B.TECH 8TH SEM – CE

SUB: ORGANISATIONAL BEHAVIOUR
PAPER CODE: HU801

1) Define organization behavior. What are contributing fields of OB?   2 + 3

2) State the concept of group. What is the process of group formation?   2 + 3

3) How do you define personality? What are the factors that influence personality?   2 + 3

4) Distinguish between values and attitudes.   5

5) What is Motivation? What is the importance of motivation in an organization?   2+3

SUB: ENVIRONMENTAL POLUTION AND CONTROL
PAPER CODE: CE-801A

1. 1. Explain the following terms:
   a) Environmental Lapse rate
   b) Adiabatic Lapse rate
2. Define air pollution, mention effects of topography and meteorology on dispersion of air pollutants.
3. Write down the motor vehicle act and water act
4. Consider the case where a noise level of 90dBA exists for five minutes and is followed by a reduced noise level of 60dBA for 50 minutes .What is the equivalent continuous equal energy level (L_{eq}) for the 55 minutes period? Assume a five minute sampling period .Write the concept of (L_{eq})
5. What is population density and population forecasting?

SUB: PAVEMENT DESIGN
PAPER CODE: CE-802D

1. What are the factors considered in design of rigid pavements? Explain it.   10
2. As per IRC 58-2002, explain the procedure of design of rigid pavements.   10
3. Calculate the wheel load stress at edge and corner region of a CC pavement using and modified equations and the following data. Wheel load =51kn,E=3x10^4 n/mm^2.μ=0.15,pavement thickness=180mm,radious of contact area=150mm and modulus of sub grade reaction=0.06N/mm^3 10
4. Briefly explain the typical types of flexible pavement failures.   10

SUB: STRUCTURAL ENGINEERING DESIGN PRACTICE
PAPER CODE: CE-891

1. Design a welded plate girder 24m in span and laterally restrained throughout. It has to support a uniform load of 100kn/m throughout the span exclusively of self weight .Fe410   10

2. How do engineer determine the number of cells for concrete box girder bridges?   10

3. Design an Intze tank of 900,000litres capacity. The height of staging is 16 m up to the bottom of the tank. The bearing capacity of soil may be assumed to be 150 kn/m^2.Assume the intensity of wind pressure as 1500N/m^2.Use M20 concrete and HYSD bars.   10

4.Design a circular water tank of capacity 200,000litres .The depth of the tank is limited to 3m from inside. Keep the joint between wall and the base slab as flexible. The base slab rests on the ground .use M20 concrete. 10

B.TECH 8TH SEM – CSE

SUB: ORGANISATIONAL BEHAVIOUR
PAPER CODE: HU801

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5) What is Motivation? What is the importance of motivation in an organization?   2+3

SUB: CRYPTOGRAPHY & NETWORK SECURITY
PAPER CODE: CS801D

1. Explain the operational description of PGP.

2. Write Short notes on S/MIME.

3. Explain the architecture of IP Security.

4. Write short notes on authentication header and ESP.

5. Explain in detail the operation of Secure Socket Layer in detail.

6. Explain Secure Electronic transaction with neat diagram.

1.What is e-commerce? Discuss B2B2C and C2B2C model giving proper examples.
2.Define Electronic Data Interchange.What are the components of Electronic Data Interchange?
3.What is Firewall?State the function of Firewall in e-commerce.
4.What is EDI? Discuss it's layered structure.
5.Discuss the E- COMMERCE Architecture and it's components in details with the help of a diagram.

SUB: DESIGN LAB

PAPER CODE: CS891

1. Write a program to calculate Factorial of a number using C++.

2. Write a program to calculate Fibonacci series using C++.

3. Write a program to check a year is Leap year or not using C++.

4. Write a program to check a number is Prime number or not using C++.

5. Write a program to check a number is Palindrome or not using C++.

6. Write a program to check a number isArmstrong number or not using C++.

B.TECH 8TH SEM –AEIE

SUB: ORGANISATIONAL BEHAVIOUR
PAPER CODE: HU801

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SUB: POWER ELECTRONICS
PAPER CODE: EI 801A

1) What is a cycloconverter? What benefits does it offer in comparison to inverter?

2) Explain are the different types of thyristor protection. Explain briefly about di/dt protection.

3) Write down the advantage and disadvantage of IGBT.

4) Draw and explain dynamic or switching characteristics of an SCR.

5) Compare power MOSFETs with BJT.

SUB: DIGITAL IMAGE PROCESSING
PAPER CODE: EI802C

1. What do you mean by Digital Image? what is Digital Image Processing?
2. what are the basic relationship between Pixels?
3. what are the difference between DFT and FFT?
4. Explain Karhunen-Loeve Transform.
5. what is Histogram Processing?

SUB: POWER ELECTRONICS LAB
PAPER CODE: EI891A

1. Study of characteristics of an SCR.
2. Study of the operation of a single phase full controlled bridge converter with R and RL load.
3. Study of the characteristics of a Triac.
4. Study of the performance of a single phase half controlled symmetrical bridge converter with R and RL load.

SUB: INSTRUMENTATION AND CONTROL DESIGN LAB
PAPER CODE: EI892

1. Process Control Loop Design of a. Flow Control and b. Level Control.
2. Controller (digital) design (designing of processor i.e., program) for different process transfer function including dead time (Smith Predictor).
3. Design and fabrication of an instrument like a. thermal conductivity analyser and b. piezo-electric accelerometer.
4. Design of a. specified amplifier and b. counters (high frequency).

B.TECH 8TH SEM –ME

SUB: ECONOMICS FOR ENGINEERS
PAPER CODE: ME801(HU)

1. (a) Differentiate elaborately Absorption Costing and Marginal Costing.

   (b) Variable cost per unit is Rs.12. Selling price per unit is Rs.20. Fixed expenses is Rs.60,000. Find BEP and what will be the selling price per unit if the BEP is brought down to 6000 units?

3. What is the importance of Ratio Analysis and Capital budgeting methods in an organization?

4. Give a short note on:

   (a) Average Rate of Return (ARR)

   (b) Balance Sheet

   (c) Power sizing model of cost estimation.

5. Explain various advantages and disadvantages of Capital Budgeting Appraisal criteria.

SUB: ENERGY CONSERVATION & MANAGEMENT
PAPER CODE: ME802C

1. Write a short Note on primary and Secondary sources of energy with essential example.
2. Draw typical model of Energy Action Play in India
3. What is life Cycle Costing? What is the formula and why we require life cycle costing?
4. What is the significance of an energy policy?
5. What are the base line data that an audit team should collect while conducting detailed energy audit?

SUB: AUTOMOBILE ENGINEERING
PAPER CODE: ME803D

1. Draw the layout of Master vac power assisted brakes. Explain the construction & working of main components of this system.
2. Explain with neat sketch the construction of a propeller shaft. Explain the necessity of differential in automobile
3. How an automobile can be classify? Describe basic component and parts of automobile.
4. Draw the diagram fuel mixing and circuit control system.
5. Describe classification of carburetor. Explain working principle of simple carburetor & Zenith carburetor with neat sketches.

SUB: DESIGN OF A MECHANICAL SYSTEM
PAPER CODE: ME881

1. Explain Machine design methodology step by step by giving suitable example.
2. In material handling system when we have to choose Belt conveyor or cranes.
3. What is need of priming in centrifugal pump method?

B.TECH 8TH SEM – EE
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SUB: HVDC TRANSMISSION
PAPER CODE: EE801A

1. What are the types of HVDC transmission system applications ?
2. Explain the importance of a HVDC converter station, in the whole scheme of HVDC transmission.
3. What are the precautions needed for series & parallel connections of thyristor.
4. Give the necessity of smoothing reactor in a HVDC system and list out main functions of it.
5. Compare EHV AC & HVDC options for an Integral power network.

SUB: SENCORS & TRANDUCERS
PAPER CODE: EE802B

1. Explain working principle with neat diagram for flow measurement using Pitot tube.

2. State the difference between a sensors and Transducer.

3. What is the importance of sensor nodes?

4. Describe different components of sensor system?

5. What are the distinct features of Transducer?

SUB: ELECTRICAL SYSTEM DESIGN LAB
PAPER CODE: EE882

1. Design and validation of an electronic choke for a fluorescent tube.
2. Designing an iron core (with air gap) inductor with specified operating dc current and minimum inductance.
3. Design and validation of the electronic commutation system for a permanent magnet   fractional hp motor.
4. Design and validation of an electronic fan regulator.

B.TECH 8TH SEM – ECE
SUB: ORGANISATIONAL BEHAVIOUR
PAPER CODE: HU801

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SUB: SATELLITE COMMUNICATION & REMOTE SENCING
PAPER CODE: EC801C

1. What are the different components of a satellite system?
2. State the difference between satellite Payload and ISDN?
3. Describe different components of Communication systems?
4. What are the fundamental features of Remote sensing?
5. What is the importance of satellite communication system?

SUB: RENEWABLE ENERGY
PAPER CODE: EC802C

1   Write short notes on mini-micro hydel power system.
2   **How Does Climate Change Affect Me?**
3   What is wave energy? Derive the expression for power in waves.
4   **What is solar energy?**
5   **Short note on wind energy.**

SUB: DESIGN LAB
PAPER CODE: EC881

1. To design a rectifier for a given average output dc voltage and a given load resistance, compare between the theoretical values of Vdc, Vrms, RF, HD, output regulation, transformer utility factor etc. with the measured values, and thus comprehend the relevance/effect of these various parameters.
2. To learn designing DC power supplies regulation and protection circuits on a series transistor based output regulation circuit, an output current limiting circuit, fold back circuit needed for a given output parameters.
3. Single stage audio frequency voltage amplifier with BJT for a given Av , Zin and Zout and maximum symmetrical out put swing. To learn basic design principles, different methods of biasing, bias stability, selection of transistor from data manuals and effect of ac coupling on bandwidth
4. Complimentary symmetry power amplifier with pre amplifier, if necessary, for a given out put power to a given load with single ended power supply. To learn the distinction of a power amplifier over and above a voltage or current amplifier, its design principles, issues like, efficiency, cross over distortion etc.