

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the Question must be answered at one place

UNIT-I

1. a) What is a data model? Explain various data models 7M
b) Explain database system structure with neat diagram. 7M

(OR)

2. a) What is Data Independence? Explain the different types of data independence. 7M
b) Explain about the schemas in DBMS with examples. 7M

UNIT-II

3. a) A university database contains information about professors (identified by a social security number) and courses (identified by a course ID). Each of the following situations concerns the relationship set between the teacher and the student. Draw an ER diagram that describes it (assuming that no further constraints hold). 8M
i) Professors can teach the same course in several semesters, and each offering must be recorded.
ii) Each professor teaches exactly one course.
iii) Each professor teaches at least one course, and some professors may teach multiple courses.
iv) Each professor teaches at least one course and some professors must teach all the courses.
b) What is an integrity constraint? Brief various integrity constraints available in DBMS. 6M

(OR)

4. a) Explain Class hierarchies with neat ER diagrams. 7M
b) Explain the logical database design and ER to relational with suitable examples. 7M

UNIT-III

5. Create the tables and insert two records for below schema: 14M
Sailors (Sid: integer, sname: string, rating: integer, age: real)
Boats (bid: integer, bname: string, color: string)
Reserves (Sid: integer, bid: integer, day: date)
Write the following SQL queries:
i. Find the names of sailors who have reserved boat 103
ii. Find the colors of boats reserved by lubber.
iii. Find the names of sailors who reserved all boats called Interlake?
iv. Find the names of Sailors who have reserved a red boat.
v. Find the names of Sailors who have reserved at least one boat.
vi. Find the names of Sailors who have reserved at least two boats.
vii. Find the names of Sailors who have reserved all boats

(OR)

6. a) What is a trigger? What are different types of triggers? 7M
b) Give the differences between a nested query and correlated query with suitable examples. 7M

UNIT-IV

7. Explain 1NF, 2NF, 3NF and Boyce-Codd normal form (BCNF) with suitable examples 14M
- (OR)**
8. a) List the properties of decompositions. 7M
b) What are the problems caused by Redundancy? 7M

UNIT-V

9. a) What is meant by B+ Tree? Explain its file organization? 8M
b) Explain about Log based recovery. 6M
- (OR)**
10. a) Discuss about Indexed sequential access methods (ISAM) with neat sketches. 10M
b) What are the main differences between ISAM and B+ tree indexes? 4M

CODE: 18CET209 **SET-1**
ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
II B. Tech II Semester Supplementary Examinations, May, 2025
Structural Analysis-I
(CIVIL ENGINEERING)

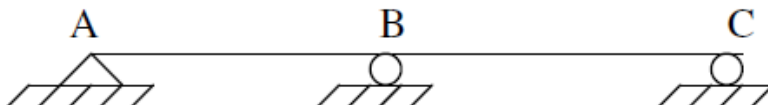
Time: 3 Hours

Max Marks: 60

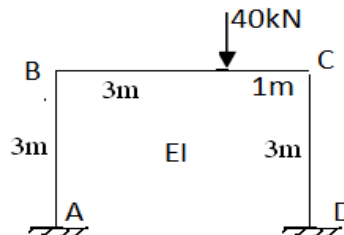
Answer ONE Question from each Unit
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UNIT-I

1. a) For the beam shown in Fig. what is the static and kinematic indeterminacy for inclined point load acting anywhere on the beam 6M

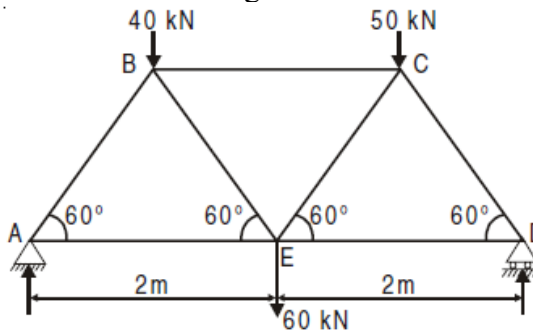


- b) For the frame shown in Fig. what is the static and kinematic indeterminacy 6M

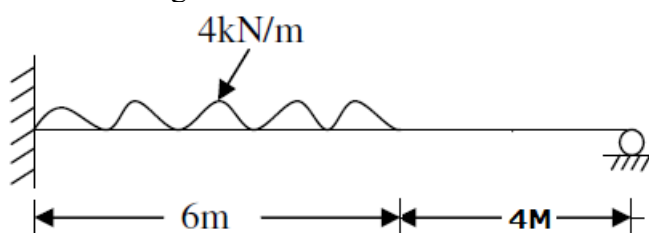


(OR)

2. Determine the forces in all the members of the truss shown in Figure and indicate the magnitude and nature of forces on the diagram of the truss. All inclined members are at 60° to horizontal and length of each member is 2 m. 12M

**UNIT-II**

3. A propped cantilever beam is shown in figure. Calculate the prop Reaction and also draw the BM and SF diagrams. 12M

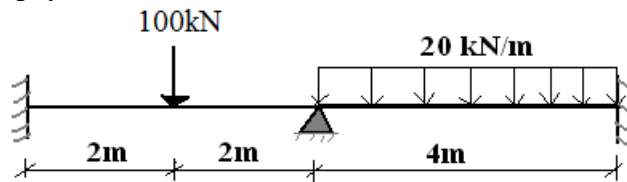


(OR)

4. A fixed beam of span 6 m is subjected a UDL of 20 kN/m on the left half of the span and a point load of 50 kN at the middle of the right half of the span. Draw the S.F. and B.M. diagrams. 12M

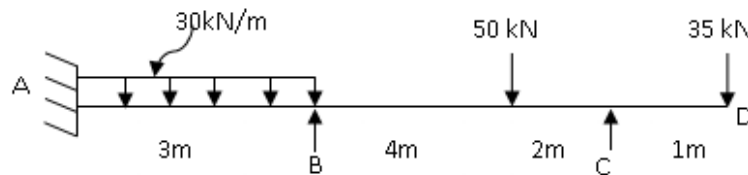
UNIT-III

5. For the beam loaded as shown in **Figure**, Draw shear force and bending moment diagrams. Use Clapeyron's theorem of three moments 12M



(OR)

6. Analyse the continuous beam shown in Figure and draw the Bending Moment diagram and Shear Force Diagram. Use Clapeyron's theorem of three moments 12M



UNIT-IV

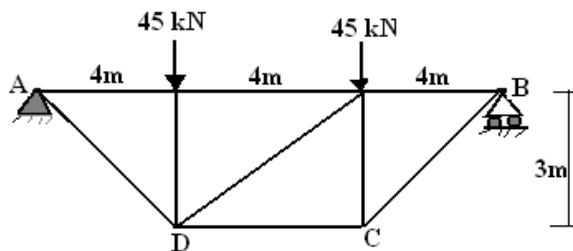
7. Find the deflection at free end and strain energy of a cantilever beam of span 3m carrying a load of 20kN if $E=200\text{GPa}$ and $I = 6 \times 10^{-4}\text{m}^4$. 12M

(OR)

8. Discuss about the Castigliano's first and second theorems with suitable examples 12M

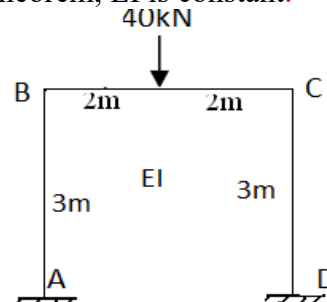
UNIT-V

9. The steel truss supported as shown in Fig. if the truss is so designed that, under the given loading, all tension members are stressed to 100 N/mm^2 and all compression members to 80 N/mm^2 , find the vertical deflection of the point C take $E= 200\text{Gpa}$. 12M



(OR)

10. Determine the deflection under the point load for the frame loaded as shown in figure using Castigliano's theorem, EI is constant. 12M



AR18

CODE: 18ECT208

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B. Tech II Semester Supplementary Examinations, May, 2025

ANALOG COMMUNICATIONS

(Electronics and Communication Engineering)

Time: 3 Hours

Max Marks: 60

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the Question must be answered at one place

UNIT-I

1. a) Explain how the amplitude modulation can be expressed in time domain and frequency domain? 6M
- b) Explain the generation of AM wave by using switching modulation technique. 6M

(OR)

2. a) Explain the reasons for doing modulation. Mention its advantages. 6M
- b) A carrier wave of frequency 10MHz and peak value of 10V is amplitude modulated by 5KHz sine wave of amplitude 6V. Determine the modulation index and draw the one sided spectrum of modulated wave. 6M

UNIT-II

3. a) Explain about frequency discrimination method of SSB-SC wave generation and mention its advantages and disadvantages. 8M
- b) An AM transmitter of 1KW power is fully modulated. Calculate the power transmitted if it is transmitted as SSB. 4M

(OR)

4. a) A 400W carrier is modulated on a depth of 75%, Calculate the total power in the modulated wave in the following forms of AM. 6M
 - a) Double Sideband with Full Carrier (DSBFC)
 - b) Double Sideband Suppressed Carrier (DSBSC)
- b) Explain the need of VSB modulation and why VSB system is widely used for TV broadcasting? Explain. 6M

UNIT-III

5. a) Obtain the expression for angle modulation from fundamentals. 6M
- b) Explain the demodulation of FM signal with the help of PLL. 6M

(OR)

6. a) Explain the process of detection of FM wave using frequency discriminator method. 6M
- b) Explain frequency division multiplexing technique with neat diagram. 6M

UNIT-IV

7. a) Explicate the working of AM transmitter using high level modulation with a neat block diagram. 6M
- b) Clarify the operation of FM receiver with neat block diagram. 6M

(OR)

8. a) Elucidate the working of variable reactance type FM transmitter with a neat block diagram. 6M
- b) Explicate the operation of Tuned Radio Frequency Receiver (TRF) with neat block diagram. 6M

UNIT-V

9. a) Draw the circuit of PPM demodulator and explain the operation. 6M
- b) Discuss the noise performance of AM system using envelope detection. 6M

(OR)

10. a) Compare PAM, PWM and PPM pulse modulation techniques. 6M

b) Distinguish between pre-emphasis and de-emphasis.
1 of 1

6M

AR18

CODE: 18EET207

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B. Tech II Semester Supplementary Examinations, May,2025

**ELECTRICAL MACHINES-II
(Electrical and Electronics Engineering)**

Time: 3 Hours

Max Marks: 60

Answer ONE Question from each Unit

All Questions Carry Equal Marks

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UNIT-I

1. a) Write any 6 differences between Squirrel cage and Slip ring Induction Motor. 6M
b) Explain briefly about the concept of Rotating magnetic field in a Induction motor. 6M
- (OR)**
2. a) Explain the constructional features of salient pole and non-salient pole Induction motor. 6M
b) Explain the equivalent circuit of a Induction motor with a neat sketch. 6M

UNIT-II

3. a) Explain briefly about the different types of starting methods in a Induction Motor. 12 M
- (OR)**
4. a) Explain briefly the working principle of an Induction Generator 6M
b) What is No-load test of a induction motor. Explain briefly. 6M

UNIT-III

5. Explain the phenomena of armature reaction when an alternator is delivering a load Current at i) purely lagging power factor ii) unity power factor iii) purely leading power Factor 12M
- (OR)**
6. Explain briefly about Pitch factor and Distribution factor in a Alternator. 12M

UNIT-IV

7. a) Explain briefly about Blondel two reaction theory in synchronous machine. 6M
b) Write the applications of synchronous generator and synchronous motor. 6M
- (OR)**
8. Explain briefly about parallel operation of alternators. Also write the advantages . 12M

UNIT-V

9. a) Explain briefly the working principle of Synchronous motor with a neat sketch. 6M
b) What is the necessity of connecting a synchronous condenser in a network. 6M
- (OR)**
10. a) Explain briefly the different starting methods of Synchronous motor. 8M
b) Write the applications of synchronous motor. 4M

AR18

CODE: 18MET206

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

II B. Tech II Semester Supplementary Examinations, May, 2025

**MANUFACTURING TECHNOLOGY -I
(Mechanical Engineering)**

Time: 3 Hours

Max Marks: 60

Answer ONE Question from each Unit

All Questions Carry Equal Marks

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UNIT-I

1. a) Define casting. Explain any four types of patterns and their applications 6M
b) Explain the sand casting process. Write merits and demerits of the process 6M
- (OR)**
2. a) Explain different types of casting defects and their remedies 6M
b) Calculate the size of a cylindrical riser (height and diameter equal) necessary to feed a steel slab casting 25X25X5 cm with a side riser casting poured horizontally into the mould 6M

UNIT-II

3. Explain GAS welding principle, advantages, disadvantages and applications of the process with neat sketch 12M
- (OR)**
4. Explain TIG welding principle, advantages, disadvantages and applications of the process with neat sketch. 12M

UNIT-III

5. a) Differentiate hot working and cold working processes 6M
b) In a rolling process, sheet of 25mm thickness is rolled to 20mm thickness. Roll is of diameter 600mm and it rotates at 100rpm. Find the roll strip contact length. 6M
- (OR)**
6. a) Show by schematic sketches the process of forward and backward extrusion? 6M
b) Explain the Rolling process with neat sketch. 6M

UNIT-IV

7. a) Define forging. Explain the upsetting forging operation and its applications 6M
b) Describe the drop forging operation and its applications 6M
- (OR)**
8. a) Describe clearances for die and punch (i) Blanking (ii) Punching 6M
b) Describe Embossing and coining 6M

UNIT-V

9. a) Explain Explosive forming process and its applications 6M
b) Describe Electromagnetic forming process and its applications 6M
- (OR)**
10. a) Discuss the principle of injection moulding and its applications 6M
b) Describe the principle of blow moulding 6M

Time: 3 Hours**Max Marks: 60**

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		Marks	CO	Blooms Level
<u>UNIT-I</u>				
1.	a) List Buzzwords in Java and explain any six.	5M	CO1	1
	b) Discuss the Naming Conventions in Java.	5M	CO1	2
(OR)				
2.	a) List the differences between while and do-while with an example.	5M	CO1	1
	b) Explain built-in Methods of String class.	5M	CO1	2
<u>UNIT-II</u>				
3.	a) Explain different types of constructors with an example.	5M	CO2	2
	b) Write a program to print the Fibonacci series using recursion.	5M	CO2	3
(OR)				
4.	a) Explain the static method in java with an example.	5M	CO2	2
	b) Demonstrate the use of this keyword with an example.	5M	CO2	2
<u>UNIT-III</u>				
5.	a) Discuss the usage of final keyword for a variable, method and a class.	5M	CO3	2
	b) How to achieve multiple inheritance in java and explain it with an example.	5M	CO3	1
(OR)				
6.	a) Compare static polymorphism and dynamic polymorphism.	5M	CO3	2
	b) List the types of inheritances and explain them.	5M	CO3	1
<u>UNIT-IV</u>				
7.	a) List the Built-in packages in java and explain.	5M	CO4	1
	b) Explain throw clause with an example.	5M	CO4	2
(OR)				
8.	a) Discuss the exception handling in java with an example.	5M	CO4	2
	b) Illustrate a java program for handling Arithmetic Exception.	5M	CO4	2
<u>UNIT-V</u>				
9.	Explain Thread Synchronization with an example.	10M	CO5	2
(OR)				
10.	a) Discuss the thread life cycle.	5M	CO5	2
	b) Explain the creation of threads with an example.	5M	CO5	2
<u>UNIT-VI</u>				
11.	a) Explain the methods of graphics class.	5M	CO6	2
	b) List and Explain the Applet methods in java. applet. Applet class.	5M	CO6	1
(OR)				
12.	a) Illustrate the parameter passing to Applet with an example.	5M	CO6	2
	b) Define Applet. List the Merits and demerits of Applets.	5M	CO6	1

Time: 3 Hours

Max Marks: 60

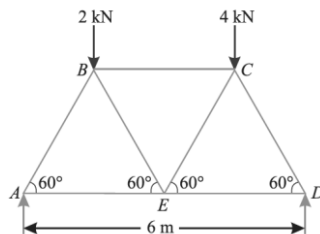
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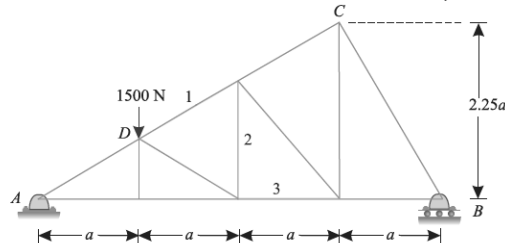
UNIT-I

1. Fig shows a Warren girder consisting of seven members each of 3 m length freely supported at its end points. The girder is loaded at B and C as shown. Find the forces in all the members of the girder, indicating whether the force is compressive or tensile.



(OR)

2. A plane truss is loaded and supported as shown in Fig. Determine the nature and magnitude of the forces in the members 1, 2 and 3.

**UNIT-II**

3. A propped cantilever beam 3 m long has 100 mm wide and 150 mm deep crosssection. If the allowable bending stress and the deflection at the centre is 45 MPa and 2.5mm respectively, determine the safe uniformly distributed load the cantilever can carry. Take $E = 120 \text{ GPa}$.

(OR)

4. A fixed beam AB, 4 metres long, is carrying a central point load of 3 tonnes. Determine the fixing moments and deflection of the beam under the load. Take flexural rigidity of the beam as $5 \times 10^3 \text{ kN-m}^2$.

UNIT-III

5. a) Derive the strain energy due to shear and axial load.
b) State the Castigliano's theorem-1

5M CO3 3

5M CO3 3

(OR)

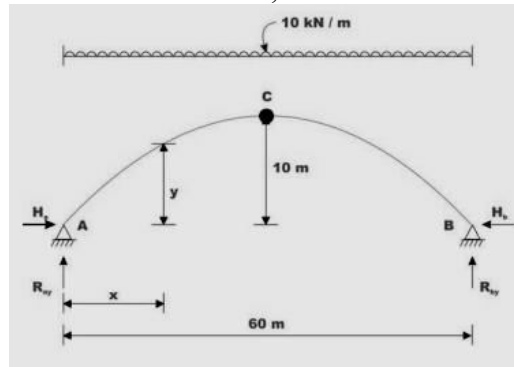
6. a) Derive the strain energy due to bending moment.
b) State the Castigliano's theorem-2

5M CO3 3

5M CO3 3

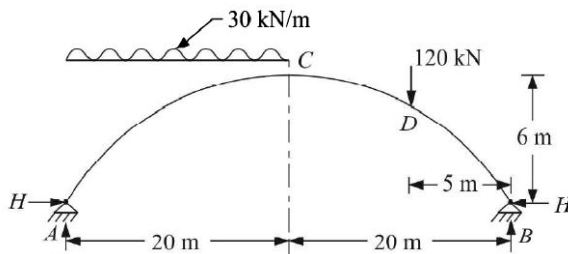
UNIT-IV

7. A three-hinged parabolic arch of uniform cross section has a span of 60 m and a rise of 10 m. It is subjected to uniformly distributed load of intensity 10 kN/m as shown in Fig. Find the horizontal thrust, vertical supports, radial shear and normal thrust at a distance of, $x = 15\text{m}$ from the support A. 10M CO4 3



(OR)

8. A two-hinged parabolic arch is loaded as shown in Figure. Determine the (1) horizontal thrust, (2) maximum positive and negative moments, (3) shear force and normal thrust at 10 m from the left support. Assume $I = I_0 \sec \theta$, where I is the moment of inertia at the crown and θ is the slope at the section under consideration. 10M CO4 3



UNIT-V

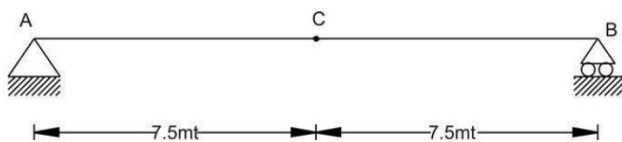
9. A continuous beam ABC of uniform section, with span AB as 8 m and BC as 6 m, is fixed at A and simply supported at B and C. The beam is carrying a uniformly distributed load of 1 kN/m throughout its length. Find the moments along the beam and the reactions at the supports. Also draw the bending moment and shear force diagrams. 10M CO5 3

(OR)

10. A beam ABCD 9 m long is simply supported at A, B and C, such that the length AB is 3 m, length BC is 4.5 m and the overhang CD is 1.5 m. It carries a uniformly distributed load of 1.5 kN/m in span AB and a point load of 1 kN at the free end D. The moments of inertia of the beam in span AB and CD is I and that in the span BC is $2I$. Draw the bending moment and shear force diagrams for the beam. 10M CO5 3

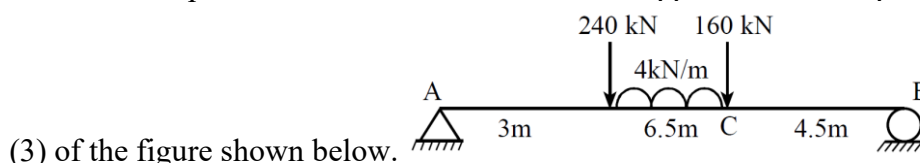
UNIT-VI

11. Find the maximum positive live shear at point C when the beam shown in Figure is loaded with a concentrated moving load of 10 kN and UDL of 5 kN/m. 10M CO6 3



(OR)

12. Use the concept of ILD to determine reaction at support and BM at point 10M CO6 3



(3) of the figure shown below.

Time: 3 Hours

Max Marks: 60

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	<u>UNIT-I</u>	Marks	CO	Blooms Level
1.	Define the concept of data independence. List the key differences between a database management system (DBMS) and a traditional file management system.	10	1	Understand
	(OR)			
2.	What is a data model? Explain any two of data models with neat diagram.	10	1	Understand
	<u>UNIT-II</u>			
3.	Construct an E-R diagram for a car-insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. State any assumptions you make.	10	2	Apply
	(OR)			
4.	Explain select, project and Cartesian product operations in relational algebra with an example?	10	2	Understand
	<u>UNIT-III</u>			
5.	Write SQL queries for the following scenarios: a) Retrieve all student records where marks are greater than 80 from a student database. b) Find the number of employees in each department using aggregate functions. c) List the names of students who do not have any pending fees using subqueries. Explain the logic of each query step by step.	10	3	Understand
	(OR)			
6.	i) With suitable example explain about nested query in SQL ii) Explain the outer joins with an example.	10	3	Understand
	<u>UNIT-IV</u>			
7.	Given R(A, B, C, D, E) with the set of FDs, F{AB→CD, ABC→E, C→A} i) Find any two candidate keys of R ii) What is the highest normal form of R.? Justify.	10	4	Understand
	(OR)			
8.	What are the pitfalls in relational database design? With a suitable example, explain the role of functional dependency in the process of normalization	10	4	Understand
	<u>UNIT-V</u>			
9.	Explain the ARIES recovery method. When does a system recover from a crash? In what order must a transaction be undone and redone? Why is this order important	10	5	Understand
	(OR)			
10.	Explain strict two-phase locking protocol and time stamp-based protocol.	10	5	Understand
	<u>UNIT-VI</u>			
11.	Classify the different types of indexing techniques, such as single-level indexes, multi-level indexes.	10	6	Understand
	(OR)			
12.	Differentiate between Hash based and Tree based Indexing Techniques	10	6	Understand

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		Marks	CO	BTL
UNIT-I				
1.	a) Discuss about AM generation using Switching Modulator	5M	1	L-2
	b) Prove that in AM, transmitting power is dependent on modulation index.	5M	1	L-3
(OR)				
2.	a) A sinusoidal carrier, modulated to a depth of 50% by a modulating signal produces side band frequencies of 5.005 MHz and 4.995MHz. The amplitude of each side frequency is 30V. Find the frequency and amplitude of the carrier signal.	5M	1	L-3
	b) Compare square law and Envelop detectors.	5M	1	L-2
UNIT-II				
3.	a) Explain the generation of DSB-SC using Ring modulator.	5M	2	L-2
	Explain how a synchronous carrier can be generated using Costas loop.	5M	2	L-2
(OR)				
4.	a) Draw the spectrum representation for DSB, DSB-SC and SSB-SC signals assuming a single tone message signal.	5M	2	L2
	b) Briefly describe about Vestigial sideband modulation.	5M	2	L-2
UNIT-III				
5.	a) Explain the Armstrong method of FM generation with neat diagrams.	5M	3	L-2
	b) A carrier is frequency modulated by a sinusoidal modulating signal of frequency 2 kHz, resulting in a frequency deviation of 5 kHz. What is the bandwidth occupied by the modulated waveform? The amplitude of the modulating sinusoid is increased by a factor 2 and its frequency lowered by 500Hz. What is the new bandwidth?	5M	3	L-3
(OR)				
6.	a) Explain the balanced slope detector method of FM detection.	5M	3	L-3
	b) Compare AM and FM in various aspects.	5M	3	L2
UNIT-IV				
7.	a) Briefly explain the effect of feedback on performance of AM transmitter.	5M	4	L-2
	b) Draw the block diagram of a tuned radio frequency receiver and elaborate its limitations	5M	4	L-3
(OR)				
8.	a) Explain the concept of Frequency stability in FM transmitter.	5M	4	L-2
	b) Elaborate on how selectivity is improved in superhetrodyne receiver.	5M	4	L-3
UNIT-V				
9.	a) Draw and explain about different sampling techniques.	5M	5	L-2
	b) Explain about Demodulation of PWM signals with neat sketches.	5M	5	L-2
(OR)				
10.	a) Draw the PAM wave forms for single polarity and double polarity cases. Explain the generation of PAM signal using a transistor.	5M	5	L-2
	b) Compare PAM,PWM and PPM.	5M	5	L-2
UNIT-VI				
11.	a) Differentiate Frequency and time division multiplexing	5M	6	L-2
	b) Explain about threshold effect in FM systems	5M	6	L-2
(OR)				
12.	a) Discuss about Various sources of Noise.	5M	6	L-2
	b) Derive the expression for Figure of merit of SSB-SC receiver	5M	6	L-2

Time: 3 Hours

Max Marks: 60

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		<u>UNIT-I</u>	Marks	CO	Blooms Level
1	a	Explain the constructional details of three-phase Induction Motor with neat diagrams	5M	CO1	BL2
	b	An 18.65KW, 4 pole, 50Hz, 3-phase induction motor has friction and windage losses of 2.5 % of output. The full load slip is 4%. Find for full load (i) the rotor cu loss (ii) the rotor input (iii) the shaft torque (iv) the gross electromagnetic torque.	5M	CO1	BL3
		(OR)			
2.	a	Draw and explain the torque slip characteristics of the three-phase induction motor	5M	CO1	BL2
	b	A 4-pole, 50-Hz, 7.46.kW motor has at rated voltage and frequency, a starting torque of 160 per cent and a maximum torque of 200 per cent of full-load torque. Determine (i) full-load speed (ii) speed at maximum torque.	5M	CO1	BL3
		<u>UNIT-II</u>			
3.	a	Explain the no-load test of a 3-phase induction motor with a relevant diagram.	5M	CO2	BL2
	b	Explain the blocked rotor test of a 3-phase induction motor with a relevant diagram.	5M	CO2	BL2
		(OR)			
4.	a	Explain the starting of IM using Auto transformer starter.	5M	CO2	BL2
	b	Explain the speed control of IM using V/f control method.	5M	CO2	BL2
		<u>UNIT-III</u>			
5.	a	Derive the EMF equation of Alternator from fundamentals clearly showing the expressions for pitch and distributions factors	5M	CO3	BL3
	b	A 3-phase, 16-pole alternator has a star-connected winding with 144 slots and 10 conductors per slot. The flux per pole is 0.03 Wb, Sinusoidally distributed, and the speed is 375 r.p.m. Find the frequency rpm and the phase and line e.m.f. Assume full-pitched coil.	5M	CO3	BL3

(OR)

6. What is armature reaction? Explain the effect of armature reaction on the terminal voltage of an alternator at (i) Unity power factor (ii) zero pf lagging load and (iii) zero pf leading load. 10M O3 BL2

UNIT-IV

7. a Explain the MMF method of determining the voltage regulation of alternator. 5M O4 BL2
b Explain the Synchronous Impedance method of determining the voltage regulation of alternator. 5M CO4 BL2

(OR)

8. a Explain two reaction theory of salient pole machines with neat sketches 10M CO4 BL2

UNIT-V

9. a Explain the principle of operation of synchronous motor 5M CO5 BL2
b A 3- ϕ , 6000 V, star connected synchronous motor has effective per phase synchronous reactance/ phase of $15\ \Omega$ & negligible armature resistance. For a certain load, the input is 800 kW at normal voltage and the induced line EMF is 8500 V. Determine: (i) Line current (ii) Power factor. 5M CO5 BL3

(OR)

10. a Explain various starting methods of three phase synchronous motors. 5M CO5 BL2
b Draw and explain the 'V-curves' and 'inverted V-curves' of synchronous motor 5M CO5 BL2

UNIT-VI

11. a Explain the principle of operation of split phase motor 5M CO6 BL2
b Explain the Principle of operation of Shaded pole motor 5M CO6 BL2

(OR)

12. a Explain the torque-speed characteristics of capacitor start motor 5M CO6 BL2
b Write the applications of single phase induction motor 5M CO6 BL2

MANUFACTURING TECHNOLOGY
(MECHANICAL ENGINEERING)**Time: 3 Hours****Max Marks: 60**

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the Question must be answered at one place

		Marks	CO	Blooms Level
<u>UNIT-I</u>				
1.	Define pattern allowance. Explain various allowances usually considered on patterns and core boxes	10	CO1	L2
(OR)				
2.	Explain in detail about with a neat sketch of cupola furnace	10	CO1	L3
<u>UNIT-II</u>				
3.	Sketch and explain the Investment casting method in detail. Give its applications	10	CO2	L3
(OR)				
4. (a)	Briefly describe the Oxy-Acetylene gas cutting technique with a neat sketch	5	CO2	L2
(b)	Describe briefly about the elements involved in gating system	5	CO2	L3
<u>UNIT-III</u>				
5. (a)	Explain TIG welding process with neat sketch.	5	CO3	L2
(b)	Explain the Thermit welding with neat sketch	5	CO3	L3
(OR)				
6. (a)	Differentiate between soldering and brazing	5	CO3	L2
(b)	Discuss the different types of welding defects and its remedies	5	CO3	L3
<u>UNIT-IV</u>				
7.	Discuss in detail about i) hot working ii) cold working	10	CO4	L2
(OR)				
8.	Briefly discuss about i) forward extrusion ii) backward extrusion iii) hydrostatic extrusion	10	CO4	L3
<u>UNIT-V</u>				
9.	Explain in detail about the types of forging operations	10	CO5	L3
(OR)				
10.	Discuss in detail about i) punching ii) blanking iii) bending	10	CO5	L2
<u>UNIT-VI</u>				
11.	Describe briefly about Magnetic pulse forming	10	CO6	L2
(OR)				
12.	Explain following techniques with neat sketch	10	CO6	L3
	(a) Injection moulding			
	(b) Blow moulding			