INSTITUTE OF SCIENCE & TECHNOLOGY
ASSIGNMENT QUESTION

B.TECH-3RD SEM-CSE & IT - THEORY
PAPER NAME: ANALOG & DIGITAL ELECTRONICS
PAPER CODE: ESC-301

1. What is Integrated circuit? Explain its characteristics.
2. Explain the operation of Bipolar junction Transistor.
3. Write short note on class A Amplifier.
4. What is the importance of OPAMP, CMRR & Slew rate?
5. What are the differences between the Mono-stable & Bi stable multivibrator?
6. Explain different Logic Gates in Digital Electronics With neat sketch.

PAPER NAME: DATA STRUCTURE & ALGORITHMS
PAPER CODE: PCC-CS-301

1. Difference between Von Neumann and Harvard Architecture.
2. Differences between Computer Architecture and Computer Organization..
3. What are Computer Organization and Architecture?
4. Defines the Types of Locality of reference?
5. What is Cache Memory? Explain with example.

PAPER NAME: COMPUTER ORGANIZATION
PAPER CODE: PCC-CS-302

1. Analyse the basic operational concepts of computer.
2. Compare RISC and CISC architectures.
3. Model the flowchart for Booths multiplication algorithm.
4. List out the advantages and disadvantages of micro programmed control.
5. Briefly explain the concept of cache memory.

PAPER NAME: MATHEMATICS-III
PAPER CODE: BSC-301

1. Solve (D2+4)y=sinx
2. Find the maxima and minimum value of the function
   Cosxcos(x-$\pi/6$)cos (x+ $\pi/6$) where 0$\leq x \leq \pi$.
3. Every infinite bounded sequence of real numbers has at least one cluster point.
4. Verify the validity of the statement $\lim_{x-2} 5x = 10$
5. Evaluate $\iint \sin(x + y)\, dxdy\ over\ R: \{0 \leq x \leq \pi/2, 0 \leq y \leq \pi/2,$
6. Show that f(x)=sinx is continuous for all values of x.What about the continuity of cosx for all real values of x

PAPER NAME: ECONOMICS FOR ENGINEERS
PAPER CODE: HS-MC-301-N

1. Write the Role and scope of Engineering Economics in Brief?
2. Define Inflation, What are causes of Inflation?
3. Write Learning Curve in Brief?
4. Basic concepts of Accounting and Financial Management in Brief.
5. Short note on Break Even Point
6. Difference between Accounting and Financial Management

B.TECH-3RD SEM-CSE – PRACTICAL
PAPER NAME: DATA STRUCTURE & ALOGORITHM LAB

1 Types of Data Structures and give example?
2. Differentiate Array and Linked List?
3. What is Tree Traversal? List different Tree Traversal Techniques?
4. Write down the Time complexities of Sorting Techniques.
5. Comparison between Quick Sort and Heap Sort?

PAPER NAME: COMPUTER ORGANISATION LAB
PAPER CODE: PCC-CS-392

1. Implement adder circuits using basic gates.
2. Implement the converter circuits using basic gates.
3. Implement the working of Multiplexer by using IC 74153.
4. Implement the various circuits for ALU, data path and control units.
5. Design to 2:4 Decoders

PAPER NAME: IT WORKSHOP
PAPER CODE: PCC-CS-393

1. What are different applications of Python? Give examples.
2. List and explain different arithmetic operators supported by Python.
3. Discuss about their precedence and associatively.
4. Write a Python program to print all prime numbers less than 256.
5. What are regular expressions? How to find whether an email id entered by user is valid or not using   Python 're' module.

PAPER NAME: ANALOG & DIGITAL ELECTRONICS LAB
PAPER CODE: ES-CS-391

1. Briefly explain the working principle of simple function generator & IC.
2. Briefly explain the characteristics curves of FET with necessary Diagram. Narrate briefly about slew rate & Ripple factor.
3. Explain the input & output characteristics BJT for CE, & CC configuration with neat sketch.
4. Draw and explain the basic Logic gates & universal logic gates.
5. Explain the characteristics of full wave rectifier circuit & draw the necessary waveform.
6. Draw & explain Encoder & Decoder in Digital-Electronics.

B.TECH-3RD SEM-AEIE - THEORY
PAPER NAME : MATHEMATICS-III
PAPER CODE: BS-M-301

1. Solve the system of equations, by Gauss – elimination method
$$2x_1 + 3x_2 + x_3 = 9$$
$$x_1 + 2x_2 + 3x_3 = 6$$
$$3x_1 + x_2 + 2x_3 = 8$$
2. Find Fourier sine transform of e^{-ax} /x.
3. If there is a war every 15 years on average then find the probability that there will be no war in 25 years .
4.Find the Laplace transform of 4cos22t.
5.show that p(AB)$\geq P(A) + P(B) - 1$.
6. Write down the Newton's backward Interpolation Formula

PAPER NAME : NETWORK ANALYSIS
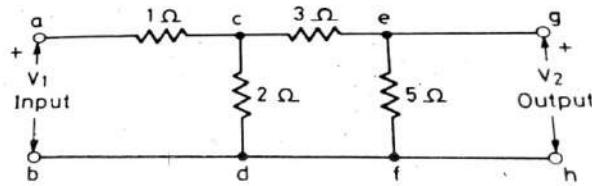## PAPER CODE: PC-EI-301

1. Explain- Application of Mason Gain Formula
2. What are the Basics of Network parameters?
3. What is Initial and Final value theorem?
4. Using partial fractions, obtain inverse Laplace transformation of

$$\frac{10^4}{s(s+250)}$$

5. Find the inverse Laplace transform of the following function
   V(s) = [10(s+4)]/[s(s+3) (s+1)2]
6. Find the Z11 & Z21 parameters of following network.

PAPER NAME : SENSORS AND TRANSDUCERS
PAPER CODE: PC-EI-302

1. Write a short note on: Industrial Relay system.
2. State the difference between measurement and instrumentation?
3. Describe different components of sensor system?
4. What are the fundamental features of various wireless sensor Networks?
5. Explain working principle with neat diagram of a Transducer.
6. What are the characteristics of smart-cities? What is the importance of sensor nodes?

PAPER NAME : ANALOG INTIGRATED CIRCUIT
PAPER CODE: PC-EI-303

1. What is the importance of Push-pull Amplification?
2. What is the duty cycle of a Astable- Multivtibrator?
3. Write short note on class AB Amplifier.
4. Draw the Pin diagram of IC & explain briefly.
5. What are the salient features De Morgan's law & Boolean Algebra?
6. Explain the operation of shunt voltage regulator using transistor.
7. What are the differences between the Mono-stable & Bi stable multivibrator?

PAPER NAME : DIGITAL ELECTRONIC CIRCUITS
PAPER CODE: PC-EI-304

1. Draw the circuit diagram of D/A converter. Explain Flash type ADC with neat sketch.
2. Briefly explain the Duality statement in Digital-Electronics.
3. Write a short note on: 2's complement.
4. What is the difference between Logic symbol and truth table of the different logic gates?
5. Briefly explain the difference between the decimal and hexa-decimal number system.
6. Explain BCD number system.

PAPER NAME : ENVIRONMENTAL SCIENCE
PAPER CODE: MC-ES-301

1. Explain- components of Ecosystem
2. What are the Basics of Environmental-science?
3. What is Biological classification?
4. Describe different types of protein & their function.
5. Discuss the relationship between biology & engineering.
6. Write briefly about ozone layer destruction.
7. Write a short note on London smog.
8. Write a short note on photochemical smog .
9. Write a note on smog.

B.TECH-3RD SEM-AEIE - PRACTICAL
PAPER NAME : CIRCUIT & NETWORK LAB
PAPER CODE: PC-EI-391

1. State & Explain Maximum Power Transfer Theorem.
2. With the detailed explanation find out the expression of resistance at which at which maximum power transfer occurs.
3. Briefly state & Explain Thevenin's Theorem
4. Briefly state & Explain Norton's Theorem
5. Explain the characteristics of 1-Port & 2- Port Networks.

PAPER NAME : SENSORS AND TRANSDUCERS LAB
PAPER CODE: PC-EI-392

1. Briefly describe the working principle of sensors with suitable diagram.
2. Briefly narrate a load cell with tensile & compressive load with neat sketch.
3. Briefly explain the working principle of pressure-gauge with necessary diagram.
4. Briefly narrate the operations of a standard Transducer system.
5. Explain with neat diagram of temperature measurement using AD590 IC sensor.

PAPER NAME : ANALOG CIRCUIT DESIGN LAN
PAPER CODE: PC-EI-393

1. With the help of neat sketch explain the operation of Full-wave rectifier.
2. Explain the Doping of the Semiconductor with neat sketch.
3. What is the difference between Zener Breakdown & Avalanche Breakdown?
4. Briefly describe the operations of Solar-cell and CMOS.
5. Briefly explain the working principle of a bipolar junction Transistor.
6. Briefly explain the working principle of a Field effect Transistor.

PAPER NAME : DIGITAL CIRCUIT DESIGN LAN
PAPER CODE: PC-EI-394

1. Draw & explain the operation of Various Flip-flop's in Digital-Electronics.
2. Draw & Explain the circuit diagram of A/D converter. Explain the Boolean - algebra in Digital Electronics.
3. Draw & explain the operation of Encoder & Decoder in Digital-Electronics.
4. Sketch with neat diagram of various shift-registers for Digital signals?
5. Deduce the difference between Logic symbol and truth table of the different logic gates.   Differentiate 1's complement over 2's complement.
6. Draw & explain the operation of various combinational & sequential circuits in Digital-Electronics.

B.TECH-5TH SEM-CSE-THEORY

PAPER NAME: SOFTWARE ENGINEERING
PAPER CODE : ESC 501

1. Define Software Engineering.
2. What is meant by Software engineering paradigm?
3. What are the Advantages of incremental model?
4. Write any two characteristics of software as a product.
5. Identify in which phase of the software life cycle the following documents are delivered.
    i) Architectural design
    ii) Test plan
    iii) Cost estimate
    iv) Source code document

PAPER NAME: COMPILER DESIGN
PAPER CODE: PCC-CS 501

1. Explain tools are used for compiler construction?
2. What is compiler design? List various types of compiler?
3. What is bootstrapping in compiler design? What is yacc?
4. What is Reloadable Machine Code? What is Lexical analysis?

5. What is Linker? List some examples of compiler construction tools?

PAPER NAME: OPERATING SYSTEMS
PAPER CODE: PCC-CS 502

1. Describe the multiprogramming operating system.
2. Draw the process state transition diagram and explain it.
3. Explain the types of schedulers context switching and dispatcher.
4. Discuses the preliminaries of memory management.
5. Explain paging.

PAPER NAME: OBJECT OREINTED PROGRAMMING
PAPER CODE: PCC-CS 503

1. Is it possible to call the base class method without creating an instance?
2. What is a super class & subclass?
3. What is the difference between Procedural programming and OOPS?
4. Write down difference between Abstraction and Encapsulation?
5. Explain the types of Inheritance in OOPS.

PAPER NAME: INTRODUCTION OF INDUSTRIAL MANAGEMENT
PAPER CODE: HS-MC501

1. Difference between formal and informal Organization?
2. Short Note on Span of Control
3. Write in Brief about Organizational Culture
4. What is Performance Appraisal?
5. Functions of Management
6. Maslow's Hierarchy

PAPER NAME: THEORY OF COMPUTATION
PAPER CODE: PEC-IT501A

1. Analyze the language proposed by Chomsky with the help of example.
2. Convert the given Context Free Grammar into CHOMSKY Normal form.
A -> bAA/As/b
B -> Abb/Bs/b
3. State post Correspondence problem(PCP) . Prove that the following instance of PCP has no solution over $\Sigma = \{0,1\}$,X and Y be lists of three strings as follows:

	List X	List Y
i	Wi	Xi
1	10	101
2	011	11
3	101	011

4. Under what circumstances we use total, partial and recursive functions.
5. State pumping lemma theorem.

PAPER NAME: CONSTITUTION OF INDIA
PAPER CODE: MC-CS501

1. Describe the fundamental rights & duties in Indian Constitution?
2. Difference between Fundamental right and duties?
3. List out the sources of Indian Constitution?
4. Describe the power & function of president as per Indian Constitution?
5. Discuss the role & functions of the collector in a district administration?
6. Role & importance of municipalities in the local administration?

B.TECH-5TH SEM-CSE-PRACTICAL
PAPER NAME: SOFTWARE ENGINEERING LAB
PAPER CODE: ESC591

1. Which process model leads to software reuse? Why?
2. What are the various activities in WINWIN Spiral Model?
3. What are the various elements that a computer based system makes use of?
4. Give at least two reasons for prototyping is problematic.
5. Mention the Advantage and Disadvantage of waterfall model.

PAPER NAME: OPERATING SYSTEMS LAB
PAPER CODE: PCC-CS 592

1. Write the features and benefits of UNIX.
2. Discuss the features of shell.
3. Write the shell program for print the file name and total numbers of file available in current path.
4. What is CPU scheduling? Explain FCFS algorithms.
5. Differentiate between multilevel queues and multilevel feedback queues.

PAPER NAME: OBJECT OREINTED PROGRAMMING LAB
PAPER CODE: CS 593

1. What are some other programming paradigms other than OOPs?
2. Write down the advantages of using OOPs?
3. Briefly describe encapsulation.
4. Discuss the main features of OOPs?
5. What is Polymorphism.

B.TECH-5TH SEM - EE & EEE- THEORY
PAPER NAME: ELECTRIC MACHINE-II
PAPER CODE: PC-EE/EEE 501

1. Why is a rotating field system used in performance to a stationary field?
2. What is synchronous condenser? Explain its operation and utility with phasor diagram.
3. Write short notes on a) two phase rotating field, b) three phase rotating field.
4. Describe the speed torque characteristics of IM. Explain the double revolving field theory for IM.
5. Derive the emf equation for an alternator. Explain clearly the meaning of a) distribution factor and b) coil span factor.

PAPER NAME: POWER SYSTEM-1
PAPER CODE: PC-EE/EEE 502

1. How can we reduce the effect of corona?
2. Find out the most economical diameter of conductor of an underground cable.
3. How is transmission lines classified? Define regulation of a transmission line.
4. What is Ferranti effect? Explain with phasor diagram.
5. What is two-part tariff? Explain how it is determined.

PAPER NAME: CONTROL SYSTEM
PAPER CODE: PC-EE/EEE 503

1. The characteristics equation of a system is given by $s^6 + 3s^5 + 4s^4 + 6s^3 + 5s^2 + 3s + 2 = 0$. Comment on the stability by applying R-H criterion.
2. What is Manson's gain formula?When poles are at 0, -6, -2±j3. And no. of poles and no. of zeros are 4 and 0 respectively then intersection point on real axis in S-plane in case of root locus technique is what?
3. For the system given as $G(s)H(s) = \dfrac{25}{s^2 + 100s + 25}$ determine (i) $\omega_n$and ω_d,(ii) $M_p$and (iii) settling time for 2% tolerance band for astep input.

4. The open loop transfer function of a unity feedbackcontrol system is $G(s) = \dfrac{20}{s(s+2)}$ Determine the steadystate error when the input is $r(t) = a_0 + a_1 t$.

5. Sketch the Nyquist plot for the open loop transfer function $G(s)H(s) = \dfrac{10K}{s(s+1)(s+100)}$ Determine the stability limit ofthe closed loop system.

PAPER NAME: POWER ELECTRONICS
PAPER CODE: PC-EE/EEE 504

1. Draw and explain the switching characteristics of power MOSFET.
2. Explain with necessary waveforms, the principle of operation of an RC triggering circuit for triggering of SCR.
3. Draw and explain dynamic or switching characteristics of an SCR.
4. Explain the principle of operation of step- up chopper with R load. Deduce the expression of O/P voltage of such chopper.
5. Draw the V-I characteristics of a thyristor ? What is the effect of gate current on the characteristics ?

PAPER NAME: POWER PLANT ENGINEERING
PAPER CODE: PE-EE/EEE 501B

1. Draw the schematic diagram of a modern steam power station.
2. Draw the flow diagram of a diesel power station and discuss its operation.
3. Explain the essential factors which influence the choice of site for a hydro-electric plant.
4. Explain the functions of the following:
(i) wind energy, (ii) tidal energy, (iii) solar energy.
5. What is the principle operation of photovoltaic cell.

PAPER NAME: OBJECT ORIENTED PROGRAMMING
PAPER CODE: OE-EE/EEE 501B

1. Is it possible to call the base class method without creating an instance?
2. What is a super class & subclass?
3. What is the difference between Procedural programming and OOPS?
4. Write down difference between Abstraction and Encapsulation?
5. Explain the types of Inheritance in OOPS.

B.TECH-5TH SEM - EE & EEE- PRACTICAL
PAPER NAME: ELECTRIC MACHINE-II LAB
PAPER CODE: PC-EE/EEE 591

1. Different methods of starting of a 3-phase cage induction motor & their comparison [DOL, Auto transformer & star-delta]
2. Speed control of 3 phase squirrel cage induction motor by different methods & their comparison [voltage control & frequency control].
3. Determination of equivalent circuit parameters of a single phase induction motor
4. To study the performance of induction generator

PAPER NAME: POWER SYSTEM-1 LAB
PAPER CODE: PC-EE 592(FOR EE ONLY)

1. Dielectric strength test of insulating oil.
2. Study of different types of insulator.
3. Active & reactive power control of alternator.
4. Determination of the generalized constants A,B,C,D Of long transmission line.

## PAPER NAME: CONTROL SYSTEM LAB
PAPER CODE: PC-EE 593/PC-EEE 592

1. Sketch the Root Locus Plot for the open loop T.F. given below:
   G(s)H(s)=[K(s2+4)/s(s+2)]
2. For a unity feedback 2nd order (TYPE-0) system with open loop T.F.
   G(s)=[3/s2+s+3]
3. Write the MATLAB program to plot step response.
4. For a unity feedback 2nd order (TYPE-0) system with open loop T.F.
   G(s)=[3/s2+s+3]
5. Write the MATLAB program to plot impulse response.
   Zeros are at (6,3) & Poles are at (2,4,8)
   Zeros are at (7,8) & Poles are at (1,6,5)

PAPER NAME: POWER ELECTRONICS LAB
PAPER CODE: PC-EE 594/PC-EEE 593

1. Study of performance of a Cycloconverter.
2. Study of different triggering circuits of an SCR
3. Study of firing circuits suitable for triggering SCR in a single phase full controlled bridge.
4. Study of the operation of a single phase full controlled bridge converter with R and R-L load.

B.TECH-5TH SEM-AEIE -THEORY
PAPER NAME:CONTROL SYSTEM
PAPER CODE : PC-EI501

1. Determine the overall transfer function from the block diagram given below using block diagram reduction technique.
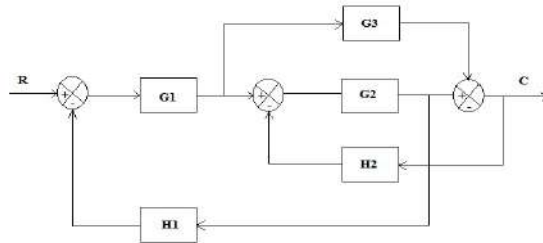
2. Draw the signal flow graph for the above block diagram and determine the overall transmittance using Manson's gain formula.
3. Sketch the root locus plot for the system having open-loop transfer function is given by
   G(s) H(s)=K/[s(s+4)(s2+4s+13)]
4. The open-loop transfer function of a system is given by G(s) H(s)=30/[s(1+0.5s)(1+0.08s)]
   Determine: (a) gain margin (b) phase margin (c) gain cross-over frequency (d) phase cross-over frequency.
5. Write a short note on Lead & Lag Compensation.

PAPER NAME: COMMUNICATION TECHNIQUES
PAPER CODE : PC-EI502

1. Draw & explain about the various communication systems.
2. What are the differences between the TDMA & FDMA?
3. What is Gaussian-noise? Briefly explain.
4. What is the significance of noise in various communication systems?
5. Define FM and draw its frequency spectrum.
6. What do you mean by multiple accesses in communication?

PAPER NAME: ELECTROMAGNETIC THEORY
PAPER CODE : PC-EI 503

1. What is Poynting theorem? Derive the expression for power and Poynting vector when the energy is transmitted from transmitter to receiver by means of electromagnetic waves.
2. Describe in general how a uniform plane wave propagates in a medium.
3. Describe the phenomenon of wave polarization of an electromagnetic wave.

4. What is transmission line? Derive the transmission line equations.
5. Explain the terms Input Impedance, Standing Wave Ratio and power in a transmission line.
6. How quarter wave transformer is used for impedance matching in a transmission line ?

PAPER NAME: OPTICAL INSTRUMENTATION
PAPER CODE : PE EI 501

1. Briefly describe the working principles of a Rectangular waveguide with a neat sketch
2. What are the advantages of using optical fiber in Instrumenting purpose?
3. What is Graded-index Fiber? Write its advantages.
4. Draw & Explain the working principle of Light –Emitting-Diode.
5. Briefly explain the differences between the core & cladding by using neat sketch.
6. What are the various Instrumentation Techniques in optical?

PAPER NAME: EMBEDDED SYSTEM
PAPER CODE : PE-EI503

1. Explain the term VLSI.
2. Draw AND, XOR gate using CMOS logic design.
3. Explain the difference between LSI and VLSI.
4. Draw & explain the operating principle of n-channel Enhancement MOSFET.
5. What are the importance of the phenomenon Hall Effect and explain briefly.
6. Discuss various Micromachining Techniques in Fabrication Technology

PAPER NAME: OBJECT ORIENTED PROGRAMMING
PAPER CODE : OE-EI501

1. Is it possible to call the base class method without creating an instance?
2. What is a super class & subclass?
3. What is the difference between Procedural programming and OOPS?
4. Write down difference between Abstraction and Encapsulation?
5. Explain the types of Inheritance in OOPS.

B.TECH-5TH SEM-AEIE -PRACTICAL
PAPER NAME:CONTROL SYSTEM LAB
PAPER CODE : PC-EI591

1. Explain the state space model of a linear continuous system.
2. Briefly explain about Lag and Lead compensation.
3. Briefly explain the step response for first and second order system with unity feedback with display on CRT screen and calculation of parameters for different system designs.
4. Explain the working principles of P, PI, PD, and PID Controller.
5. Determine the effect of P, I, D actions on first order simulated process and obtaining the system transfer functions from Bode plot
6. Briefly explain about the working principles of A.C & D.C Servo meter.

PAPER NAME: OBJECT ORIENTED PROGRAMMING LAB
PAPER CODE: OE-EI591

1. What are some other programming paradigms other than OOPs?
2. Write down the advantages of using OOPs?
3. Briefly describe encapsulation.
4. Discuss the main features of OOPs?
5. What is Polymorphism.

PAPER NAME: INDUSTRIAL INSTRUMENTATION LAB
PAPER CODE : PC EI 592

1. Draw the VTC curve of a simple CMOS inverter circuit and clearly define the different operating regions of NMOS and PMOS?
2. Derive a PLA programmed table for the combinational circuit that a square a 3 bit number
3. What is cell library? Briefly narrate about a load cell with tensile & compressive load.

4. Draw & explain the suitable & necessary waveforms of a Programmable Logic Array.
5. Explain with neat diagram of temperature measurement using AD590 IC sensor.
6. Draw & explain the differences between current source and sink. Explain the Different Applications of Instrumentation engineering in Industrial field.

B.TECH-5TH SEM-CE-THEORY

PAPER NAME: DESIGN OF RC STRUCTURE
PAPER CODE: CE(PC)-501

1. Write down the difference between Working stress Method and Limit state Method.
2. A single reinforced beam having X section 250mmx500mm(effective) has 5 bars of 14 mm diameter. Find the moment of resistance of Maximum Permissible stress in concrete=7N/mm^2, stress in steel =140 N/mm2 . m=13
3. An R.C.C beam 400x600 mm effective is reinforced with 4 bars of 25 mm diameter.The beam is subjected to a bending moment 150 knm.Find the stress set up in steel and concrete, if m-13.33
4. Determine the depth of neutral axis of a beam of a beam 250x400 mm, reinforced with 3 bars of 20 mm diameter. Also check for the type of section. Use M20 concrete and Fe 415 steel.
5. Determine the moment of resistance of a beam of dimension 250mmx350mm.The area of steel consists of 3 bars of 12 mm diameter placed at a distance of 40 mm from bottom of beam. Use M20 and Fe415 steel

PAPER NAME: ENGINEERING HYDROLOGY
PAPER CODE: CE(PC)-502

1. Write short notes on different types of Rain gauges.
2. Describe the methods used to control Reservoir Evaporation.
3. How to measure infiltration ?
4. What is the ratio of runoff to precipitation.
5. Explain the uses and limitations of UH.
6. Explain field capacity and permanent wilting point.

PAPER NAME:STRUCTURAL ANALYSIS-I
PAPER CODE : CE(PC)503

1. Describe the Castigliano's Therom I and Therom II.
2. Derive the formula of strain energy due to bending.
3. Write down difference between determinate structures and indeterminate structures. What do you mean by free body diagram? Explain in detail.
4. Define ultimate stress, breaking stress, percentage elongation and percentage reduction in area.

PAPER NAME:SOIL MECHANICS-II
PAPER CODE : CE(PC)504

1. Discuss about Terzaghi's theory of one dimensional consolidation .
2. What is active and passive earth pressure ?
3. Write down standard and modified proctor test .
4. Write down the factor affecting bearing capacity of soil
7. What is Terzaghi's bearing capacity theory?
8. What are the rigidity and depth factor correction ?
9. What is Taylor's stability number ?

PAPER NAME: ENVIRONMENTAL ENGINEERING-II
PAPER CODE : CE(PC)505

1. List the mitigation measures to remove air pollution.
2. Discuss about the component parts of manhole with neat sketches.
3. Discuss about the different type of sewer joint. With sketch. ?
4. Discuss about different type of sewer?
5. Discuss about Centrifugal pump and Air lift pump
6. What is the difference between sewage, sullage & garbage?

1. Discuss about different type of non-urban roads.
2. Write short notes on i) Right of way ii)Shoulders iii) Kerbs iv) Formation width.
3. What is gradient? Discuss on different type of gradients.
4. What is superelevation and why it is provided? Design the rate of superelevation for a horizontal curve of radius 450m and speed of 90kmph.
5. Discuss about definition of Curves and their types with neat sketch.
6. What are transition curves? Explain summit and valley curve with figures.
7. Discuss about soil stabilization.

PAPER NAME: CONSTITUTION OF INDIA
PAPER CODE : CE(MC)501
1. Describe the fundamental rights & duties in Indian Constitution?
2. Difference between Fundamental right and duties?
3. List out the sources of Indian Constitution?
4. Describe the power & function of president as per Indian Constitution?
5. Discuss the role & functions of the collector in a district administration?
6. Role & importance of municipalities in the local administration?

B.TECH-5TH SEM-CE-PRACTICAL
PAPER NAME: RC STRUCTURE SESSIONAL
PAPER CODE: CE(PC)-591
1. Design a column of size 450 mmx600mm and having 3m unsupported length. The column is subjected to a load of 2000 kn and is effectively held in position but not restrained against rotation. Use M20 concrete and Fe 415 steel.
2. Design a simply supported R.C.C slab to carry a uniformly distribution load of 2 kn/m2 (including its self weight) over an effective span of 3.5 m. Use M20 concrete and Fe 415 steel

PAPER NAME:SOIL MECHANICS LAB
PAPER CODE : CE(PC)594
1. Determine shear strength parameters of soil by direct shear test.
2. Perform triaxial test to determine shear strength parameters of soil.

PAPER NAME: ENVIRONMENTAL ENGINEERING LAB
PAPER CODE : CE(PC)595
1. Determination of turbidity for an assumed sample of water.
2. Determination of pH for an assumed sample water.

PAPER NAME: TRANSPORTATION ENGINEERING LAB
PAPER CODE : CE(PC)596
1 Describe the softening point test.
2. Describe the crushing strength test of aggregate.

PAPER NAME: COMPUTER APPLICATION IN CE
PAPER CODE : CE(PC)597
1. Explain truncation errors in detail.
2. Give algorithm for Secant and Bairstow's method.
3. Write short note on linear algebraic equations.
4. Write short note on non - linear Regression analysis and its application areas.
5. What is the use of backward, forward and central difference relations in numerical differentiations?

B.TECH-5TH SEM-ME-THEORY

PAPER NAME:-HEAT TRANSFER
PAPER CODE : PC-ME501

1. Define Heat Exchanger and its types of heat exchanger with neat sketch.
2. Explain Newton's law of cooling and also its significance of heat transfer coefficient.
3. Explain natural and Forced Convection with valid example.
4. What advantage does the effectiveness of NTU method have over the LMDT method?
5. What is the physical significance of thermal diffusivity of a metal?
6. Explain the Fourier's law for Isotropic materials.
7. Consider a slab of thickness L=0.25 m. One surface is kept at 1000 C and the other surface at 100 C. Determine the net flux across the slab, if the slab is made from copper. Thermal conductivity of copper may be taken as 387.6 W/m K.

PAPER NAME: SOLID MECHANICS
PAPER CODE : PC-ME502

1. What is the assumption of Plasticity theory?
2. a) Explain stress Displacement Relations and Hooke's law.
   b)Derive Compatibility equations
3. a) Explain Airy's stress function.
   b). Derive solutions for axisymmetric problems for Plane stress and plane Strain.
4. a)How to calculate the torque of a thin- walled sections
   b)Derive the expressions for Bending of Bar under transverse load at one end
5. a) Explain the significance of the theories of failure.
   b) Explain in detail the term 'Anisotropic Plasticity'

PAPER NAME: KINEMATICS & THEORY OF MACHINES
PAPER CODE: PC-ME503

1. What do you mean by whirling of shafts? Explain critical speed.
2. Explain in what way the gyroscopic couple affects the motion of an aircraft while taking a turn.
3. A small turbine rotor & its shaft are equivalent to a shaft of 200 cm long & 20 cm dia. It carries three discs weighing 200kg, 350kg, & 475kg at 35cm, 43cm& 60cm from left end bearing. The total deflections under the loads are found to be 0.022cm, 0.015cm& 0.013cm respectively. Neglect the weight of the shaft, determine the critical speed by energy method & compare it with the Dunkerley,s method.
4. Establish an expression for the natural frequency of free transverse vibration s for a simply supported beam carrying a number of point loads, by   a) energy method ;   b) Dunkerley,s method
5. What are the difference between flywheel and governor? What is the sensitiveness of governor?
6. A weight of 40 kg suspended from a spring produces a statical deflection of 1.2 cm & when in motion it experiences a viscous damping force with value of 20 kg at a velocity of 25 cm/s. calculate the periodic time of Damped vibration. the weight is then subjected to a periodic disturbing force having a maximum value of 25 kg & making 2 cycles/s, find the amplitude of ultimate motion.

PAPER NAME: HUMANITIES

1. What are the characteristics of Effective Technical Communication
2. State difference between general and technical communication.
3. Mention some barriers to effective technical communication.
4. Give details of five C's of business letters.
5. What are the typical components of technical reports?
6. Write in brief the characteristics of Effective Memos.
7. Define report. Mention the elements of a formal report.
8. Mention different formats of written communication.

PAPER NAME : ESSENCE OF INDIAN KNOWLEDGE TRADITION
PAPER CODE : MC501

1. Describe the fundamental rights & duties in Indian Constitution?

2. Difference between Fundamental right and duties?
3. List out the sources of Indian Constitution?
4. Describe the power & function of president as per Indian Constitution?
5. Discuss the role & functions of the collector in a district administration?
6. Role & importance of municipalities in the local administration?

B.TECH-5TH SEM-ME-PRACTICAL

## PAPER NAME: MECHANICAL ENGINEERING LABORATORY I (THERMAL)
PAPER CODE: PC-ME591

1. Explain the thermal conductivity and specific heat of given objects.
2. Determine the calorific value of a given fuel and its flash & fire points.
3. Determine the p-V diagram and the performance of a 4-stroke diesel engine.
4. Determine the convective heat transfer coefficient for flow over a heated plate.
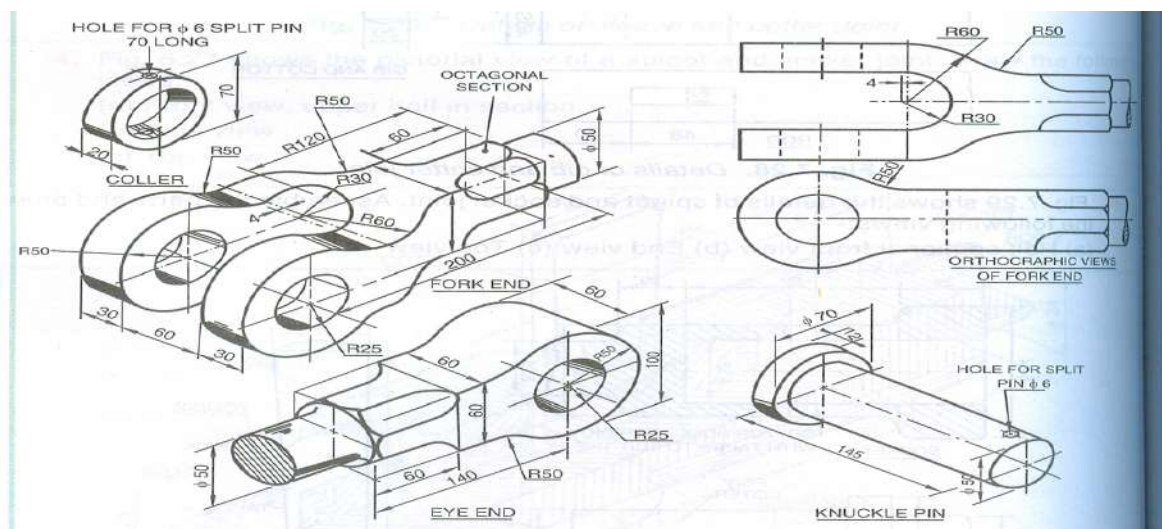5. Determine the performance characteristics of a vapour compression system

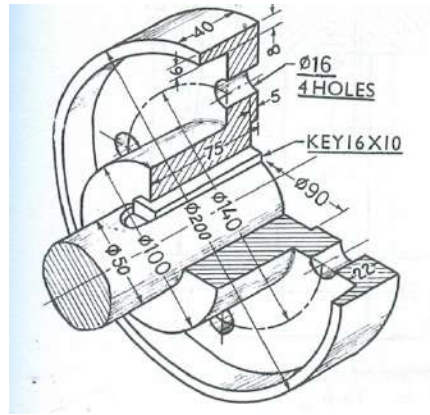## PAPER NAME: MACHINE DRAWING-II
PAPER CODE: PC-ME592

1. Draw an orthographic view of the following figure.
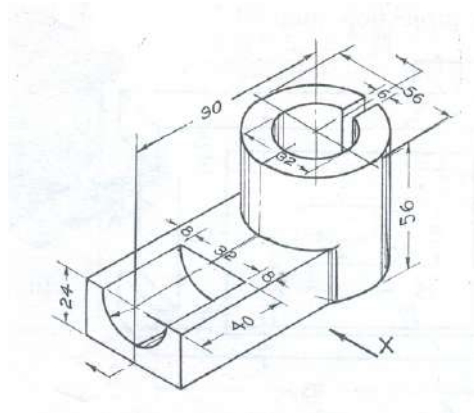
2. Draw the assemble front view of the following figures

3. Draw the front view and side view of the following figure

B.TECH-5TH SEM-ECE-THEORY

PAPER NAME: ELECTROMAGNETIC WAVE
PAPER CODE: EC 501

1. Explain the differential length, area and volume in cartesian coordinate systems, circular cylindrical coordinate system and spherical polar coordinate system.
2. What is Del operator? How is it useful in defining gradient of a scalar, divergence of a vector and curl of a vector?
3. Explain Gauss divergence theorem and Stoke's theorem in terms of divergence and curl of a vector.
4. What is Coulomb's law in electrostatics? Derive the expression for the force between two point charges in terms of Coulomb's law.
5. Describe the Electric Flux Density.
6. Derive Gauss Law in electrostatics. How is it related to Maxwell's Equations

PAPER NAME: COMPUTER ARCHITECTURE
PAPER CODE: EC 502

1. Explain how large storage can be implemented with optical disks
2. Discuss the possible methods for specifying the placement of memory blocks in cache.
3. Differentiate static and dynamic RAMs.
4. Write the major functionalities of disk controllers.
5. Explain the following: (5M + 4M + 5M, Apr'2018) a) Storing a word in memory. b) Basic operation of micro programmed control unitc) Input and Output gating of ALU23. Differentiate logical and physical addresses.

PAPER NAME: DIGITAL COMMUNCATION AND STOCHASTIC PROCESS
PAPER CODE: EC-503

1. Draw & explain about the various Digital-communication systems.
2. What are the differences between the TDMA & FDMA?
3. What is Gaussian-noise? Briefly explain.
4. What is the significance of noise in various communication systems?
5. Define FM and draw its frequency spectrum.
6. What do you mean by multiple accesses in communication?

PAPER NAME: DIGITIAL SIGNAL PROCESSING
PAPER CODE: EC-504

1. Discuss the operations of LTI System. What do you mean by DSP?
2. What are different components of ADE?
3. Explain the fundamental difference between the FFT & DFT.
4. Explain Transfer Function. What is DFT?
5. What is the fundamental difference between ASP & DSP?

6. Explain various Digital signal processing techniques.

PAPER NAME: POWER ECLECTRONICS
PAPER CODE: PE-EC505C

1. Draw and explain the switching characteristics of power MOSFET.
2. Explain with necessary waveforms, the principle of operation of an RC triggering circuit for triggering of SCR.
3. Draw and explain dynamic or switching characteristics of an SCR.
4. Explain the principle of operation of step- up chopper with R load. Deduce the expression of O/P voltage of such chopper.
5. Draw the $V-I$ characteristics of a thyristor ? What is the effect of gate current on the characteristics ?

PAPER NAME: HUMAN RESOURCE MANAGNMENT
PAPER CODE: OE-EC506C

1. Define HRM in Brief?
2. Why Recruitment is a Positive Process and Selection is Negative Process?
3. Difference between HRM and HRD?
4. 5 Qualities of HR Manager
5. What are the Sources of Recruitment?
6. Difference between Recruitment and Selection

PAPER NAME: EFFECTIVE TECHNICAL COMMUNICATION
PAPER CODE: MC-HU 501

1. Describe in brief "Verbal and Non-verbal communication.
2. How can we make an effective use of body language?
3. State some do's and don'ts of facing an interview.
4. How can you defend for cyber security?
5. "Is internet killing the print media?" Establish your views.

B.TECH-5TH SEM-ECE-PRACTICAL

PAPER NAME: ELECTROMAGNETIC WAVE LAB
PAPER CODE: EC 591

1. Study the input impedance a terminated coaxial line using shift in minima technique.
2. Study the Smith chart on Matlab Platform.
3. Discuss the study of Smith chart for single-stub and double-stub matching. .
4. Study the Radiation pattern of dipole antenna.

PAPER NAME: DIGITAL COMMUNCATION LAB
PAPER CODE: EC 592

1. Draw & explain the block diagram of BFSK.
2. Draw & explain the block diagram of Delta-Modulation & De-Modulation.
3. Draw & explain the operations of CDMA
4. Draw & explain the operations of GSM.
5. Draw & explain the working operations of WAE model.
6. Draw the block diagram of cellular phone and explain. Deduce the significance of the term   GPRS network.

PAPER NAME: DIGITIAL SIGNAL PROCESSING LAB
PAPER CODE: EC 593

1. Draw & explain the operating principle of a swept super heterodyne spectrum analyzer.
2. With proper explanation, deduce the Norton's theorem. What is Laplace transformation?
3. With diagram, explain the operation of various types of connected graphs.
4. What are the major advantages of Fourier transform over Laplace transformation?

5. Briefly discuss about LTI Systems. Mention the advantages and disadvantages of Band pass filters.
6. Draw and explain the working principle of 2-port Networks.

B.TECH-7TH SEM-CSE-THEORY

PAPER NAME: CLOUD COMPUTING
PAPER CODE: PEC-CS 701B

1. Discuss in detail about Nano computing and Optical Computing.
2. Why is it necessary to understand the various computing paradigms?
3. Elaborate the term "Software as a Service" related to cloud computing.
4. Give the drawbacks of Cloud Computing paradigm.
5. What are the Services provided by PaaS ? Discuss in detail.

PAPER NAME: SOFT COMPUTING
PAPER CODE: PEC-CS702B

1. Implement NAND function using McCulloch-Pitts neuron model. (Use binary data representation).
2. Explain why Widrow-Hoff rule is adopted to minimize error in ANN learning.
3. Using your own intuition and definition of universe of discourse, plot membership functions for liquid level in the tank. (empty, very less, less, full, very full)
4. Differentiate between Mamdani FIS and Sugeno FIS.
5. Represent the standard fuzzy set operations using Venn diagram.

PAPER NAME: OPERATION RESEARCH
PAPER CODE: OEC-CS 701A

1. Solve the following LP problem graphically:
   Maximize $z = -x_1 + 2x_2$
   Subject to $x_1 - x_2 \leq -1$
   $0.5x_1 + x_2 \leq 2$
   And $x_1, x_2 \geq 0$
2. Write the dual of the following primal problem
   Maximize $Z = 3x_1 + x_2 + 2x_3 - x_4$
   Subject to the constraints
   (i) $2x_1 - x_2 + 3x_3 + x_4 = 1$
   (ii) $x_1 + x_2 - x_3 + x_4 = 3$
   And $x_1, x_2 \geq 0$ and x_3, x_4 unrestricted in sign.
3. Write down the advantages and limitation of Linear Programming.
4. A retailer purchases cherries every morning at Rs 50 a case and sells them for Rs 80 a case. Any case remains unsold at the end of the day can be deposed of the next day at a salvage value of Rs 20 per case(thereafter they have no value). Past sales have ranged from 15 to 18 cases per day. The following is the record of sales for the past 120 days.
   Cases sold   : 15   16   17   18
   Number of days: 12   24   48   36
5. Find out how many cases should the retailer purchase per day in order to maximize his profit.
6. Write down the queuing model for {(M/M/1) : (N/FCFS)}.

PAPER NAME: PROJECT MANAGEMENT & ENTREPRENEURSHIP
PAPER CODE: HSMC 701

1. Meaning of Entrepreneurship
2. Challenges faced by the women Entrepreneur
3. Difference between PERT and CPM
4. Point out some Contribution of Entrepreneur in the Society
5. Define demand and Supply

B.TECH-7TH SEM-CE-THEORY
PAPER NAME: METRO SYSTEM & ENGINEERING
PAPER CODE: CE-OE 701A

1. What is bridge? Discuss about the classification of Bridge with sketch.
2. Write short notes on i) Submersible Bridge ii) Afflux iii) Skey Bridge iv) Semi through Bridge
3. What is culvert? Discuss about the different type of culverts with sketch.
4. Discuss about the components of a bridge with sketch.
5. What is pier? Discuss about the different types of piers.

PAPER NAME: HYDRAULIC STRUCTURES
PAPER CODE: CE-PE 701C

1. What is the difference between gravity and embankment dam?
2. Write short notes on stilling basins type.
3. What are the necessity and uses of the diversion head works .
4. Discuss about the components of a Dam with sketch.
5. Discuss about the slip circle method .

PAPER NAME: PRESTRESSED CONCRTE
PAPER CODE: CE-PE 702A

1. What is prestressed concrete?
2. What is loss of stress in prestress?
3. What are the advantages of PSC construction .
4. Define pre tensioning and post tensioning.
5. What is the need for the use of high strength concrete and tensile steel in prestressed concrete ? .

PAPER NAME: AIR AND NOISE POLLUTION & CONTROL
PAPER CODE: CE-PE 703A

1. What is air pollution? Discuss about the effect of air pollution.
2. Write the different type of sources of air pollution.
3. Write down the different type of control measures of air pollution.
4. Discuss about Cyclonic scrubbers with neat sketch.
5. Discuss about Bag filter with neat sketch.

PAPER NAME: ADVANCE STRUCTURAL ANALYSIS
PAPER CODE: CE-PE 704B

1. Explain the term: Null Matrix, Transpose of Matrix and band matrix.
2. Derive the strain and strain-displacement relations for small displacement
3. Derive the shape functions for three nodes beam using usual notations.
4. Explain pre-processing and post processing stage in finite element method.
5. Derive the shape functions for constrain triangle with polynomial function

PAPER NAME: PAVEMENT DESIGN
PAPER CODE: CE-PE 705B

1.   What are the desirable characteristics of pavement?
2.   Explain different types of flexible pavement failure.
3.   Explain the various types' rigid pavement failure.
4.   Explain IRC recommendation is the design of dowel bar, tie bar.
5.   Write Westergaad's load stress equations at critical regions and discuss critical combination of stress

B.TECH-7TH SEM-EE-THEORY
PAPER NAME: ELECTRIC DRIVE
PAPER CODE: PC-EE-701

1. What are the different advantages of electrical drives?
2. What are the equivalent value of drive parameter for loads with rotational and translation motion?
3. What are the different types of braking of D.C. motor, Induction motor and synchronous motor? Also determine the energy loss during breaking.
4. Explain the 1-phase, 3-phase fully controlled and half controlled D.C. drives.
5. Explain the Voltage Source Inverter fed Synchronous motor drive.

PAPER NAME: POWER GENERATION ECONOMICS
PAPER CODE: PE-EE 701C

1. Explain the flat rate tariff. What is the advantage and disadvantage of flat rate tariff.
2. Define the terms 'Load factor' and 'Diversity factor' and
3. Explain the economic implications of these factors on the cost of generation.
4. Explain briefly the various costs which form the total cost of a power system.
5. What is a tariff? Discuss the types of tariffs.

PAPER NAME: COMPUTER GRAPHICS
PAPER CODE: OE-EE 701C

1. Explain ellipse generating algorithm.
2. Distinguish between random and raster scan algorithms.
3. Differentiate between Gouraud and Phong shading.
4. What is the difference between boundary fill and flood-fill algorithms?
5. Write 8- boundary fill algorithm.
6. Explain the steps in the Z-buffer algorithm

PAPER NAME: COMPUTER NETWORK
PAPER CODE: OE-EE 702C

1. Provide a simple overview of IPv6 and compare it with IPv4.
2. Write a note on Internet Key Exchange protocol.
3. Compare Adhoc and Cellular networks.
4. Explain different types of Handoff strategies. What are the problems addressed by these techniques.
5. Write down a note on the evolution of wireless communication systems

PAPER NAME: PRINCIPLE OF MANAGEMENT
PAPER CODE: HM-EE 701

1. Define Management
2. What are the various functions of Management?
3. Explain 14 principles of management by Henry Fayol?
4. What is scientific management? Explain its principles & Features
5. Write a short note on Advantages of planning?
6. What is MBO? & it's limitations?
7. What is planning? Explain steps in planning process

B.TECH-7TH SEM-EE-PRACTICAL
PAPER NAME: ELECTRIC DRIVE LAB
PAPER CODE: EE791

1. Study of Chopper fed DC Drive.
2. Study of AC Single phase motor-speed control using TRIAC.
3. PWM Inverter fed 3 phase Induction Motor control using PSPICE / MATLAB / PSIM Software.
4. Study of V/f control operation of 3 Ph. induction motor drive.
5. Study of permanent magnet synchronous motor drive fed by PWM Inverter using Software.

B.TECH-7TH SEM-AEIE-THOERY
PAPER NAME: DIGITIAL CONTROL SYSTEM
PAPER CODE: PE-EI 702

1. How Can We Calibrate A Positioner? Why is derivative control not used alone?
2. Draw the block diagram of a basic process control loop and describe the function of each block in brief.
3. Explain What Is The Working Principle Of The Magnetic Meter?
4. How to Choose Differential Range? What Is The Working Of Rota Meter?
5. What Is Solenoid Valve? Where It Is Used? What Is Ratio Control System?

PAPER NAME: ANALYTICAL INSTRUMENTATION
PAPER CODE: PE-EI 703

1. List the types of electrodes used for pH measurement.
2. Explain the construction details of one of them.
3. Why is reference electrode required for pH measurement?
4. Describe a method of measuring dissolved oxygen content in the boiler feed water?
5. Explain the use of thermal conductivity gauge for the analysis of flue gas.

PAPER NAME: TELEMETRY & WIRELESS SENSOR NETWORK
PAPER CODE: OE-EI 701

1. Make a comparison between TDM & FDM systems.
2. How companding techniques used in PCM system? Explain briefly with suitable diagram
3. Draw the schematic of a Wavelength-division-multiplexing system for optical fiber telemetry
4. What is the importance of FDM system?
5. Draw and explain the block diagram of Wireless sensor Network.
6. Draw & explain about BPSK & BFSK Techniques in brief.

PAPER NAME: COMPUTER NETWORK
PAPER CODE: ES-CS 701

1. Provide a simple overview of IPv6 and compare it with IPv4.
2. Write a note on Internet Key Exchange protocol.
3. Compare Adhoc and Cellular networks.
4. Explain different types of Handoff strategies. What are the problems addressed by these techniques.
5. Write down a note on the evolution of wireless communication systems

B.TECH-7TH SEM-ME-THOERY

PAPER NAME: ADVANCE MANUFACTURING TECHNOLOGY
PAPER CODE: PC-ME 701

1. Discuss the mechanism of material removal for Abrasive jet machining (AJM). State their limitations.
2. Describe with neat sketch the working principle of Electro discharge machining (EDM)?
3. Describe with neat sketch the working principle of Laser beam machining (LBM)?
4. Write down the advantages wire cut EDM over conventional EDM.
5. Write principle & advantages Electro chemical machining (ECM) process.

PAPER NAME: AUTOMOBILE ENGINEERING
PAPER CODE: PE-ME 701A

1. Describe with neat sketches the construction & working function of constant mesh gear box & sliding mesh gear box.
2. Draw the layout of Master vac power assisted brakes. Explain the construction & working of main components of this system.
3. Explain with neat sketch the construction of a propeller shaft. Explain the necessity of differential in automobile

4. Enlist the common troubles experienced in the fuel supply system of an engine. Locate their possible causes & suggest measure to remedy these.
5. Draw the diagram fuel mixing and circuit control system.

PAPER NAME: ADVANCE WELDING TECHNOLOY
PAPER CODE : PE-ME702H

1. Explain the principle of non-vacuum electron beam welding. What are its advantages ?
2. Explain principle and operation of LASER beam welding with its advantages and limitation.
3. Explain the term 'transferred modes' and 'non-transferred modes' used in plasma Arc welding. What is 'Plasma' ? Describe plasma arc welding.
4. The electrode M 32432 P is being used for a certain process. What information do you get from various letters and numbers of the above I. S. Code ?
5. Discuss the mechanism of explosive welding. Write the name of some explosives used. Discuss limitations and applications of explosive welding.
6. Mention normally encountered welding defects and remedial measures taken

PAPER NAME: NON CONVENTIONAL ENERGY SOURCES
PAPER CODE: OE-ME701D

1. Explain the Ocean Thermal Energy Conversion Method.
2. Describe the term the Energy Storage System
3. Write a short Note on Development and role of Renewable Sources of Energy.
4. What is Extraterrestrial Solar Radiation? Explain the method of Measurement and Estimation of Solar Radiation. If necessary derive the expression.
5. Explain solar ponds and Solar Concentrators with neat sketch.

PAPER NAME: ECONOMICS FOR ENGINEERS
PAPER CODE: HM-HU 701

1. What is elasticity of demand?
2. What is opportunity cost?
3. What do you mean by marginal cost?
4. Explain marginal costing?
5. Give a short note on sunk cost
6. What is meant by marginal revenue?

B.TECH-7TH SEM-ME-PRACTICAL

PAPER NAME: MECHANICAL ENGINEERING LABORATORY III (MANUFACTURING)
PAPER CODE : PC-ME 791

1. Give Experimental procedure on ECM/ LBM
2. Write different between orthogonal cutting and oblique cutting.
3. Set Programming on CNC Lathe using G and M Codes
4. What is up milling process? Explain with figure. Write the advantage of down milling process.
5. Give the effect of parametric variation in arc welding
6. Study of and Solving problems on geometry of robot manipulator, actuators and grippers
7. Set Programming on CNC Milling Machine using APT

B.TECH-7TH SEM-EEE-THOERY

PAPER NAME: ANALOG AND DIGITAL COMMUNICATION
PAPER CODE: PC-EEE 701

1. Write the differences between ASK and BFSK.
2. What is Frequency-Modulation? Draw its necessary waveform.
3. What are the main advantages of Digital communication over Analog communication?
4. Write the short note of Voltage-controlled oscillator.

5. What is WWE? Draw its model.

PAPER NAME: ELECTRIC DRIVE
PAPER CODE: PE-EEE-701A

1. What are the different advantages of electrical drives?
2. What are the equivalent value of drive parameter for loads with rotational and translation motion?
3. What are the different types of braking of D.C. motor, Induction motor and synchronous motor?
4. Also determine the energy loss during breaking.
5. Explain the 1-phase, 3-phase fully controlled and half controlled D.C. drives.
6. Explain the Voltage Source Inverter fed Synchronous motor drive.

PAPER NAME: COMPUTER NETWORK
PAPER CODE: OE-EEE 701B

1. Provide a simple overview of IPv6 and compare it with IPv4.
2. Write a note on Internet Key Exchange protocol.
3. Compare Adhoc and Cellular networks.
4. Explain different types of Handoff strategies. What are the problems addressed by these techniques.
5. Write down a note on the evolution of wireless communication systems

PAPER NAME: COMPUTER GRAPHICS
PAPER CODE: OE-EEE 702B

1. Distinguish between random and raster scan algorithms.
2. Differentiate between Gouraud and Phong shading.
3. What is the difference between boundary fill and flood-fill algorithms?
4. Write 8- boundary fill algorithm.
5. Explain the steps in the Z-buffer algorithm.

PAPER NAME: PRINCIPLE OF MANAGEMENT
PAPER CODE: HM-EEE 701

1. What are the various functions of Management?
2. Explain 14 principles of management by Henry Fayol?
3. What is scientific management? Explain its principles & Features
4. Write a short note on Advantages of planning?
5. What is MBO? & it's limitations?
6. What is planning? Explain steps in planning process.

PAPER NAME: ANALOG AND DIGITAL COMMUNICATION LABORATORY
PAPER CODE: PC-EEE 791

1. Briefly narrate about the principle of VSWR Meter with neat sketch.
2. Study the Pulse Amplitude Modulation Technique with neat sketch of its different waveforms.
3. Explain the operation of solar cell with necessary suitable diagrams.
4. Explain the operation of Photo-Diode with necessary suitable diagrams.
5. Explain the Design of a PLL using VCO & measurement the lock frequency.