

COMPUTER SCIENCE

TIME ALLOWED: 3 HOURS

MAXIMUM MARKS: 100

Attempt total **five** questionsAttempt **at least one** question from each section

Each question carries 20 Marks

SECTION-A

- Q.NO.1 (A) Explain the built-in features of internal architecture of a microprocessor alongwith the Buses. Marks 10
- (B) Illustrate the following:
Interfacing of 4K*8 bit RAM with 8085 microprocessor.
Interfacing of 4K*8 bit ROM with 8085 microprocessor. Marks 10
- Q.NO.2 (A) Explain any two of the following scheduling policies Marks-10
- First Come First Serve (FCFS)
 - Shortest Job First (SJF)
 - Round Robin (RR)
- (B) Calculate the average waiting time, average turnaround time. Draw the Gantt Chart using FCFS, SJF. Which of the policies provides minimum average waiting time? Marks-10

JOB	A.T	E.R.T
1	0	10
2	1	18
3	2	11
4	3	05

- Q.NO.3(A) How ISO's OSI Seven layers approach of Network architecture is implemented practically? Explain in detail. Marks-10
- (B) When choosing a topology, the devices to be linked that may be peer -to- peer or primary-secondary. Marks-10
Which topologies are more convenient for
- Peer-to-peer
 - primary-secondary
 - either
- A Corporation has a fully connected mesh network consisting of 16 devices calculate the total number of cable links needed and the number of ports for each device.

SECTION - B

- Q.NO.4(A) Why **functions** are used in programming? Write the important reasons.
Write a function called zerofunction() that is passed two int arguments by reference and then sets the smaller of the two numbers to 0. Write a main () program to exercise this function. Marks-10
- (B) What is **object oriented programming**? Describe Encapsulation, Inheritance and Polymorphism. Marks-10

P.T.O

Q.NO.5(A) What is **quicksort** technique? Sort the given list of items using quicksort technique.
List of items: 25, 39, 16, 74, 48, 11, 29, 34. Marks-10

34

(B) Define **Stake** and **Queue** data structures.
Write the algorithms for queues and stacks showing insertion and deletion operations. Marks-10

SECTION - C

Q.NO.6(A) What are the advantages of **database** approach over **file based** approach? Marks-10

(B) How the **primary key** is different from **candidate key**? What role does it play in maintaining the consistency of a relation? Marks-10

Q.NO.7(A) Create a website about any organization using HTML, DHTML and JavaScript which implement the following : Marks-10

- i. Frames
- ii. Images
- iii. Tables
- iv. Links
- v. Form & Buttons

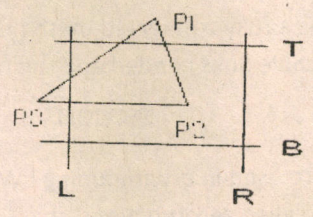
(B) Define the following attributes of <Table> tag.
i. Valign ii. Cellpadding iii. CellSpacing iv. Rowspan Marks-10

Implement the following table in HTML.

MarkSheet

Names	Batch: 08							
	Section: I & II							
	Subjects							
	IPM		JAVA		DS		IS	PS
	TH	PR	TH	PR	TH	PR	TH	TH
Misbah	95	45	90	46	85	42	94	85
Faizan	86	40	92	45	96	43	96	90
Arsalan	89	42	86	41	82	41	89	96
Hammad	98	46	83	47	85	42	95	98

Q.NO.8(A) What is **Clipping Pipe**? Apply the Polygon Clipping on the following polygon having Vertices P1, P2 and P3. Write each of the steps necessary to implement the polygon Clipping (Show the resultant figures as well). Marks-10



(B) Describe the following two dimensional transformation techniques with the help of figures.
i. Translation
ii. Scaling
iii. Rotation Marks-10