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SEAT No. :

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P60

TE/INSEM/APR-67

T.E. (I.T.) (Semester - II)
314451 - OPERATING SYSTEM
(2012 Pattern)

Time : 1 Hour]

Instructions to the candidates:

- 1) Answers Q. 1 or Q. 2, Q. 3 or Q. 4 Q. 5 or Q. 6.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data if necessary.

[Max. Marks : 30

Q1) a) Explain the following operating systems (i) Real time system (ii) Distributed system. [6]

b) What are the OS design consideration for multiprocessor and multicore architecture? [4]

OR

Q2) a) What is virtual machine? Explain the virtual machine architecture? [6]

b) What are the functions & services of OS? [4]

Q3) a) Draw and explain process state transition diagram. [5]

b) Define thread. Explain types of threads in details. [5]

OR

Q4) a) Consider following set of processes [6]

Process	AT	BT
P1	0	3
P2	1	5
P3	3	2
P4	9	5
P5	12	5

P.T.O.

Apply SJF preemptive & non preemptive calculate average waiting time & turn around time.

b) Explain the concept of context switching with the help of neat diagram. [4]

Q5) a) Write and explain deadlock free solution for dining philosophers problem. [5]

b) Enlist different ways to handle mutual exclusion. Give example of each. [5]

OR

Q6) a) Explain the necessary & sufficient condition for the occurrence of a deadlock. [6]

b) Describe any two methods for deadlock recovery. [4]

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