Duration: 2 Hrs   **Marks: 30**

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Instructions: **1. Answer ANY FIVE questions from Q1.**
                        2. Answer ANY FOUR questions from Q2.
                        3. Figures to the right indicate marks.

Q.1.	Answer <u>ANY FIVE</u> questions from the following	**(5*2=10)**
a.	What is Deadlock?	**(2)**
b.	What is Swapping?	**(2)**
c.	State two difference between Trojan Horse and Worms.	**(2)**
d.	Explain the two types of Fragmentation.	**(2)**
e.	What is Virtual Memory?	**(2)**
f.	State two major functions of an Operating System.	**(2)**
g.	What is Multi programmed Batch System?	**(2)**
h.	Define RAID.	**(2)**
	Explain the Critical-Section Problem.	
Q.2.	Answer <u>ANY FOUR</u> questions from the following	**(4*5=20)**
Q.2.A.	Explain the Process Control Block with diagram.	**(5)**
Q.2.B.	Explain the steps in handling Page fault with a diagram.	**(5)**
Q.2.C.	Explain the Critical-Section Problem.	**(5)**

Q.2.D. Define Round Robin Scheduling. Consider the following four **(5)** processes, with the length of the CPU burst given in milliseconds.

Process	Burst Time
P1	53
P2	17
P3	68
P4	24

Find out the average waiting time for this round robin schedule with the time quantum of 20 by giving a Gantt Chart, illustrating the execution of these jobs.

Q.2.E. Explain Cryptography as a Security tool. **(5)**

Q.2.F. What is the basic mechanism of C-LOOK disk scheduling **(5)** algorithm? Suppose a disk contains 200 tracks(0-199) and the request queue contains the track numbers 93, 176, 42, 148, 27, 14, 183 respectively. Consider the current position of the R/W head is at 55. Calculate the total number of cylinders moved by the head using C-LOOK disk scheduling algorithm.

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