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
1	Part time Instructors ME/ CE / CSE	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	20/09/2021 09:00 am to 11:00 am
2	Guest AP (Mechanical)	Degree	B.E./B.Tech., and M.E./M.Tech. Mechanical Engg.from recognized university with first class or equivalent either in B.E./B.Tech., or M.E./M.Tech.	20/09/2021 9:00 am to 11:00 am
3	Guest AP (Electronics & Communication Engineering)		B.E./B.Tech., and M.E./M.Tech. Electronics & Communication Engineering from recognized university with first class or equivalent either in B.E./B.Tech., or M.E./M.Tech.	20/09/2021 9:00 am to 11:00 am
4	Guest AP (Computer Science & Engineering)		B.E./B.Tech., and M.E./M.Tech. Computer Science Engg. From recognized university with first class or equivalent either in B.E./B.Tech., or M.E.,/M.Tech.,	21/09/2021 9:00 am to 11:00 am
5	Guest AP (Chemistry)		First class Master's Degree in appropriate subject with first class or equivalent at Bachelor's or Master's level	21/09/2021 9:00 am to 11:00 am
6	Guest AP (Mathematics)		First class Master's Degree in appropriate subject with first class or equivalent at Bachelor's or Master's level	21/09/2021 10:00 am to 12:00 am
7	Guest Lecturer (Electrical)	Diploma	First class B.E./B.Tech., from recognized university in relevant course	22/09/2021 9:00 am to 11:00 am
8	Guest Lecturer (Computer Science / Information Technology)			22/09/2021 9:00 am to 11:00 am
9	Guest Lecturer (Hygiene and Nutrition)		First class Master's Degree in Hygiene and Nutrition	23/09/2021 9:00 am to 11:00 am
10	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	23/09/2021 9:00 am to 11:00 am

Dean (Academics)

Demo topics for Guest AP, Guest Lecturer and Part Time Instructor DBRAIT 2021-22

DEPART-MENT	DEGREE	Practical(Degree)	DIPLOMA (Theory)	Practical(Diploma)	PTI
Civil	1.Structural engineering - a)mechanics of solids - 1 - bending stresses b) structural analysis 1 - moment distribution method 2. Environmental engineering :- Transportation of sewage 3. Geotechnical engineering 1:- One dimensional consolidation	1. Determination of quality of water 2. Test on cement / aggregate 3. Tacheometric survey 4. Test of steel			1. CT-Test for cement and aggregates 2. MOS - Test on steel 3. PHE- test for potability of water 4. Advanced Surveying-tacheometric survey
CSE	**1.Computer Programming** a) Recursion and arrays b) Pointers c) User defined data types **2. Computer Hardware and network trouble shooting** a) Desktop versus Laptop motherboards. b) Connectors – Switches- RTC/NVRAM batteries. c) Interrupts- DMA channels- I/O port addresses **3. Language Translator** a) Compilers- analysis of the source program-phases of a computer b) Context free grammars c) A language for specifying lexical analyzer	**1. Computer Network Lab** i. Creation of a socket between two computers and enable file transfer between them. Using (a.) TCP (b.) UDP ii. Creation of a socket between two computers and enable file transfer between them. Using (a.) TCP (b.) UDP iii. Broadcast /Multicast routing **2. Artificial Intelligence Lab** i. Water Jug Problem using DFS, BFS ii. Representation of Knowledge using Prepositional Logic and Querying	**1.Advance Java Programming:-**Delegation Event Model, Event sources, Event Listener Socket Programming. **2.Object Oriented Programming Using C++** :- Polymorphism in C++, File Operations **3.Data Structure Using 'C':-**Tree traversal.	**1.Advance Java Programming:-** Develop Program in java for client server communication. **2.Object Oriented Programming Using C++ :-**Develop programs for Operator overloading and function overloading. **3.Data Structure Using 'C':-** Develop program in C for various operations on a singly linked list. **4.Fundamental of ICT :-**Mail merge	1.Cabling 2.Assemble and Disassemble of various part of computer System. 3.OS installation 4.C/C++ program on pointer, structures.

		iii. Forward chaining and Backward chaining **3. Computer Network and Hardware Troubleshooting** i. Assembling of a Personal Computer ii. Circuit Tracing iii. Interfacing a timer/programmable I/O using PCI bus **4. Platform Technology Lab** i. Exception Handling, Multi-Threading in C#.Net ii. Database controls in VB.Net iii. Delegates in VB.Net and C#.Net **5. Computer Programming Lab** i) Recursion and Arrays ii) Pointers iii) User defined data types, files handling		**5.Workshop Practices :-** Cabling, Assemble and Disassembly of PC.	
Mathematic	1. Lagrange method of undetermined multipliers 2. Area by double integration and volume by triple integration 3. First order linear differential equations 4. Partial fraction of proper and improper fraction. 5. Expansion of periodic function into fourier series				

	6. Solutions of linear simultaneous in the three unknown by cramers rule. 7. Point of intersection of two lines, equation of line passing through point of intersection with given condition				
Chemistry	1. Hardness Of Water 2. Polymer Properties 3. Vulcanization –Synthetic Rubber 4. Chemical and Electrochemical corrosion 5. Desalination process- reverse osmosis and Electrodyalisis 6. Moulding constituent of plastics and moulding techniques 7. Primary and secondary cells 8. Types of polymerization 9. Reactions	10. To determine the pH value of solution using pH meter and universal Indicator 11. Estimation of available chlorine in Bleaching powder 12. Determination of carbonates and bi carbonates in water 13. determination of percentage of iron present given Hematite ore by KMno4 Solytion 14. Determination of Hardness of the sample water by EDTA method			
HM			1.Food Poisoning 2.Municipal Health Law 3.Health Food 4.HA CCP	1. Test for adulteration 2. Calculation of Nutritional value of given recipe	
Electrical			1. MESH and nodal analysis. 2.AC fundamentals 3.RLC series circuit and series resonance	1. Verification of Kirchhoff's law. 2.Measurement of three phase power by two wattmeter method	

			4. Measurement of single phase using Dynamometer type wattmeter. 5.Construction and working principle of transformer	3.Staircase wiring 4.Go down wiring 5.Load test on single phase transformer 6.Load test on three phase induction motor	
Electronics	1. Embedded Program Modeling Concept in C-Programming in Assembly language (APL) Vs. High Level Language. 2. Explain Optical Network – Principles ofSONET/ SDH and WDM. 3. Explain Mobile Internet Protocol and transfer layer. 4. Explain Mobile Computing Vs. Wireless Networking and Mobile Computing application.	1. To Construction and perform of DAC Circuits – R2R and ladder type. 2. To design the op-amp for differentiator and Integrator of various time constants. 3. To design a digital clock simulation using 8051/PIC microcontroller. 4. Design of m derived filter for measure frequency and phase response of the m derived high pass filter. 5. To deign code conversion for 8085 microprocessor. 6. To realization of 4 to 16 line decoder using 3 to 8 line decoder ICs.			
Mechanical	1. Angle of projections. (first and third both) 2. Development of surfaces. 3. Losses in pipeline flow.	1. Conic Sections. 2. Isometric Projections. 3. Verification of Bernoulli's theorem.			1. Conic Sections. 2. Isometric Projections. 3.Verification of Bernoulli's theorem.

	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)	4. Determination of Friction Factor. 5. Linear measurement by Vernier Calliper. 6. Angular measurements by Sine bar & slip gauges. 7. 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**. 8. 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.			4.Determination of Friction Factor. 5. Linear measurement by Vernier Calliper. 6. Angular measurements by Sine bar & slip gauges. 7. 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**. 8. 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.