chemistry)			
6	Guest Lecturer (Physics)			
7	Guest Lecturer (English)			
8	Guest Lecturer (Management)			
9	Guest Lecturer (Accounts)			




Dean (Academics)
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GOVT. POLYTECHNIC DIGLIPUR

DEMO TOPICS FOR GUEST FACULTY SELECTION PROCESS FOR THE SESSION 2025-26 (ODD SEM)

S.NO.	DEPARTMENT	DEMO TOPIC	
		THEORY	PRACTICAL
1	CIVIL (GL)	Building Plan and Drawing- (a) Types of Lines (b) Principles of planning of residential & public building (c) Planning & design of doglegged staircase for residential and public buildings	Concrete Technology- (a) Test for aggregates (course & fine) (b) Test for cement (c) Test for concrete
		(a) Concrete Technology - Properties of concrete (b) Methods of testing - Mix design	Building Plan and Drawing- (a) Preparing various types of plan and section for a framed structure building (b) Working drawing of the framed structure (c) Pinning of dog legged staircase for residential and public building
		Public Health Engineering- (a) Estimate the quantity water and waste water (b) Process of treatment of water and waste water (c) Physical and chemical characteristics of water and waste water	Public Health Engineering- (a) Test for portable water (common physical & chemical parameters) (b) Test for calculating optimum dosage of coagulant (c) Residual chlorine and chlorine demand test
2	CSE(GL)	DATABASE MANAGEMENT Concept of Normalization (a) Functional Dependency (b) Database Anamoly (c) Normalization types Entity & Re;ationship Model (a) Entities (b) Releationship (c) Attributes Transaction in DBMS (a) ACID properties (b) States of transaction (c) Database backup	(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
		COMPUTER GRAPHICS Line Drawing Algorithm (a) DDA algorithm (b) Bresanham's algorithm 2-D Transformation 3-D Transformation	
		OOPs (a) Constructors and Destructors (b) Classes and Objects	
		OPEARTING SYSTEM CPU Scheduling Algorithm (a) FCFS (b) SJF (c) Priority (d) Round Robin	
		DATA STRUCTURE (a) Concept fo ADT. (b) Array (c) Linked List	

3	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
4	ECE (GL)	DIGITAL TECHNIQUES (a) Boolean Algebra: Laws of Boolean algebra, Duality theorem, De Morgan's Theorem (b) Encoder/Decoder: Basic of encoder decoder, comparison (IC7447) BCD to 7 segment decoder/Driver (c) SR flip flop: SR flip flop, clocked SR flip flop with preset and clear, drawback of SR flip flop	(a) Design full adder and full subtractor (b) Build /test function of RS flip flop using NAND gate (c) Build R2-R resistive network on breadboard to convert given digital data into analog. (d) Construct S-R, J-K, D and T flip flop and verify truth table
		BASIC ELECTRICAL & ELECTRONICS ENGG (a) Active and passive components; resistor, capacitor, inductor, symbol, colour code, specification. (b) voltage and current sources. (c) Integrated circuit-Analog and Digital (d) Input and Output characteristic: CE, CB and CC configuration. (e) Transistor Parameter: CB gain α , CE gain, input resistance, output resistance, relation, relation between α and β	(a) Test the performance of PN junction Diode. (b) Determine the value of given resistor using Digital multimeter to confirm with colour code (c) Test the performance of NPN transistor. (d) Test the performance of transistor as switch circuit. (e) Test the performance of transistor amplifier circuit.
		EMBEDDED SYSTEM (a) Feature of 89C51, PIC, AVR and ARM microcontroller with their application (b) Classification of embedded system: small scale, medium scale, sophisticated stand-alone, reactive /real time (soft and hard real time) (c) interrupt control program with 'embedded C' for given microcontroller (d) Max 232 as a bidirectional level converter (e) Features of RTOS: watch dog timer, semaphore	(a) Execute the 'C' program to perform following arithmetic operation on 8-bit data: addition, subtraction, multiplication. (b) Develop and test the 'C' program to perform data transfer from source to destination (use internal data memory location) (c) Interface RS 232 connector to PC using MAX 232 IC. (d) Identify the pin of 8051 and AVR microcontroller.
		ELECTRONICS MEASUREMENTS & INSTRUMENTATIONS (a) Fundamentals of Electronics measurements (b) Calibration : Need and meaning of calibration (c) CRO: Block diagram of CRO, CRT, vertical deflection system and horizontal deflection system, need of delay line, time base generator, amplitude and frequency measuring using CRO, Lissajous pattern for phase and frequency measurement	(a) Test the characteristic of potentiometer. (b) Use thermocouple to measure temperature of given liquid. (c) Use RTD (Pt-100) to measure temperature of given liquid.
5	Physics (GL)	Ultrasonic Wave Production	Determination of thickness of given piece of sample by air wedge method
		Lasers and fibre optics	Determination of wavelength of monochromatic light by using diffraction grating
		Air wedge- Michelson's interferometer	Determination of elasticity of a metallic wire by using Searle's apparatus
		Work, Energy and Power	Determine the modulus of rigidity by using torsional pendulum
		Nanomaterials- its synthesis, Properties and Application	Determination of law resistance by using meter bridge
		Photo-electric Effect	Determination of velocity of sound by resonance column
		Semiconductor	To determine the radius of curvature of a planoconvex lens using Newton's ring apparatus
		Applications of semiconductor	To determine the refractive index of glass prism by using Pin method
		Superconductors and its application	To determine the internal resistance of primary cell by using potentiometer
		Magnetic field and magnetic field Intensity	To calculate the magnetic moment and pole strength of a bar magnet by using vibration magnetometer.

6	Chemistry (GL)	Conducting polymers – classification and application	To determine the pH value of solution using pH meter and universal Indicator
		Protective coating and its types in terms of corrosion	Determine thinner content in oil paint
		Vulcanization –Synthetic Rubber	Estimation of vinegar
		Super conductivity	Estimation of available chlorine in Bleaching powder
		Desalination process- reverse osmosis and Electrodialysis	Estimate the chlorine content of given water sample
		Moulding constituent of plastics and moulding techniques	Estimation of magnesium by EDTA
		Different types of crystal structures with angle.	Determination of carbonates and bi carbonates in water
		Qualitative idea of line, point surface and volume defect	Determination of percentage of iron present given Hematite ore by KMnO ₄ Solution
		How to calculate Co-ordination number and atomic radius of FCP and HCC unit cells	Determination of Hardness of the sample water by EDTA method
		Dielectric polarization and Mechanism	Estimation of ferrous by permagnetometry
7	English (GL)	Strategies of effective communication	
		Importance of public speaking	
		Passage in written and spoken form	
		Comprehension of technical and non technical materials	
		Active and Passive Voice	
		Importance Of Comprehension	
		Phonetics	
		Use of modern office equipments and gadgets	
		Types of communication	
		Use of articles in formulating sentences.	
8	Maths (GL)	Differentiation of implicit function	
		Eigen value and Eigen vector	
		Laplace transformation	
		Area by double integration and volume by triple integration	
		First order linear differential equations	
		Partial fraction of proper and improper fraction.	
		Reduction of quadratic form into conical by orthogonal transformation	
		Periodic function into Fourier series	
		Solutions of linear simultaneous in the three variables by crammers rule.	
		Point of intersection of two lines, equation of line passing through point of intersection with given condition	