

DEMO TOPICS FOR DEGREE/DIPLOMA PROGRAMME FOR ODD TERM 2017-18

S.NO	FACULTY	DEGREE TOICS	DIPLOMA TOPICS
1	CIVIL	<p>THEORY</p> <ol style="list-style-type: none"> Design of stair case Design of combine footing Design of slab Design of sewers. <p>PRACTICAL</p> <ol style="list-style-type: none"> Drawing of plate girder. (Auto cad drawing) Continuous slab-Auto cad drawing Drawing of combine footing Drawing of stair cases. 	<p>THEORY</p> <ol style="list-style-type: none"> Concept of bearing capacity Permanent and temporary bridges and maintenance of bridge. Maintenance and rehabilitation of structure. Methods of Retrofitting in RCC building. <p>PRACTICAL</p> <ol style="list-style-type: none"> Measurement of horizontal, magnetic bearing, deflection angle and ertical angle by Aransit theodolite Preparation of line plan, detailed plan, developed plan, section, siteplan, area statement. Determination of liquid limited plastic limit of given soil sample. Determination of grain size distribution of given soil sample by mechanical sieve analysis.
2	COMPUTER	<p>THEORY</p> <ol style="list-style-type: none"> Network layer and Technology Cryptography Exception handling Addressing modes Virtual memory Routing algorithm Parsing Linker and loader <p>PRACTICAL</p> <ol style="list-style-type: none"> Hardware Trouble shooting Dual Booting of OS Establish LAN connection between PC to PC Program(C/C++/Java) <ol style="list-style-type: none"> Matrix multiplication File handling Exception handling Applet programming 	<p>THEORY</p> <ol style="list-style-type: none"> Process Management Scheduling Network Layer and Topology Firewalls Intrusion Detection Network(IDS) Network layer and topology Cyber Law Normalization Software testing strategy and methods. <p>PRACTICAL</p> <ol style="list-style-type: none"> Round robin scheduling DDL and DML Quires Hardware troubleshooting Establish LAN connection Between PC to PC VB Calculator Data base application Shorting algorithm
	ELECTRONICS	<p>THEORY</p> <ol style="list-style-type: none"> What is real time operating system OSI/ISO reference model Magnitude comparator. Describe about wireless local loop <p>PRACTICAL</p> <ol style="list-style-type: none"> Write an ALP to mask off most significant four bits Program to implement Buzzer interface using 8051UC kit Demonstration of serial communication using 8051uC and computer. Convert Hexa to decimal and BCD to Hexa. 	<p>THEORY</p> <ol style="list-style-type: none"> Classification of control system: open loop & closed loop system Process of control system: block diagram & explanation of each block Define pre-emphasis and de-emphasis. Architecture of 8051 microcontroller. <p>PRACTICAL</p> <ol style="list-style-type: none"> Measurement and control error of angular position with DC position control system. Develop and simulate assembly language program for block transfer and block exchange with external memory. Construct the circuit for bridge wave rectifier and obtain the waveform. Convert hexa to Decimal using 8085 microprocessor.
4	MECHANICAL		<p>THEORY</p> <ol style="list-style-type: none"> Theory of simple bending Thermal stress in composite bar Stress in cylindrical shell Iron carbon equilibrium diagram Design of riveted joints Working of wire cut EDB machine Working of differential Centrifugal casting Compounding of steam turbine. <p>PRACTICAL</p>

			<ol style="list-style-type: none"> 1. Verify of Lami's theorem 2. Calculate co-efficient of friction 3. Verify Bernoulli's theorem 4. Calculate thickness of the given specimen by using vernier caliper 5. Calculate diameter of the given specimen by using micrometer 6. Calculate angle of the given specimen by using bevel protractor 7. Verify polygon law of forces
5	ELECTRICAL		<p>THEORY</p> <ol style="list-style-type: none"> 1) CONSTRUCTION AND WORKING OF 3-PHASE TRANSFORMER. 2) PROTECTION OF ALTERNATORS. 3) PARALLEL OPERATION OF ALTERNATOR AND LOAD SHARING. 4) NEED AND TYPES OF EARTHING. 5) POWER FACTOR IMPROVEMENT. <p>PRACTICAL</p> <ol style="list-style-type: none"> 1) VERIFICATION OF KVL AND KCL. 2) VERIFICATION OF THEVENIN'S THEOREM. 3) POWER MEASUREMENT OF 2-WATTMETER METHODS. 4) EFFICIENCY OF SINGLE PHASE TRANSFORMER. 5) STAIR CASE WIRING. 6) MOTOR CONNECTION THROUGH DOL/STAR-DELTA STARTER.
6	MATHEMATICS	<ol style="list-style-type: none"> 1) Integral calculus 2) Differential Equation of first and second order 3) Radius of curvature 4) Binomial, Poison and Normal distribution 5) Partial Differential equation 6) Complex integration 	
	CHEMISTRY		<ol style="list-style-type: none"> 1) Polymers 2) Lubricants – characteristics, mechanism and functions 3) Corrosion and its control 4) Electrochemical cells 5) Cements and lime
	PHYSICS		<ol style="list-style-type: none"> 1) ULTRASONICS 2) ELASTICITY 3) X-RAYS 4) ELECTRICITY 5) MAGNETISM
	ACCOUNTS		<ol style="list-style-type: none"> 1) Cash budget and cash flow 2) Cash flow analysis 3) Problem based on forecasting principles 4) Characteristic of ideal financial statement. 5) Methods of costing forms of profit and loss accounts

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

TOPICS FOR PART TIME INSTRUCTOR

1.	ECE	<ol style="list-style-type: none"> 1) Develop and simulate assembly language program for block transfer and block exchange 2) Develop and simulate C Language program for clockwise and anticlock wise with hardware. 3) Design and implement half and full adder 4) Construct and implement ripple counter using IC.
2	COMPUTER/IT	<ol style="list-style-type: none"> 1) OS installation 2) Hardware trouble shooting 3) Network cabeling and troubleshooting 4) C Programming <ul style="list-style-type: none"> • Array • Structures • Pointer
3	ELECTRICAL	<ol style="list-style-type: none"> 1) Verification of KVL and KCL. 2) Verification of Thevenin's Theorem. 3) Power measurement of 2-wattmeter methods. 4) Efficiency of single phase transformer. 5) Stair case wiring. 6) Motor connection through Dol/Star-Delta Starter.
4	MECHANICAL	<ol style="list-style-type: none"> 1. Compute the Brinnel hardness no of the given specimen. 2. Calculate stress strain and percentage elongation of the given specimen. 3. Calculate diameter of the given specimen by using micrometer 4. Calculate angle of the given specimen by using bevel protractor 5. Verify polygon law of forces 6. Verify Lami's theorem.
5	HM	<ol style="list-style-type: none"> 1) Table setup for a five course menu 2) Bed making 3) Prepare two veg and two non veg staters 4) Prepare two varieties of mocktails 5) Calculate occupancy %, ARR, Room count, single occupancy %.
6	Physical Instr	<ol style="list-style-type: none"> 1) Fitness test 2) Skill test <ul style="list-style-type: none"> - Indoor games - Outdoor games 3) Officiating games, sports and athletics

NOTE: All the candidates appearing for demo practical are hereby informed to prepare all the topics given.