

AR16

CODE: 16CE3015

SET-2

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

III B.Tech I Semester Regular/Supplementary Examinations, October / November-2019

**CONCRETE TECHNOLOGY
(Civil Engineering)**

Time: 3 Hours

Max Marks: 70

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 briefly the physical properties of ordinary Portland cement. 7 M
b) What is the affect of size of aggregate on concrete? 7 M
- (OR)**
2. a) Write about retarders, accelerators and plasticizers. 7 M
b) Bring out a detailed discussion on Alkali Aggregate reaction. Write the factors promoting and methods to control. 7 M

UNIT-II

3. a) Mention the different tests which are commonly adopted to measure workability and explain about any two tests. 7 M
b) Explain the various steps in the manufacture of concrete. 7 M
- (OR)**
4. a) What are the different types of plasticizers and superplasticizers? 7 M
b) What is fineness modulus? How is sieve analysis conducted for FA and CA? 7 M

UNIT-III

5. a) What is the relation between compression and split tensile strength? 7 M
b) What are the different Non Destructive Tests? Also, write the codal provisions of NDT.
- (OR)**
6. a) Write about Abram's law and Gel space ratio. 7 M
b) Explain in detail the factors influencing the strength results in case of hardened concrete. 7 M

UNIT-IV

7. Design a concrete mix of M20 grade for a roof slab. Take a Standard deviation of 4MPa. The specific gravities of Coarse Aggregate and Fine Aggregate are 2.73 and 2.60 respectively. The bulk density of coarse aggregate is 1615 kg/m³ and fineness modulus of fine aggregate is 2.74. A slump of 55mm is necessary. The water absorption of coarse aggregate is 1% and free moisture in fine aggregate is 2%. Design the concrete mix using IS code method. Assume any missing data suitably. 14 M

(OR)

8. Design a concrete mix of M25 grade for a roof slab. Take a Standard deviation of 4MPa. The specific gravities of Coarse Aggregate and Fine Aggregate are 2.75 and 2.58 respectively. The bulk density of coarse aggregate is 1630kg/m³ and fineness modulus of fine aggregate is 2.78. A slump of 60mm is necessary. The water absorption of coarse aggregate is 1% and free moisture in fine aggregate is 2%. Design the concrete mix using IS code method. Assume any missing data suitably. 14 M

UNIT-V

9. a) Explain the following, 7 M
i) Cellular concrete ii) Polymer concrete
iii) Fibre reinforced concrete
b) Explain salient features of light weight concretes 7 M
- (OR)**
10. a) Write the difference between High performance concrete and High Density concrete. 7 M
b) What are the different types of fibres? What are factors affecting properties of FRC. 7 M

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

III B.Tech I Semester Regular/Supplementary Examinations, October / November-2019

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

Time: 3 Hours

Max Marks: 70

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) Derive the equivalent circuit of a single phase induction motor using double revolving field theory? 7M
- b) Explain the construction features and principal of operation of single phase induction motor? 7M

(OR)

2. Draw the equivalent circuit of a single phase induction motor and discuss the experimental procedure to obtain its parameters 14M

UNIT-II

3. a) Describe the constructional features and operating characteristics of a AC Series motor and give its applications? 7M
- b) Describe the constructional features and operating characteristics of a shaded-pole motor and give its uses? 7M

(OR)

4. a) Describe the constructional features and operating characteristics of a universal motor and give its applications? 7M
- b) Explain with a neat diagram a capacitor start induction run single phase induction motor and draw their speed torque characteristics? 7M

UNIT-III

5. a) Describe constructional aspects of stepper motor? 7M
- b) What are hybrid stepping motors? Explain. 7M

(OR)

6. a) Explain the operation of a VR stepper motor. Also mention their applications. 7M
- b) A stepper motor has a step angle of 1.8° and is driven at 400pps. Determine i) Resolution, ii) Motor speed and iii) number of pulses required to rotate the shaft through 54° . 7M

UNIT-IV

7. a) What are the advantages and disadvantages of Brushless DC machines compare to conventional DC motors. 7M
- b) Explain operating principle of Brushless DC motor with the help of diagrams. 7M

(OR)

8. a) Explain the principle of operation of Brushless DC Motor. 7M
- b) Mention the different applications of BLDC motors. 7M

UNIT-V

9. What are linear motors? What are its applications? Explain the constructional details of a linear induction motor. 14M

(OR)

10. a) Draw and explain the constructional details of a linear induction motor. 7M
- b) In what way the linear motors are different from conventional motors? Explain the applications of linear motors. 7M

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SET-1

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

III B.Tech I Semester Regular/Supplementary Examinations, October / November-2019

**INSTRUMENTATION AND CONTROL SYSTEMS
(Mechanical Engineering)**

Time: 3 Hours

Max Marks: 70

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 the Dynamic performance characteristics 7M
- b) What are Transducers and how are they classified? Explain their importance in an instrumentation process 7M

(OR)

2. a) Write the principle and working of seismic type accelerometer 7M
- b) What are the various errors occur in the measuring instruments and explain the methods of elimination 7M

UNIT-II

3. a) Discuss in detail electrical strain gauge with a necessary diagram 7M
- b) Explain the stroboscope speed measurement 7M

(OR)

4. a) Explain with a neat sketch of strain gauge load cell 7M
- b) Explain Electrical resistance strain gauges 7M

UNIT-III

5. a) Explain the Ionization type pressure gauges 7M
- b) Explain the Mcleod vacuum gauges used for pressure measurement and its limitations 7M

(OR)

6. a) What is a thermistor? How is it used for temperature measurement 7M
- b) Explain the resistive level measurement 7M

UNIT-IV

7. a) Explain with a neat sketch of Hot-wire anemometer 7M
- b) What are the factors affecting Recording Type Psychrometer 7M

(OR)

8. a) Discuss in detail Dew point meter 7M
- b) Explain the measurement of flow rate using ultrasonic flow meter? 7M

UNIT-V

9. a) Describe with neat sketch the open loop speed control system 7M
- b) Illustrate with example, explain closed loop temperature control system 7M

(OR)

10. a) With a neat sketch explain the position control system 7M
- b) Describe a speed control system for controlling speed of an I.C. engine 7M

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)****III B.Tech I Semester Regular/Supplementary Examinations, October / November-2019****ELECTRONIC MEASUREMENTS AND INSTRUMENTATION****(Electronics and Communication Engineering)****Time: 3 Hours****Max Marks: 70**

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 various dynamic characteristics of measurement systems. 7M
- b) A voltmeter having a sensitivity of $1\text{K}\Omega/\text{V}$ is connected across an unknown resistance in series with a milli ammeter reading 80V on 150V scale. When the milli ammeter reads 10mA, Calculate the (i) apparent resistance of the unknown resistor (ii) Actual resistance of the unknown resistor, and (iii) Error due to the loading effect of the voltmeter? 7M

(OR)

2. a) Draw the Thermocouple type RF ammeter and explain its operation. 7M
- b) The following values are obtained from the measurements of the value of a resistor: 147.2 , 147.4 , 147.9 , 147.1 , 147.5 , 147.6 , 147.4 , 147.6 , 147.5 . Calculate a) Arithmetic mean b) Average deviation c) Standard Deviation. 7M

UNIT-II

3. a) Illustrate why triggering circuit is provided in a CRO? 7M
- b) Draw the block diagram of a spectrum analyser and explain its working. 7M

(OR)

4. a) Explain the Measurement procedure of Lissajous patterns with one example 7M
- b) What are the various applications of Digital Fourier Analyzers? 7M

UNIT-III

5. a) Explain the operation of a Dual trace oscilloscope with neat sketches. 7M
- b) Explain the principle and working of a storage oscilloscope. 7M

(OR)

6. a) Compare various oscilloscopes with different parameters. 7M
- b) Explain the principle and working of a digital storage oscilloscope with neat figures. 7M

UNIT-IV

7. a) Explain the operation of wheat stone bridge with derivations. 7M
- b) Explain the operation of Kelvins bridge. 7M

(OR)

8. a) Illustrate the method of measurement of unknown inductance by Maxwell's bridge 7M
- b) A sheet of 4.5 mm thick Bakelite is tested at 50 Hz between 12 cm in diameter. The Schering bridge uses a standard air capacitor C2 of 105 pF capacitor, a nonreactive, R4 of $1000/\sqrt{2}$ in parallel with a variable capacitor and is obtained with C4 = 0.5 μF and R3 = 260 Ω . Calculate the capacitance, PF and relative permittivity of the sheet. 7M

UNIT-V

9. a) Draw the Linear variable differential Transducer (LVDT) and explain its operation in detail. 7M
- b) Explain the working of capacitive transducers. 7M

(OR)

10. a) Discuss about Thermistors and Sensistors. 7M
- b) List out different types of Strain Gauges used Transducer and explain any one in detail. 7M

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SET-1

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

III B.Tech I Semester Regular/Supplementary Examinations, October / November-2019

JAVA PROGRAMMING

(Common to CSE & IT)

Time: 3 Hours

Max Marks: 70

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) Describe with a flowchart, how various Java tools are used in the application development. 7M
- b) Write a program to determine the sum of the following harmonic series for a given value of n: $1 + 1/2 + 1/3 + \dots + 1/n$. The value of n should be given interactively through the keyboard. 7M

(OR)

2. a) What is Java Virtual Machine and how it is considered in context of Java's platform independent feature? 7M
- b) Define variable. What are the differences between instance variable, static variable and local variable? 7M

UNIT-II

3. a) What is constructor? Illustrate parameterized constructors with relevant Java program. 7M
- b) What are the differences between instance method and static method? Explain restrictions using static methods. 7M

(OR)

4. a) Describe, in general, how does java's garbage collector work ? 4M
- b) Design a class to represent a bank account which include the following 10M
members:
Data members : Name of the depositor
Account number
Type of account
Balance amount in the account
Methods: To assign initial values
To deposit an amount
To withdraw an amount after checking balance
To display the name and balance.

UNIT-III

5. a) Differentiate method overloading and method overriding with an example. 7M
- b) Write a program to calculate the area and perimeters of circle, rectangle, and square shapes using inheritance hierarchy. 7M

(OR)

6. a) What is multiple inheritance? Explain how it can be implemented in JAVA with the help of an example program. 7M
- b) What are the differences between abstract modifier and final modifier? Give an example. 7M

UNIT-IV

7. a) What are benefits of importing packages? 5M
b) Define an exception called “NoMatchException” that is thrown when a string is not equal to “Bharat”. Write a program that uses this exception. 9M

(OR)

8. a) Explain try, catch, finally blocks with an example program. 6M
b) Create a try block that is likely to generate three types of exception and then incorporate necessary catch blocks to catch and handle them appropriately. 8M

UNIT-V

9. a) Differentiate between synchronized methods and synchronized statements. 7M
b) How do applets differ from standalone application programs. 7M

(OR)

10. a) Write java applet to scroll a banner. 7M
b) Develop an applet for displaying a bar chart for the table given below. 7M

Year	1991	1992	1993	1994
Turnover(Rs. Crores)	110	150	100	170

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SET-1

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

III B.Tech I Semester Supplementary Examinations, October / November-2019

**ELECTRICAL MACHINES-III
(Electrical & Electronics Engineering)**

Time: 3 Hours

Max Marks: 70M

Answer All Questions

[1 x 10 = 10M]

PART – A

1. a) What is armature reaction of a synchronous machine?
b) Define pitch factor.
c) Discuss the importance of synchronous impedance method
d) What are the main parts of synchronous generator?
e) A machine with large air-gap has a higher synchronizing power, why?
f) Define sub-transient, transient and steady-state reactance's of AC generators
g) What is an infinite bus? Mention three conditions to be satisfied prior to synchronizing an alternator to an infinite bus.
h) Mention the functions of damper winding
i) Why single phase induction motor has low power factor?
j) What are the applications of universal motor?

PART-B

Answer one Question from each Unit:

[5x 12=60M]

UNIT – I

2. a) Derive EMF equation and describe how the induced 'emf' in armature winding is affected by (a) form factor (b) pitch factor and (c) distribution factor.
b) A 3-phase, 16-pole, 375rpm star-connected alternator has 72 slots on the armature. Each slot has 12 conductors and winding is short-pitched by 2 slots. Find the induced emf between lines, given the flux per pole is 0.08wb
[6M+6M]

(OR)

3. a) What is an armature reaction? Explain its effect on the terminal voltage of an alternator at unity power factor load.
b) Explain the construction and operation of three phase alternator.
[6M+6M]

UNIT – II

4. a). A three phase star connected, 25KVA, 600V, 50 Hz, 4-pole alternator has the following test data at rated speed

Exciting current	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	6	8
Per phase OC Volts	112.5	210	259.5	303	336	346.5	375	385.5	390	394.5	399	405

exciting current	1	2	3
SC Current	8	16.03	24.05

Armature resistance per phase is 3.5 ohms. Draw OC and SC characteristics on a graph paper and then determine synchronous reactance per phase (X_s).

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- b) For the same synchronous machine, a) determine percentage voltage regulation at rated load at 0.8 p.f. lag by synchronous impedance method. [5M+7M]

(OR)

5. a) Describe the slip test method for measurement of X_d and X_q of synchronous machine
b) Discuss in brief, how voltage regulation can be computed by EMF method. [6M+6M]

UNIT – III

6. a) What are the effects of change in excitation and mechanical input when alternators operated in parallel.
b) Two identical 10MVA alternators operate in parallel. The governor of first machine is such that the frequency drops uniformly from 50 Hz on no-load to 47.5 Hz on full-load. The corresponding uniform speed drop of the second machine is 50 Hz to 48 Hz. How will they share a load of 15MW? [7M+5M]

(OR)

7. a) Explain the advantages of sharing of loading between two alternators operating in parallel. [7M]
b) Discuss the condition required for paralleling two synchronous generators. [5M]

UNIT – IV

8. a) What is meant by hunting? How hunting is suppressed in a synchronous motor? [6M]
b) Describe in brief the principle of operation of synchronous motor [6M]

(OR)

9. a) Describe how a synchronous motor can be operated as a synchronous condenser. [6M]
b) Explain the various starting methods of synchronous motor [6M]

UNIT – V

10. Discuss principle and operation of shaded pole motor and draw its characteristics. [12M]

(OR)

11. a) Explain the operation of a single phase induction motor using split phase technique [6M]
b) Show that the starting torque of a single phase induction motor is zero. [6M]

CODE: 13ME3017**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)****III B.Tech I Semester Supplementary Examinations, October / November-2019****THERMAL ENGINEERING - II
(Mechanical Engineering)****Time: 3 Hours****Max Marks: 70****PART-A****ANSWER ALL QUESTIONS****[1 X 10 = 10 M]**

1.
 - a) Define critical pressure ratio of a convergent nozzle.
 - b) Define vacuum efficiency of a condenser.
 - c) What is a nozzle?
 - d) Sketch the effect of friction on h-s diagram when the working fluid is gas.
 - e) What is the purpose of governor in a steam turbine ?
 - f) What is the degree of reaction
 - g) What are different accessories of boiler?
 - h) Define the term stage efficiency in case of reaction turbines.
 - i) Write complete combustion equation for n-heptane (C_7H_{16}).
 - j) What is the function of economiser in a boiler?

PART-B**Answer one question from each unit****[5x12=60M]****UNIT-I**

2.
 - (a) A power generating plant uses steam as a working fluid and operates at a boiler pressure of 50 bar, dry saturated and a condenser pressure of 0.05 bar. Calculate cycle efficiency, work ratio and specific steam consumption for Carnot and Rankine cycle. [7M]
 - (b) What are gravimetric and volumetric analyses? Where these analyses are used. [5M]

(OR)

3.
 - (a) A fuel having chemical formula C_8H_{18} is burnt with chemically correct amount of air at atmospheric pressure. Write the reaction equation and find the stoichiometric air-fuel ratio. Also calculate the percentage of mass and volume of products at atmospheric pressure. [7M]
 - (b) Mention the effects of reheating in a steam power plant on the efficiency, work ratio, specific steam consumption and condition of steam at the exit. [5M]

UNIT-II

4.
 - (a) Sketch and describe a Cochran vertical boiler. What are its special features? [6M]
 - (b) Explain the difference between fire tube and water tube boilers. What are their merits and demerits? [6M]

(OR)

5.
 - (a) Why mountings are essential in boilers? Name different mountings and give functions of each. [6M]
 - (b) Name and give functions of essential accessories provided for the operation of boilers. [6M]

UNIT-III

- 6 (a) A steam turbine using 60,000 kg of steam per hour exhaust into a condenser in which the extraction pipe pressure corresponds to vacuum of 71.2 cm of Hg (with barometer 76 cm of Hg) and the temperature in the same pipe is 32°C. The air leakage is estimate to be 0.9 kg per 1000 kg of steam passing through the turbine. The increase in the temperature of the circulating water passing through the condenser is 15°C. Estimate the volume in m³/min of the air extracted meant to remove air and condenser steam. Assume volumetric efficiency to be 0.8. [8M]
- (b) State briefly the sources and effect of air leakage into a condenser. [4M]

(OR)

- 7 (a) Derive an expression for maximum discharge through a convergent-divergent nozzle. [6M]
- (b) 5kg/s of air at 10bar and 200°C expands in a convergent-divergent nozzle into a space at 1.03bar. Calculate the throat and exit cross sectional areas of the nozzle. Neglect the air inlet velocity to the nozzle. [6M]

UNIT-IV

- 8 (a) Sketch and explain pressure compounded impulse turbine showing the pressure and velocity variations along the axis. [5M]
- (b) The data pertaining to an impulse is as follows: Blade speed 300m/s; isentropic enthalpy drop in nozzles 450 kJ/kg; nozzle efficiency 0.9; nozzle angle 20°; blade velocity coefficient 0.85; blade exit angle 25°C. Sketch velocity diagrams and calculate per a mass flow of 1kg/s. [7M]
- i) The inlet angle of moving blades. ii) The axial thrust. iii) The driving force on the wheel.

(OR)

- 9 (a) Deduce an expression for work done per stage of a reaction turbine. [6M]
- (b) Give the comparison between impulse turbine and reaction turbine. [6M]

UNIT-V

- 10 (a) Discuss relative advantages and disadvantages of gas turbines and steam turbines. [6M]
- (b) Describe with a suitable sketch the constant pressure closed cycle gas turbine. [6M]

(OR)

- 11 (a) Describe turbo jet engine and explain its thermodynamic cycle. [6M]
- (b) Describe the principle of ram jet where is it used? Why? [6M]

Time: 3 Hours**Max Marks: 70****PART-A****ANSWER ALL QUESTIONS****[1 x 10 = 10 M]**

1. a) Define the term resolution
- b) Write ideal specification of digital multimeter
- c) Write standard specifications of signal generators
- d) Draw block diagram of spectrum analyser
- e) What is importance of delay line CRO
- f) What is the specialty of dual beam CRO
- g) Draw circuit diagram of Maxwell bridge
- h) What is the primary use of kelvin bridge
- i) what are the materials used in thermocouples
- j) Write advantages of thermocouples

PART-B**Answer one question from each unit****[5x12=60M]****UNIT-I**

2. a Define the terms accuracy, error and precision explain each one with example
- b What are the sources of errors in the instruments

(OR)

3. a Draw practical PMMC movement explain its operation.
- b Draw circuit diagram of shunt type ohm meter and explain

UNIT-II

4. a what principle is employed for the operation of a function generator
- b Draw the block diagram of a function generator and explain the method of producing sine wave

(OR)

5. a Draw block diagram of frequency selection wave analyser and explain operation
- b Explain different methods of harmonic distortion analyser concepts

UNIT-III

6. a Explain in detail principle of operation of single beam CRO
- b Write standard specification of CRO

(OR)

7. a Write about horizontal section importance in the CRO why sweep signal used in horizontal section
- b What is the differences between active and passive probes

UNIT-IV

8. a Describe the operation of kelvin bridge
- b Describe the operation of wheat stone bridge

(OR)

9. a Draw the circuit diagram of a Q meter explain its operation
- b What are the precautions to be taken when using a bridge

UNIT-V

10. a What are the parameters required for a electrical transducers
- b Draw resistance position transducer setup to measure displacement and explain operation

(OR)

11. a Write advantages of electrical transducers
- b Draw and explain potentiometer transducer and write its advantages

CODE: 13CS3014**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)****III B.Tech I Semester Supplementary Examinations, October / November-2019****OPERATING SYSTEMS
(Common to CSE & IT)****Time: 3 Hours****Max Marks: 70****PART-A****ANSWER ALL QUESTIONS****[1 x 10 = 10 M]**

1. a) Differentiate tightly coupled systems and loosely coupled systems.
b) Compare preemptive and non preemptive scheduling methods
c) What are the requirements that a solution to the critical section problem must satisfy?
d) Define busy waiting and spin lock.
e) What are the common strategies to select a free hole from a set of available holes?
f) What is a reference string?
g) What are the operations that can be performed on a directory?
h) List the various file attributes.
i) What is low-level formatting?
j) What is the use of boot block?

PART-B**Answer One Question From Each Unit****[5 x 12 = 60 M]****UNIT-I**

2. Consider the following set of processes, with the length of the CPU-burst time given in seconds:

<u>Process</u>	<u>Arrival time</u>	<u>Burst time</u>
P1	0	10
P2	2	1
P3	4	2
P4	6	1
P5	8	5

- i. Draw three Gantt charts illustrating the execution of these processes using FCFS, SJF and SRTF scheduling.
- ii. What is the turnaround time of each process and what is the average turnaround time for each of the scheduling algorithms in part a?
- iii. What is the waiting time of each process and what is the average waiting time for each of the scheduling algorithms in part a?

(OR)

3. a) Define process and explain with a neat diagram about process states and process control block. 8M
b) Explain briefly the operating systems role in the overall computer system. 4M

UNIT-II

4. What is the need of Banker's algorithm? Consider the following snapshot of a system:

	<u>Allocation</u>				<u>Max</u>				<u>Available</u>			
	A	B	C	D	A	B	C	D	A	B	C	D
P0	0	1	1	0	0	2	1	0	1	5	2	0
P1	1	2	3	1	1	6	5	0				
P2	1	3	6	5	2	3	6	6				
P3	0	6	3	2	0	6	5	2				
P4	0	0	1	4	0	6	5	6				

Answer the following questions using the Banker's algorithm:

- What is the content of the matrix Need?
- Is the system in a safe state?
- If a requests from Process p1 arrives for (2,1,1,0)) and (0,2,10) can the requests be granted immediately?

(OR)

- Explain in detail about peterson's solution for CS problem 6M
 - What is critical section problem and explain the requirements? 6M

UNIT-III

- Explain the concept of demand paging and the performance issues of demand paging? 6M
 - why segmentation and paging combined into one scheme? 6M

(OR)

- What is fragmentation? Discuss the difference between external and internal fragmentation? 4M
 - Calculate the number of page faults for the following reference string using
i) FIFO ii) optimal page replacement iii) LRU algorithm 8M

5 2 0 1 0 3 2 0 3 4 0 3 2 1 3 0 1 5

UNIT-IV

- List and discuss various methods for implementing a directory. Single-Level Directory. 8M
 - Explain and compare different file access methods. 4M

(OR)

- Explain the indexed and linked file allocation methods. Discuss the advantages and disadvantages in those methods. 8M
 - List and briefly discuss the most common schemes for defining the logical structure of a directory. 4M

UNIT-V

- Discuss with diagrams the following three disk scheduling: FCFS, SSTF, C-SCAN 8M
 - Discuss about file system mounting. 4M

(OR)

- What are the different block and character devices? Explain in detail. 8M
 - Explain projection and security goals. 4M