

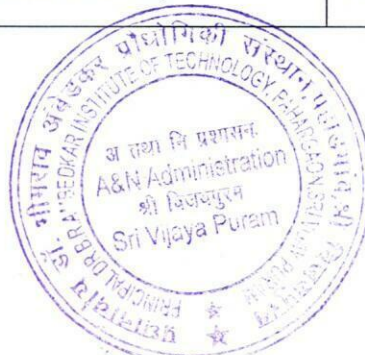


## **RECRUITMENT NOTICE FOR GL AND PTI (2025-26 EVEN SEM) – DBRAIT**

Selected candidates shall be eligible for an amount of Rs. 1000/- per hr for theory and Rs. 750/- per hr for practical classes not exceeding Rs. 25,000/- per month for the Guest Lecturer (GL) (Diploma Programs). For the Part Time Instructors (PTI), Rs.750/- per day for the practical classes not exceeding Rs. 18,000/- per month. Selection will be based on the performance of the candidates in the theory demo and practical skill test.

The candidates shall report to concerned department/Academic Cell 30 mins prior to the schedule time as mentioned below:

S. No.	Details of requirement	Educational Qualification	Date and Time	
			Practical	Theory
1	Guest Lecturer (English)	First class Master's Degree in appropriate subject with first class at Bachelor's level	-----	24.11.2025 02:00 pm to 04:00 pm
2	Guest Lecturer (Maths)			
3	Guest Lecturer (Management)			
4	Guest Lecturer (Civil)	First Class B.E./B. Tech from recognized University in relevant course.	24.11.2025 09:00 am to 12:00 noon	25.11.2025 02:00 pm to 04:00 pm
5	Guest Lecturer (ME)			
6	Guest Lecturer (CO/IT)	First Class B.E./B. Tech from recognized University in relevant course.	24.11.2025 09:00 am to 12:00 noon	26.11.2025 02:00 pm to 04:00 pm
7	Guest Lecturer (Electrical)	First Class B.E./B. Tech from recognized University in relevant course.	24.11.2025 09:00 am to 12:00 noon	27.11.2025 02:00 pm to 04:00 pm
8	Guest Lecturer (ECE)			
9	Guest Lecturer (HM)	First Class Degree in Hotel Management & Catering Technology with 1-year experience OR First class Diploma in Hotel Management & Catering Technology with 2 years' experience	24.11.2025 09:00 am to 12:00 noon	28.11.2025 02:00 pm to 04:00 pm
10	Part Time Instructors (CO/IT, EE, CE, HM)	Bachelor's degree in relevant field from a recognized University OR Diploma in relevant field from recognized University / Board OR Senior Secondary Pass (10+2) in science subject from a recognized Educational / Technical Institution OR Senior Secondary Pass (10+2) with Vocational Course Certificate in an appropriate trade with 3 years practical experience.	27.11.2025 09:00 am to 12:00 noon	-----
11	Part Time Instructors (Physical Education)	Bachelor's degree in Physical Education (B.P.E.) from a recognized university	27.11.2025 09:00 am to 12:00 noon	-----



Dean (Academic)

Dean (Academics)

डॉ. भीमराव अंबेडकर प्रौद्योगिकी संस्थान  
DR. B. R. AMBEDKAR INSTITUTE OF TECHNOLOGY  
पहाडगांव, श्री विजयपुरम  
Pahargaoon, Sri Vijaya Puraam

**DR. B R AMBEDKAR INSTITUTE OF TECHNOLOGY, SRI VIJAYA PURAM**

**DEMO TOPICS FOR GUEST FACULTY (GL) & PTI SELECTION PROCESS FOR THE SESSION 2025-26 (EVEN SEM)**

S. No.	DEPARTMENT	DEMO TOPIC	
		THEORY	PRCATICAL
1	Diploma ECE (GL)	Architectures of Microcontroller: Harvard , Von Neumann.	ALP to perform addition of BCD data
		Memory Organization and Power saving options of 8051 Microcontroller	Block exchange of data from source locations to destination location
		Line-of-Sight Transmission, Point-to-Point, Broadcast	Amplitude Shift Keying(ASK) using any simulator
		Circuit-switched network, Packet switched network	Write a 'C' program for parity check error detection
		GPRS network nodes, mobility management and routing in GPRS	Implement line coding technique Unipolar NRZ using MATLAB and Simulink
		Features and services of International mobile telecommunications 2000 (IMT-2000)	
		General troubleshooting procedure	Troubleshooting the regulated power supply by testing the voltage at different output points.
		Grounding and Shielding systems in electronic equipment	
		Arduino Uno hardware architecture and Peripheral features	Install any one embedded system(ex- Arduino IDE)and execute program to turn LED ON/OFF using delay.
		Process of interfacing appropriate actuator with embedded boards.	Install any one embedded system(ex- Arduino IDE)and execute program to Change the status of Buzzer ON/OFF
		Need for filters, circuit diagram and working of L, C and CLC filter.	Determine the voltage regulation by using Zener diode under variable input and output conditions.
		Transistor as a switch and as an amplifier.	Test input /output characteristics of NPN transistor in CE configuration
		RC integrator and RC Differentiator	Build and Test the full wave rectifier using two diodes.
		Working principle of Enhancement type MOSFET	
		Functional block diagram and register organization of 8086.	Write an assembly language program for addition and subtraction using different addressing mode instruction. (8 bits or 16 bits)
		Program development steps	

2	Diploma Civil (GL)	Area Calculations of field by cross staff	Basic Surveying: Chain surveying, Compass surveying and Leveling
		Compass Traversing: open and closed.	Water and waste water engineering: Physical and chemical parameters
		Local attraction, Methods of correction of observed bearings- Correction at station and correction to included angles	Construction Material testing and concrete Laboratory: Test for cement, fine aggregates ,coarse aggregates , concrete and steel
		Various types of Pressure	
		Pressure measuring devices	
		Types of Fluid Flow	
		Estimating, Types and purpose, costing, Administrative Approval, Technical Sanction and Budget provision.	
		Preparing rate analysis of different items of work: PCC, RCC work in (column, beam, lintel, slab), brick masonry, stone masonry, Vitrified tile flooring, plastering.	
		Methods of Calculation of Depreciation	
		Water Softening Methods	
		Pipe Network System	
		Sewer Appurtenance	
3	Diploma CO/IT (GL)	Fundamentals of Cryptography: Symmetric and Asymmetric Cryptography	Prepare and test straight and test cable
		Steganography	Write a C program to implement Caesar cipher technique to perform encryption and decryption of text
		TCP/IP Model	Write a C program to craetes strong password authentication [password should be more than 8 characters and combination of digits, letters and special character (#, %, &, @)]
		Subnetting (Classful & Classless)	Write a C program for parity check error detection
		User requirements & its Analysis Techniques	Preperation of result sheet in excel
		Generative AI	
		Blockchain Technology	
		Need and features of Android	
		Android architecture framework	
		Acceptance testing : Alpha, Beta testing	
		Regression testing	

4	Diploma ME (GL)	Development of surface	Conic sections
		Losses in pipeline flow	Isometric projections
		Heat treatment principles & processes	Orthographic projection in Auto CAD
		Concept of internal energy & entropy	Verification of Bernoulli's theorem
		Second law of thermodynamics	Determination of Friction Factor
		Working of MPFI system	Linear measurement by Vernier Calliper
		Principles of Electrostatics precipitation	Angular measurement by Sine bar & slip gauge
		Principles of direct and bending stress	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.
		Principle of Hydraulic and Pneumatic control systems	Determine the M.A, V.R, Efficiency, ideal effort & effort lost in friction, state & justify whether machine is reversible or not for a given double purchase crab winch.
		TTT- Diagram	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.
5	Diploma EE (GL)	Iron-Carbon equilibrium diagram	
		Essential & scope of waste heat recovery	
		Mesh/ Nodal Analysis	Verification of Kirchhoff'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	Load test on single phase transformer
		Parallel operation of transformer	Open circuit and short circuit test of single phase transformer
		Voltage regulation of alternator	Load test on three phase induction motor
		Construction and working of Buchholz Relay	Staircase wiring
		Different types of line insulators in transmission & distribution system	Go down wiring
		Different types of single phase induction motors	Straight joint and T-joint
		Over current and earth fault protection of alternators	Starting and running of single phase induction motor in forward & reverse direction

6	DHMCT (GL)	Food Production: Methods of Cooking, Menu Planning and Indenting, Regional Indian Cooking, Cold Kitchen, Soups, Stocks & Sauces.	Plan & prepare a 03 course menu of your choice which should include a starter veg/non veg, one main course & a dessert
		Food & Beverage service: Methode Champainoise, Whiskey (production & examples), Flambe, Types of F&B outlets, Types of Catering, Cigarettes & Cigars	Plan & prepare a 05 course continental menu & lay the table according to it
		Housekeeping: Control Desk, Laundry, Interior Designing, Acoustics, Colour Wheel, Flower Aggrangement, Types of flooring, Inventory Management, Hotel Linen.	Perform the procedure adopted during room break-ins, bomb threat, theft in hotel, and drunk guest
		Front Office: Types of Hotel, Check in Check out Procedures, Guest Cycle, Reservation Modes and Sources, Types of Rooms, Room Plan & Modes of Payments, Night Auditing	Demonstrate the group and crew departure, express check out and self check out
7	Maths (GL)	Solve given system of linear equations using matrix in version method	
		Derivative of composite functions (chain rule), implicit and parametric functions	
		Functions and limit : Concept of functions and simple examples	
		Integration by parts	
		Derivatives of composite, implicit, parametric, inverse, logarithmic, exponential functions	
		Solution of linear differential, equation of first order	
		Binomial & poisson's distribution in probability	
		Find partial fraction of proper and improper fraction of simple rational function	
8	English (GL)	Formulate paragraphs with synchronised sentence strucure on the given situation/topic	
		Dairy entry of situations	
		preparation skill- body language for effective communication	
		Paragraph writing	
		Develop dialogues to practice language skill in a structured and meani9ngful way	
		Formulate sentences using new words	
		Use correct syntax to construct meaningful sentences for the given situation	
		Dialogue writing	

9	Management (GL)	Describe the new product development process for a product/ service	
		Explain the significance of the project management and various tools of project management	
		Importance of various techniques for optimization and waste minimisation	
		Importance of need, wants and desires in marketing	
		Interpret the traditional and digital marketing techniques	
		Analyze the various methods of recruitment, selection and training for an organization	
		Explain categorization of MSME on the basis of turnover and investment	
		Role of the incubation centre and accelerators for the given product/service	
10	CO/IT (PTI)		Network Cabling
			Setup wifi
			Assemble & disassemble of various parts of computer system
			OS installation
			C Program on pointer, structure & file management
			C Programming using Array
			C Programming using Structures
			C Programming using Pointer
			Mail Merge
11	Diploma Civil (PTI)		Preparation of results sheet in excel
			Basic Surveying: Chain surveying, Compass surveying and Leveling
			Water and waste water engineering: Physical and chemical parameters
			Construction Material testing and concrete Laboratory: Test for cement, fine aggregates ,coarse aggregates , concrete and steel

12	Diploma EE (PTI)		Verification of Kirchoff's laws
			Measurement of power in single phase AC circuit
			Measurement of three phase power by two wattmeter method
			Load test on single phase transformer
			Open circuit and short circuit test of single phase transformer
			Load test on three phase induction motor
			Staircase wiring
			Go down wiring
			Straight joint and T-joint
			Starting and running of single phase induction motor in forward & reverse direction
13	DHMCT (PTI)		Plan & prepare a 03 course menu of your choice which should include a starter veg/non veg, one main course & a dessert
			Plan & prepare a 05 course continental menu & lay the table according to it
			Perform the procedure adopted during room break-ins, bomb threat, theft in hotel, and drunk guest
			Demonstrate the group and crew departure, express check out and self check out
14	Physical Education (PTI)		a) Volleyball (Fingering/ Service/Underarms/ Smashing) b) Badminton (The game skill) c) Table tennis (The game skill) d) Sit-ups (dips/ Shuttle run/ each nos in 30 seconds per activity) e) Interview (General knowledge of Sports/ Physical education)