Q. P. Code:-24599

(3 Hours)   Total Marks: 80

N.B.   1) Question **no.1 is compulsory**

2) Solve any **Three** questions from remaining five.

3) Assume suitable data wherever required

Q.1   Answer any four

a)   Compare and contrast between thread and process   05

b)   What is system call? Explain any four system calls   05

c)   Explain internal & external fragmentation   05

d)   Explain various RAID levels   05

e)   Write short note on File Access methods   05

Q.2 a)   What are the four conditions that create deadlock? Explain dead lock prevention   10
and avoidance techniques.

b)   Draw and Explain various states of process with the help of state transition diagram.   10

Q.3 a)   Calculate the Hit and faults using FIFO, Optimal and LRU page replacement   10
policies for the following page sequence (2,3,5,4,2,5,7,3,8,7) assume page frame
size is 3.

b)   What is semaphore? Explain different types of the semaphores.   10

Q.4 a)   Explain objectives and functions of OS.   10

b)   What is scheduling? Give different scheduling policies and their comparison.   10

Q.5 a)   What is thread? Explain user level and kernel level thread.   10

b)   What is paging? Explain how logical address converted into physical address.   10

Q.6   Write short note on (any four)   20

a)   I-node

b)   Android OS

c)   Producer consumer problem

d)   Inter process communication

e)   Process control Block

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