MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
(Autonomous)
B.Tech. III Semester End Examinations
(Model Question Paper)

MR-21

Course Title: Electronic Devices and Circuits **Course Code: EC301PC**
Time: 3 hours Max. Marks: 70

Note: Answer ALL Questions
Part-A (10 x 2 = 20 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
1. a)	Write the Applications of Diode	2	1	1	1
1. b)	Differentiate between Clipper and Clamper	2	2	1	3
	Unit-II				
1. c)	What is Early Effect	2	1	1	1
1.d)	Explain the concept of Thermal runaway in detail	2	2	1	3
	Unit-III				
1. e)	Distinguish between avalanche and Zener mechanisms of a diode	2	1	1	3
1.f)	How FET work as a Voltage variable Resistor	2	2	2	2
	Unit-IV				
1. g)	Draw the small signal low frequency h-parameter model of a CB Transistor	2	2	4	5
1.h)	Why CC Amplifier is called Emitter Follower	2	2	4	5
	Unit-V				
1. i)	What are the advantages of FET over BJT	2	1	4	1
1.j)	Draw the Drain characteristics of E-MOSFET	2	1	4	1

Part-B (5 x 10=50 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
2.a)	Design a negative Clipper Circuit with Reference voltage is 3V.	6	6	2	3
2.b)	The voltage across a silicon diode at room temperature is 0.7 V when 2 mA current flows through it. If the voltage increases to 0.75 V, calculate the diode current. Assume V_T = 26 mV.	4	4	2	2
	OR				
2. c)	Draw and explain the circuit diagram of full wave rectifier with L-section filter	5	2	1	4
2.d)	Derive the Diffusion Capacitance in PN Junction Diode	5	4	1	1
	Unit-II				
3. a)	From the transistor current components, develop the current equation of transistor.	5	6	2	3
3. b)	An NPN transistor if β=50 is used in common emitter circuit with Vcc=10V and Rc=2kΩ. The bias is obtained by connecting 100kΩ resistor from collector to base. Find the quiescent point and stability factor	5	4	3	2
	OR				
3. c)	Draw and Explain the Voltage divider Bias technique and derive its stability factor S.	5	3	3	11
3.d)	Explain the Input and Output characteristics of CB configuration with neet diagram.	5	1	2	1
	Unit-III				
4. a)	Explain the Construction and operation of N-Channel JFET	5	1	4	3
4. b)	Explain the construction and working of SCR	5	2	2	3
	OR				
4. c)	Draw the V-I Characteristics of Tunnel diode with the help of Energy band diagram.	4	3	4	3

4.d)	An n-channel JFET has I_{DSS} =10mA and V_P = - 2V. Determine the drain source resistance r_{ds} for (i) V_{GS} =0V. (ii) V_{GS} = - 0.5V.	4	4	3	2
Unit-IV					
5. a)	Sketch the circuit diagram of CE amplifier and explain its operation in detail	5	2	4	11
5. b)	A transistor in CB configuration circuit has the following set of 'h' parameters. h_{ib} = 20 Ω, h_{fb} = 0.98, h_{rb}=3×10-4 , h_{ob} = 0.5×10-6 A/V . Find the values R_i , R_o, A_i and A_v, if R_s = 600Ω and R_L = 5 kΩ.	5	3	4	2
OR					
5. c)	Compare the performance of BJT as an amplifier in CE, CB, CC configuration	5	2	4	1
5.d)	Draw the Common emitter amplifier with Emitter resistor and explain its operation.	5	3	4	1
Unit-V					
6. a)	Explain the Construction and operation of Enhancement mode MOSFET	5	2	2	4
6. b)	Why CD Aplifier is Known as Source Follower. Explain in detail.	5	3	4	1
OR					
6. c)	Derive the expressions for Z i , Zo and Av for common source J-FET amplifier	6	4	4	3
6.d)	Write the differences between J-FET and MOSFET	4	3	4	1

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
(Autonomous)
B.Tech. III Semester End Examinations
(MODEL QUESTION PAPER)

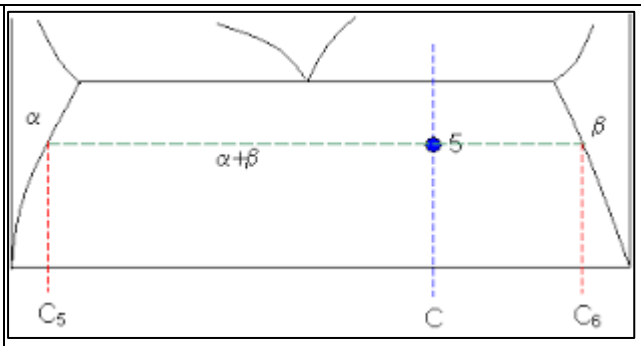
MR-21

Course Title: Materials Science and Metallurgy **Course Code: MM331ES**
Time: 3 hours Max. Marks : 70

Note: Answer ALL Questions
Part-A (10 x 2 = 20 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
1. a)	Define primitive unit cell and give examples.	2	1	1	1 to 12
1. b)	List differences between edge and screw dislocations.	2	2	1	
	Unit-II				
1. c)	What type of compounds forms if the difference between electronegatives of solvent and solute is high?	2	6	2	1, 2, 3, 4, 5, 6, 8, 9, 10, 12
1. d)	Describe the effect of C on Fe alloys?	2	3	2	
	Unit-III				
1. e)	How Bainite is different from Pearlite?	2	3	3	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12
1. f)	Draw a TTT diagram for a plain carbon steel which contains 0.9 wt% of carbon.	2	1	3	
	Unit-IV				
1. g)	Write a formula which shows increase in heating rate in induction hardening?	2	2	4	1, 2, 3, 4, 5, 6, 8, 9, 10, 12
1. h)	Factors effecting carburizing are?	2	1	4	
	Unit-V				
1. i)	Why Ti alloys are best for aerospace applications?	2	3	5	1 to 12
1. j)	Silicon significance in cast irons?	2	1	5	

Part-B (5 x 10=50 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
2. a)	List 7 crystal structures and their Bravais lattices	5	1	1	1 to 12
2. b)	Derive an equation for critically resolved shear stress in single crystal alloys.	5	3	1	
	OR				
2. c)	Which methods is best suitable to increase strength of alloys at high temperatures?	5	3	1	1 to 12
2. d)	Describe imperfections in solid solutions.	5	2	1	
	Unit-II				
3. a)	 Derive an equation to calculate phase fractions of α and β for the given phase diagram.	5	4	2	1, 2, 3, 4, 5, 6, 8, 9, 10, 12
3. b)	List Hume-Rothery rules and explain.	5	1	2	
	OR				
3. c)	Draw Fe-Fe_3C phase diagram and label it.	5	2	2	1, 2, 3, 4, 5, 6, 8, 9, 10, 12
3. d)	Give examples to eutectic, eutectoid, peritectic, peritectoid, syntactic, monotectic phase diagrams.	5	3	2	
	Unit-III				
4. a)	Explain phase developments in 0.8 wt% carbon steel using TTT diagrams.	5	4	3	1, 2, 3,

4. b)	What are applications, advantages and limitations of CCT curves?	5	1	3	4, 5, 6, 7, 8, 9, 10, 12
OR					
4. c)	Tabulate differences between annealing, normalizing, quenching, and spheroidising.	5	3	3	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12
4. d)	Explain austempering and martempering.	5	1	3	
Unit-IV					
5. a)	Write a short note on vacuum and plasma hardening.	5	1	4	1, 2, 3, 4, 5, 6, 8, 9, 10, 12
5. b)	Indicate type of phase transformations occur during carburizing of low carbon steels?	5	5	4	
OR					
5. c)	Write a short note on carburizing and carbonitriding.	5	1	4	1, 2, 3, 4, 5, 6, 8, 9, 10, 12
5. d)	Propose a heat treatment method to get tough core and hard case.	5	5	4	
Unit-V					
6. a)	What are different alloying elements in stainless steels, explain their effects.	5	2	5	1 to 12
6. b)	Classify and explain different cast irons.	5	1	5	
OR					
6. c)	Explain strengthening mechanism in Al-Cu-Mg alloys.	5	4	5	1 to 12
6. d)	Write applications of Cu, Al, Ti alloys.	5	1	5	

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
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B.Tech. III Semester End Examinations
(Model Question Paper)

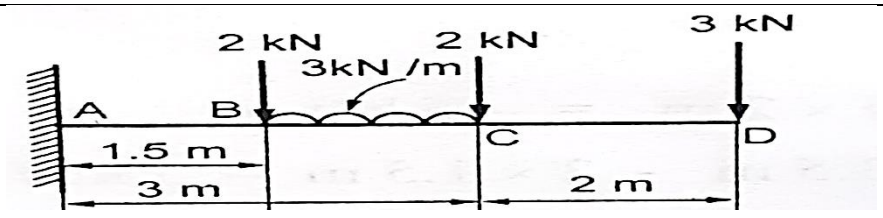
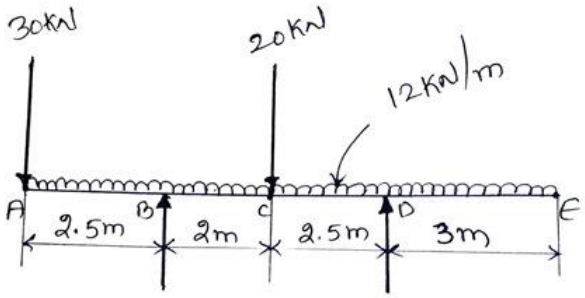
MR-21

Course Title: Mechanics of Solids **Course Code:** ME301PC
Time: 3 hours Max. Marks : 70

Note: Answer ALL Questions
Part-A (10 x 2 = 20 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
1. a)	Define young's Modulus, bulk modulus and Rigidity Modulus?	2	1	1	1
1. b)	Define Strain energy, resilience and Proof resilience?	2	1	1	1
	Unit-II				
1. c)	Define Point of Contra flexure and point of inflection?	2	1	2	1
1. d)	Mention the different types of loads and beams with neat sketches.	2	1	2	2
	Unit-III				
1. e)	What is the section modulus of a circular section of radius 100mm?	2	4	3	2
1. f)	Mention the assumption in simple bending?	2	1	3	1
	Unit-IV				
1. g)	Define principal plane, principal stress?	2	1	4	2
1. h)	Write Condition for maximum shear stress in triangular section?	2	5	4	3
	Unit-V				
1. i)	A cylinder of internal diameter 0.5 m contains air pressure of 7 N/mm^2 if the maximum permissible stress is 80 N/mm^2 . find the thickness?	2	2	5	1
1. j)	Find the polar section modulus for a rectangle of size 200 x 300 mm?	2	4	5	1

Part-B (5 x 10=50 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
2. a)	Explain the Stress – strain curve of a mild steel bar in tension test.	4	2	1	1
2. b)	Derive the relation between young's modulus and Rigidity modulus?	6	2	1	1
	OR				
2. c)	A gun metal rod 25mm diameter screwed at the end passes through a steel tube 30mm and 35mm internal and external diameters. The temperature of the whole assembly is 125°C and the nuts on the rod are then screwed on the ends of the tube. Calculate the stresses developed in gun metal and steel tube when the temperature of the assembly has fallen to 20°C. Take Eg= $1x10^5$ N/mm^2 and Es= $2.1x10^5$ N/mm^2. $\alpha_g=20x10^{-6}$ /°C, $\alpha_s=12x10^{-6}$ /°C	7	2	1	1
2. d)	Define Factor of Safety, Poisson's ratio and state Hooke's law	3	1	1	1
	Unit-II				
3. a)	 Draw SFD and BMD for the above beam.	6	4	2	4
3. b)	Derive the relation between rate of loading, Shear force and Bending Moment	4	3	2	2
	OR				
3. c)	Draw SFD and BMD for the following beam. 	10	4	2	4

Unit-III					
4. a)	Derive the equation M/I = σ/y =E/R M=B.M, I= Plane M.I, σ = bending stress, y= distance of a layer from N.A, E= elastic modulus and R=radius of curvature	5	3	3	3
4. b)	A rectangular beam 20cm deep and 10 cm wide is subjected to maximum bending moment of 500N-m. Determine the maximum stress in the beam. If the value of E for the material is $2.1x10^5$ N/mm^2 find out the radius of curvature.	5	3	3	2
OR					
4. c)	A cast iron beam of an I-section with top flange 80 mm x 40 mm, bottom flange 160 mm x 40 mm and web 120 mm x 20 mm. If the tensile stress is not to exceed 30 N/mm^2 and compressive stress 90 N/mm^2 , what is the maximum uniformly distributed load the beam can carry over a simply supported span of 6 m, if the bottom flange is in tension?	10	5	3	3
Unit-IV					
5. a)	A T-section beam 350 mm X 150 mm has a web thickness of 10 mm and a flange thickness of 20 mm. if the shear force acting on the section is 40KN. Find the maximum shear stress developed in T-section.	5	5	4	3
5. b)	Derive the condition for maximum shear stress distribution in Triangular section	5	3	4	2
OR					
5. c)	An element is subjected to tensile stresses of 60 N/mm 2 and 20 N/mm^2 acting on two perpendicular planes and is also accompanied by shear stress of 20 N/mm^2 on these planes. Draw the Mohr's circle of stresses and determine the magnitudes and directions of principal stresses and also the greatest shear stress.	5	5	4	4
5. d)	The stresses at a point in a bar are 300N/mm2 (Tensile) and 150 N/mm2 (Compressive). Determine the resultant stress in magnitude and direction on a plane inclined at 450 to the axis of major stress by using analytical method .	5	3	4	2
Unit-V					
6. a)	Derive the expressions for hoop stress and longitudinal stress in thin cylinder with neat sketches.	5	3	5	3
6. b)	A hollow steel shaft is to transmit 95 KW at 200 rpm. Find the outer diameter of shaft where inside diameter is 0.7 of outside. Taking allowable shear stress as 70MPa.	5	5	5	1
OR					
6. c)	Derive Torsion Equation and state the assumptions made in Torsion Equation	5	3	5	2
6. d)	A thin cylinder 1.5m internal diameter and 5 m long is subjected to internal pressure of $2N/mm^2$. If the maximum stress is limited to 160 N/mm^2 find the thickness of the cylinder 2GPa and poisson's ratio 0.3. Also find change in diameter, change in length and change of volume of cylinder.	5	2	5	3

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MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
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B.Tech. III Semester End Examinations
(Model Question Paper)

MR-21

Course Title: Thermal Science **Course Code: MT301PC**
Time: 3 hours Max. Marks : 70

Note: Answer ALL Questions
Part-A (10 x 2 = 20 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
1. a)	Explain Macroscopic View Point.	2	2	1	1
1. b)	Differentiate between Path Function and Point Function.	2	5	1	1
	Unit-II				
1. c)	List the five types of thermometers with their property.	2	1	2	1
1. d)	What are the Limitations of First Law of Thermodynamics.	2	2	2	12
	Unit-III				
1. e)	What is PPM of second kind?	2	2	3	1
1. f)	State the Third law of Thermodynamics.	2	3	3	2
	Unit-IV				
1. g)	Give the expression for Thermal Efficiency of an Otto Cycle with terms.	2	2	4	2
1. h)	Draw the Sankey diagram to show the heat balance of an internal combustion engine.	2	3	4	1
	Unit-V				
1. i)	Give any two differences of Two Stroke and Four Stroke Engines.	2	2	5	1
1. j)	Show the net-work done savings in a P-V diagram when an intercooler is used in an Air-Compressor.	2	3	5	1

Part-B (5 x 10=50 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
2. a)	Explain about Quasi-static process.	5	2	1	1
2. b)	Explain Thermodynamic System and Control Volume.	5	1	1	1
	OR				
2. c)	Explain the concept of Continuum.	5	1	1	2
2. d)	Distinguish between the terms Change of State, Path and Process.	5	2	1	1
	Unit-II				
3. a)	Is it possible to measure temperature without invoking Zeroeth Law of Thermodynamics ? Discuss.	5	2	2	12
3. b)	Apply steady flow energy equation for flow through a turbine.	5	4	2	3
	OR				
3. c)	Explain the working principle of Thermocouple.	5	2	2	2
3. d)	Apply steady flow energy equation on steam nozzle to determine its exit velocity.	5	4	2	3
	Unit-III				
4. a)	Give the Kelvin-Plank statement of the Second Law of Thermodynamics.	5	2	3	2
4. b)	A reversible heat engine operates between two reservoirs at	5	3	3	2

	temperatures of 600^0C and 40^0C. The engine drives a reversible refrigerator which operates between reservoirs at temperatures of 40^0C and -20^0C. The heat transfer to the engine is 2000 kJ and the network output of the combined engine- refrigerator plant is 360 kJ. Evaluate the heat transfer to the refrigerant and the net heat transfer to the reservoir at 40^0C.				
OR					
4. c)	Give the Clausius statement of the Second Law of Thermodynamics.	5	1	3	1
4. d)	Water is heated at a constant pressure of 0.7 MPa. The boiling point is 164.97^0C. The initial temperature of water is 0^0C. The latent heat of evaporation is 2066.3 kJ/kg. Find the increase of entropy of water if the final temperature is steam.	5	4	3	2
Unit-IV					
5. a)	Derive the expression for thermal efficiency of an air standard Diesel cycle.	5	2	4	1
5. b)	In an air-standard Diesel engine cycle with a compression ratio of 14, the condition of air at the start of the compression stroke are 1 bar and 300 K. after addition of heat at constant pressure, the temperature rises to 2775 K. Determine the thermal efficiency of the cycle, net work done per kg of air and the mean effective pressure.	5	3	4	2
OR					
5. c)	Give the P-V, T-S diagrams of air standard cycles- Otto, Diesel and Dual cycles along with the expression of their thermal efficiencies.	5	2	4	1
5. d)	An engine working on the Otto cycle has an air standard cycle efficiency of 56% and rejects 544kJ/kg of air. The pressure and temperature of air at the beginning of compression are 0.1MPa and 60^0C respectively. Compute (i) the compression ratio of the engine, (ii) the work done per kg of air, (iii) the pressure and temperature at the end of compression, and (iv) the maximum pressure in the cycle.	5	5	4	2
Unit-V					
6. a)	Give the Valve timing and Port Timing diagrams for a Petrol engine.	5	1	5	1
6. b)	Draw the line diagram and explain the working of a fuel injector	5	2	5	1
OR					
6. c)	Explain with the help of line diagrams, the modes of fuel admission to engine cylinder	5	1	5	1
6. d)	What are the different ignition systems used in I.C. engines and explain one of them?	5	2	5	1

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MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
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B.Tech. III Semester End Examinations
(Model Question Paper)

MR-21

Course Title: FLUID MECHANICS AND HEAT TRANSFER **Course Code: MT302PC**
Time: 3 hours Max. Marks : 70

Note: Answer ALL Questions
Part-A (10 x 2 = 20 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
1. a)	Distinguish between ideal and real fluids	2	2	1	2,3
1. b)	Define streamline. Write streamline equation	2	1	1	1,4
	Unit-II				
1. c)	Define the Equation of Continuity.	2	1	2	1,2
1. d)	What are the assumptions made in deriving Euler's equation.	2	1	2	1,2
	Unit-III				
1. e)	State and write Fourier law of heat conduction	2	1	3	1,2
1. f)	What do you understand by critical radius of insulation	2	2	3	1,2
	Unit-IV				
1. g)	What are the uses of dimensional analysis.	2	2	4	1,2
1. h)	What is the significance of Grashof's and Reynold's numbers	2	2	4	1,2
	Unit-V				
1. i)	What is a heat exchanger? Give examples	2	1	5	1,2
1. j)	Write about shape factor	2	2	5	1,2

Part-B (5 x 10=50 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
2. a)	Calculate the capillary rise in a glass tube of 3.2 mm diameter when immersed vertically in mercury. Take surface tension for mercury is 0.073 N/m.	5	2	1	4
2. b)	Differentiate between simple manometers and differential manometers.	5	2	1	3,12
	OR				
2. c)	A shaft of 150 mm dia rotates in bearings with a uniform oil film of thickness 0.8 mm. Two bearings of 15 cm width are used. The viscosity of the oil is 22 cP. Determine the torque if the speed is 210 rpm.	5	3	1	2
2. d)	Given that $u = x^2 - y^2$ and $v = -2xy$, determine the stream function and potential function for the flow	5	3	1	3,4
	Unit-II				
3. a)	What is a venturimeter? Deduce an expression for the rate of flow through a venturimeter.	5	2	2	2,3
3. b)	Water flows through a pipe with diameters 300mm and 450mm at its two ends where the corresponding pressures are 120 kN/m^2 and 400 kN/m^2 respectively. If the rate of flow through the pipe is 50 lit/s, find the differences in the datum head.	5	3	2	3,4
	OR				
3. c)	Derive Euler equation of fluid motion and derive Bernoulli's equation from it	5	2	2	2,3
3. d)	A 100 mm diameter pipe carries oil of specific gravity 0.8 which flows with a velocity of 2 m/s. At another section of the pipe, the diameter is 50 mm. Determine the mass flow rate of oil through the pipe and velocity of oil at the smaller section.	5	3	2	3,4
	Unit-III				
4. a)	A composite cylinder is made of 6 mm thick layers each of two materials of thermal conductivities of 30 W/m.K and 45 W/m.K. The inside is exposed to	6	3	3	3,12

	a fluid at 500^0C with a convection coefficient of 40 W/m^2.K and the outside is exposed to air at 35^0C with a convection coefficient of 25 W/m^2 .K. Determine the heat loss for a length of 2 m. The inside diameter = 20 mm.				
4. b)	Explain the modes of heat transfer and their mechanisms	4	2	3	2,3
	OR				
4. c)	Derive the critical radius of insulation for a cylinder	4	2	3	3,4
4. d)	A wall is constructed of several layers. The first layer consists of masonary brick 20 cm thick of thermal conductivity 0.66 W/m K, The second layer consists of 3 cm thick of mortar of thermal conductivity 0.6 W/m K. The third layer consists of 8cm thick limestone of thermal conductivity 0.58 W/m K and the outer layer consists of 1.2 cm thick plaster of thermal conductivity 0.6 W/mK. The heat transfer coefficient on the interior and exterior of the wall are 5.6 W/m2K and 11 W/m2K respectively. Interior room temperature is 22^0C and outside air temperature is -5^0C. Calculate: a) Overall heat transfer coefficient b) Overall thermal resistance. c) The rate of heat transfer d) The temperature at the junction between the mortar and limestone	6	4	3	3,12
	Unit-IV				
5. a)	Derive an expression for forced convective heat transfer through a conduit using dimensional analysis.	5	2	4	3,4
5. b)	If a straight tube of 50 mm diameter, water is flowing at 15 m/s. The tube surface temperature is maintained at 60^0C and the flowing water is heated from the inlet temperature 15^0C to an outlet temperature of 45^0C. Calculate the heat transfer coefficient from the tube surface to the water and the length of the tube	5	4	4	3,12
	OR				
5. c)	Explain about thermal and velocity boundary layer	4	2	4	3
5. d)	Air at 20^0C at a pressure of 1 bar is flowing over a flat plate at a velocity of 3 m/s.If the plate is maintained at 60^0C, Calculate the heat transfer per unit width of the plate. Assuming the length of the plate along the flow of air is 2m.	6	4	4	3,12
	Unit-V				
6. a)	What is radiation shield? Why is it used?	5	2	5	2,3
6. b)	The flow rates of hot and cold water streams running through a heat exchanger are 600 kg/hr and 1500 kg/hr. The inlet temperatures on the hot and cold sides are 70^0C and 25^0C. The exit temperature of hot water is 50^0C. If the individual heat transfer coefficients on both sides are 700 W/m^2 K, find the area of heat exchanger.	5	3	5	3,4
	OR				
6. c)	Calculate for the following for an industrial furnace in the form of a black body and emitting radiation at 2500^0C. i) Monochromatic emissive power 1.2 μm length, ii) Maximum emissive power.	5	3	5	2,3
6. d)	Derive an expression for LMTD in parallel flow and counter flow heat exchangers	5	2	5	3,4

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MAHATMA GANDHI INSTITUTE OF TECHNOLOGY
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B.Tech. III Semester End Examinations
(Model Question Paper)

MR-21

Course Title: Constitution of India **Course Code: MC301HS**
Time: 3 hours Max. Marks : 70

Note: Answer ALL Questions
Part-A (10 x 2 = 20 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
1. a)	Define Constitution of India	1	1	1	6,8
1. b)	List the drafting committee of constitution of India	1	1	1	6,8
	Unit-II				
1. c)	What do you mean by fundamental duties in Indian constitution	1	1	2	6,8
1. d)	List the fundamental rights.	1	1	2	6,8
	Unit-III				
1. e)	List the classification of directive principles of state policy.	1	1	3	6,8
1. f)	Briefly write about directive principles	1	2	3	6,8
	Unit-IV				
1. g)	List out the three types of emergencies under Indian Constitution	1	1	4	6,8
1. h)	State the important amendments.	1	1	4	6,8
	Unit-V				
1. i)	What is Union Public service commission?	1	1	5	6,8
1. j)	Define Election commission of India.	1	1	5	6,8

Part-B (5 x 10=50 Marks)

Q. No.	Stem of the Question	M	L	CO	PO
	Unit-I				
2. a)	Give detail account on the historical background of Indian Constitution.	5	1	1	6,8
2. b)	Define. Explain the importance of preamble in the implementation of constitution.	5	2	1	6,8
	OR				
2. c)	Describe the salient features of Indian Constitution.	5	3	1	6,8
2. d)	Discuss in detail the fundamental right to equality.	5	3	1	6,8
	Unit-II				
3. a)	Explain the scope of the right to life and personal liberty.	5	2	2	6,8
3. b)	Discuss in detail the fundamental duties of every citizen.	5	3	2	6,8
	OR				
3. c)	Explain the needs and importance of fundamental duties of an Indian Citizen.	5	2	2	6,8
3. d)	Explain fundamental right to certain freedom	5	2	2	6,8
	Unit-III				
4. a)	State the Directive Principles of State Policy and explain its significance.	5	1	3	6,8
4. b)	Distinguish between fundamental rights and directive principles of state policy.	5	5	3	6,8
	OR				
4. c)	Discuss the views of Gandhian Principles in Directive Principles of State Policy.	5	3	3	6,8
4. d)	State the importance of directive principles of state policy.	5	1	3	6,8
	Unit-IV				
5. a)	Explain the power of the parliament to amend the constitution referring to decided case	5	2	4	6,8
5. b)	Describe the procedure of amendment of the constitution.	5	2	4	6,8
	OR				
5. c)	Discuss in detail the federal structure and distribution of legislative and financial powers between the union and states.	5	3	4	6,8
5. d)	List out the effects of financial emergency.	5	1	4	6,8
	Unit-V				
6. a)	Classify the role of Local Government.	5	2	5	6,8
6. b)	Write shorts on finance commission of India	5	3	5	6,8
	OR				
6. c)	What are the important provisions relating to the Election Commission in the Indian Constitution	5	2	5	6,8
6. d)	List the important constitutional bodies and explain about election commission of India	5	1	5	6,8

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome