


Govt. POLYTECHNIC DIGLIPUR

DEMO TOPICS FOR GUEST FACULTY SELECTION PROCESS FOR THE SESSION 2023-24 (EVEN SEM)

S.NO.	DEPARTMENT	DEMO TOPIC	
		THEORY	PRACTICAL
1	CIVIL (GL)	<ul style="list-style-type: none"> • Repair and maintenance of structure a) Types of cracks and method of repair b) Materials for maintenance and repair c) Causes of damages in structure 	<ul style="list-style-type: none"> • Contract Technology a) Test for aggregates (course and fine) b) Test for cement c) Test for concrete
		<ul style="list-style-type: none"> • Building drawing and planning a) Principles of planning b) Preparation of plans c) Perspective drawing 	<ul style="list-style-type: none"> • Building drawing and planning a) Preparing various types of plan and section for a framed structure building
		<ul style="list-style-type: none"> • Concrete Technology a) Properties of concrete b) Methods of testing c) Mix design 	<ul style="list-style-type: none"> • Concrete Technology a) Chain surveying b) Compass surveying c) Levelling
2	CSE (GL)	<ul style="list-style-type: none"> • Concept of RDBMS Relation, Attribute, Domain, Cardinality, Degree, Properties of RDBMS • Database Security Introduction, Need of Database security, types of database Users 	<ul style="list-style-type: none"> • Create and execute DDL commands. • Create and execute DML commands.
		<ul style="list-style-type: none"> • Arrays and String • Structure and Union 	<ul style="list-style-type: none"> • Programs on Array. • Programs on String. • Programs on Structures.
		<ul style="list-style-type: none"> • Software Requirement Engineering Need of SRS, formats and its characteristics 	
		<ul style="list-style-type: none"> • Data structures in Python List, Tuple 	<ul style="list-style-type: none"> • Implement various operations of Tuple in Python. • Implement Various operations of List in Python.
		<ul style="list-style-type: none"> • Concepts of Artificial Intelligence • Concept of Machine Learning 	
3	MANAGEMENT (GL)	Need for instruction & direction to subordinates	
		preparation of balance sheet & profit-loss statement	
		need for safety management measures	
		planning at supervisory level- planning, detailing, and following each step	
		types of organization- steps in organizing	
		business plan preparation	
		incubation centre- role & procedure	
		Intrapreneur & entrepreneur	
		market study procedures	
		total quality management	

4	ECE (GL)	<ul style="list-style-type: none"> Full wave rectifier with filter clipper & clamper circuit CE transistor characteristics Working of sensor & transducer and active and passive transducer. 	<ul style="list-style-type: none"> Build/ Test full wave rectifier bridge Build/ test the combinational clipper circuit Test the performance of FET Drain characteristic transfer characteristic and calculate transductance.
		<ul style="list-style-type: none"> Wireless local loop architecture GPRS architecture. 	<ul style="list-style-type: none"> Use AT Commands to understand working of 3G Networking using 3G mobile phone & trainer kit, Simulate the Delta modulation using MAT LAB and Simulink
		<ul style="list-style-type: none"> LVDT & RVDT Strain guage. 	<ul style="list-style-type: none"> Use of strain guage to measure weights Measure displacement using LVDT
		<ul style="list-style-type: none"> Implement - 4 bit ripple counter and 7476 Perform 8 bit addition. 	<ul style="list-style-type: none"> 8051 architecture Master Slave JK flipflop 4 Bit Asynchronous counter
		<ul style="list-style-type: none"> DC Regulator power supply, PN junction & zener diode characteristic. 	<ul style="list-style-type: none"> Build/test zener voltage regulator for the given voltage. Characteristic of Zener diode
5	EE (GL)	Mesh / Nodal analysis	Verification of Kirchoff's laws
		RLC series circuit and 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 three 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 and reverse direction

NOTE: The interview shall be held on 10-01-2024
at 10:00 am at Govt. Polytechnic Dighpur
in GMSSS sitanagar, Dighlipur.


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