

Jaypee University of Information Technology
Waknaghat, Solan

T-1 Examination, February, 2019

Subject: Advanced Operating Systems
Code: 10M11CI212

Dated:
Max. Marks: 15

All Questions are compulsory and carrying equal marks.

- Q. 1 Note down the purpose and type of the semaphore and also explain Reader's priority solution using semaphores. (3)
- Q. 2 Difference between a deadlock and starvation. (1+1+1)
Write the fundamental conditions for deadlock.
Separate the concept of policy and mechanisms.
- Q. 3 Write short note on any two:
Specify the steps needed in graph reduction method for a deadlock checking state.
What is knot in a graph, shows it with an example.
Give the pro and cons of different strategies of deadlock handling approaches. (1.5+1.5)
- Q. 4 $A = (2, 4, 3);$
 $B = \begin{bmatrix} 1, 2, 2 \\ 1, 2, 1 \\ 1, 1, 1 \end{bmatrix}, C = \begin{bmatrix} 1, 2, 0 \\ 0, 1, 1 \\ 1, 0, 1 \end{bmatrix}, E = \begin{bmatrix} 0, 0, 2 \\ 1, 1, 0 \\ 0, 1, 0 \end{bmatrix}$ and P_1 makes a request $F_1 = (0, 0, 1)$
Should it be granted? If yes then find the sequence of execution of processes as well as generate the required matrix during allocation. (3)
- Q. 5 What are the issues in Distributed Operating system, describe briefly. (3)