Walk-in interview

Candidates who have applied for guest Lecturers (Degree / Diploma programs) in DBRAIT through email are intimated to attend walk in interview on **08/09/2020 and 09/09/2020** as per time schedule given below.

Selection will be based on the performance of the candidates in the interview /demo class. The Demo topics can be obtained from Institute website (http//: dbrait.andaman.gov.in).

S.No.	Details of requirement	Demo class Date	Time
1	Guest Lecturer (Civil)	08/09/2020	10:00 AM
2	Guest Lecturer (Electronics & Communication Engineering)	08/09/2020	11:30 AM
3	Guest Lecturer (CSE)	08/09/2020	02:00 PM
4	Guest Lecturer (Chemistry / Physics / Maths / English / Management)	08/09/2020	03:00 PM
5	Guest Lecturer (Mechanical)	09/09/2020	10:00 AM
6	Guest Lecturer (Electrical)	09/09/2020	11:15 AM
7	Guest Lecturer (DHMCT)	09/09/2020	11:30 AM
8	Physical Education	09/09/2020	12:00 AM

Dean (Academics)
DBRAIT

DEMO TOPICS FOR DEGREE/DIPLOMA PROGRAMME FOR APPOINTMENT OF GUEST LECTRUER AT DBRAIT FOR THE ODD TERM 2020-21

S.NO	*FACULTY*	*DEGREE TOICS*	*DIPLOMA TOPICS*	*PTI*
1	**CIVIL**	THEORY 1. Analysis of in determinant beams 2. Sight distance 3. Theodolite traversing 4. Theory of bending 5. Collection & transport of sewage. PRACTICAL 1. CMTC Lab 2. Surveying Lab 3. Geo Tech Lab 4. Environmental Lab	THEORY 1. Mix design of concrete 2. Contour gradient 3. Super elevation PRACTICAL 1. CMTC Lab 2. Surveying Lab 3. Geo Tech Lab 4. Environmental Lab	
2	**COMPUTER**	THEORY 1. **Computer Networks**: Networking Layers-Routing Algorithms-Congestion control-Netwrok security. 2. **Data structures& Object Oriented Programming :** Stacks-Trees-Graph-Tables. **3. Object Oriented programming & Design:**Constructors and Destructors-Inheritance-Polymorphism and Virtual Functions-Exception Handling-Operations on File. 4. **Computer Organization Architecture**: Basic Structure of computer-Input/Output organization-the Memory system –Pipeline. 5. **Language translator**: System Software and Machine Structure Loader and Linkers-Parsing-Optimization. **PRACTICAL TOPICS** **1. Computer Networks** i. Creation of a socket between two computers & enable	THEORY **1. Information Security:** Introduction to Cyber Crimes – Hacking, Cracking, Viruses, Virus Attacks, Pornography, Software Piracy, Intellectual property, Legal System of Information Technology, Mail Bombs,Bug Exploits, Cyber Crime Investigation 2. **Computer Security**: Firewalls: Need for Firewall, limitations, characteristics. Types of Firewall : Hardware, Software, Packet filter, Proxy Server, Hybrid, Application gateways, circuit level gateway, Implementing Firewall **3. Computer Hardware & Networking:** LCD monitor: functional block diagram of LCD monitor, working principle, Types-Passive matrix and Active matrix. Important characteristics - Resolution, Refresh rate, Response time. Comparison of CRT display and LCD display	1. Practical Topic's 2. OS installation 3. Hardware Trouble Shooting 4. Network Cabling and Troubleshooting 5. C Programming (i) Array (ii) Structures (iii) Pointer

		file transfer between them using a) TCP b) UDP ii. Create a socket for HTTP for web page upload & download. iii. Implementation (using NS2/Glomosim) and performance evaluation of the following routing protocols a) Shortest path routing b) Flooding **2. Data Structures & Object Oriented Programming** i. Searching Algorithms ii. Sorting Algorithms iii. Evaluation of arithmetic expression to postfix expression iv. Tree Traversals v. Graph Traversals vi. Establish a network between Computer systems using Switch. **3. Computer Programming** i. C Program to perform Matrix Multiplication ii. C Program to perform various string handling function such as strlen, strcpy, strcat, strcmp. iii. C program to create student details using Structures. iv. Create a file by getting the input from the keyboard and retrieve the content of the file using file operation command.	**4. Software Engineering:** Testing Strategies - Unit Testing - Integration Testing - Top-Down Approach - Bottom-up Approach - Regression Testing - Smoke Testing. 5. **Programming in C:** Function -function call, call by value, call by reference, recursion, command line Arguments. **PRACTICAL TOPICS** 1. Information Security (1) Encrypt and decrypt the message using Caesar Cipher With Variable Key(Cryptool) (2) Create Digital Signature document using Cryptool. 2. Computer Hardware & Networking (1) Formatting and partitioning of Hard Disk and installation of Windows7/8/10 (2) Prepare different types of Network Cable. 3. Programming in C (1) Program using pointer and function. 4 Windows Programming (1) Write a program to draw dots and lines using GDI in VC++. (2) Write a program to draw filled areas and rectangles using GDI in VC++.	
3	**ELECTRONICS**	THEORY 1) Explain rate monotonic and earliest deadline first scheduling algorithm 2) Explain how telemetry tracking and command system is used in satellite 3) Explain how Authentication Is performed in GSM. 4) Explain magnitude comparator.	THEORY 1. Explain classification of control system. 2. Explain the architecture of 8051 microcontroller. 3. Explain the working principle of push pull amplifier. 4. Explain the design and working principle of 4-bit synchronous counter.	1. To design the performance of 2nd order LPF &HPF using op-amp IC 741. 2. To design the 8-bit magnitude comparator using 4-bit magnitude comparator IC. 3. To design a clippers circuts using

		5) Explain the Architecture of 8051. PRACTICAL 1. Design and implementation of magnitude comparator. 2. Write a program for LCD interface to display "BRAIT" using hardware. 3. Write a program for ascending and descending order using 8085 microprocessor. 4. Develop and execute "C" program to interface stepper motor. 5. To design athe working of a astable multivibrator & Monostable multivibrator using IC741.	PRACTICAL 1. Develop and execute "C" program to interface stepper motor. 2. Measurement and control error of angular position with DC position control system. 3. Classification: class A, Class B, Class AB and Class C with respect to operation point on load line, efficiency. 4. Multiplexer-Block diagram, truth table, Logical expression and logic diagram of Multiplexers(2:1, 4:1, 8:1 and 16:1), Multiplexer tree.	diode positive clippers, negative clippers and biased clippers. To develop and simulate assembly language program for block transfer and block exchange with external memory.
4	**MECHANICAL**		1. Thermal stress in composite bar. 2. Theory of simple bending. 3. Working of Automobile Differential unit(Final Reduction Gear). 4. Type of constrained motion. 5. Angle Projection used in Engineering Graphics/Drawing. PRACTICAL 1. Verify Bernoull's Theorem. 2. Determine the coefficient of Discharge of Venturimeter. 3. Draw the orthographic projection(F.V., T.V.,R.S.V.)for a given Isometric view. 4. Compare coefficient of friction on horizon plane and inclined plane for the same surface. 5. Find out the unknown angle for a given sample with the help of bevel protector. 6. Determine the thickness of a given sample with the help of micrometer.	1. Verify Lami's theorem. 2. Compare coefficient of friction on horizon plane and inclined plane for the same surface 3. Find the MA, VR, Efficiency, Ideal Effort lost in friction for various loads and establish law of machine. Calculate maximum efficiency and also check the reversibility of machines of differential axle and wheel. 4. Determine the diameter of a given sample with the help of Vernier Caliper. 5. Draw the Pictorial/Isometric view for a given orthographic view.

5	**ELECTRICAL**		THEORY 1. MESH /Nodal Analysis 2. A.C .fundamentals 3. R-L-C series circuit and series resonance 4. Measurement of single phase power using Dynamometer type wattmeter. 5. Construction and working Principle of Transformer.	1. Cerification of Kirchoff's law 2. Measurement of 3-Ø power. 3. Stair case wiring on practice board. 4. Loa test of a shunt DC motor 5. Slip measurement of a 3-Ø Induction motor. 6. Go down wiring.
6	**MATHEMATICS**	1. Differential equation of first and second order. 2. Laplace transform and its applications. 3. Fourier transform and its application 4. Fourier series representation of periodic function. 5. Analytic function and bilinear transformation.		
7	**CHEMISTRY**		1. Polymers 2. Lubricants-characteristic, mechanism and functions 3. Corrosion and its control. 4. Wave motion. 5. Non-destructive testing of material.	1. Determine the pH value of given solution using pH meter and universal indicator. 2. Determine thinner content in oil paint. 3. Determine total hardness, temporary hardness and permanent hardness of water sample by EDTA method. 4. Standardization of KMno4 solution using standard oxalic acid IV and determine the percentage f iron present in given Hematite ore by KNno4 solution. 5. Determination of carbonates and bicarbonates in water.
8	**PHYSICS**		1) Lasers and fiber optics. 2) Diffraction grating and its application 3) Thermal properties of matter. 4) Wave motion.	1. To study of magnetic field along the axis of A circular coil(STEWART AND GEE'S METHOD).

			5) Non destructive testing of materials.	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 module of given wire.
9	**ACCOUNTS**		1. Business budget 2. Ledger 3. Depreciation account 4. Principles of double entry systems.	
10	**ENGLISH**		1) Effective communication 2) Non verbal and graphical communication 3) Comprehension and analysis. 4) Oral communication. 5) Formal written communication.	
11	**LANGUAGE LAB**	1. OS installation 2. Hardware Trouble Shooting 3. Network Cabling and Troubleshooting		
12	**DHMCT**		Food & Beverage service - Types of services - Food and wine combination - Food catering & its types - Wine and its types. Food Production - Continental cusine	1) Table setup for a five course menu 2) Bed making 3) Prepare two veg and two non veg starters 4) Prepare two varieties of mock tails Calculate occupancy %, ARR, Room count, single occupancy %.

			- Cooking and methods of cooking - Cuts of muttons. - Types of Pastries. House Keeping - Types of keys and key handling - Checkout room cleaning procedure. - Interior designing - Flower arrangement. Front Office - Front office procedure for receiving guest - Concierge - Left Luggage Handling Mail Handling.	

NOTE: All the candidates appearing for interview are hereby informed to prepare all the topics given for the interview