T.E. SEM V / IT / 20.11.17 / NOV 2017

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 and avoidance techniques. — 10

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 policies for the following page sequence (2,3,5,4,2,5,7,3,8,7) assume page frame size is 3. — 10

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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