SECOND INTERNAL QUESTION BANK

2 Marks

1. What is process synchronization?
2. Define independent and cooperative process?
3. What is race condition? List the causes for race condition.
4. Define semaphore. list its types.
5. What do you mean by critical condition problem.
6. What is a deadlock? list necessary conditions to for deadlock to occour
7. What do you mean by “Resource Allocation graph”?Give Example
8. Define logical and physical address space.
9. Define swapping.
10. Define fragmentation.

5 marks

1. Explain the race condition with an example.
2. Write a short note on critical section.
3. List and explain the different requirements to solve the critical section problem.
4. Write a short note on Producer consumer problem using semaphore.
5. Explain “Dining Philosopher’s problem” in brief.
6. What is a deadlock? explain necessary conditions to for deadlock to occour.
7. Explain methods of deadlock prevention.
8. Explain resource allocation graph algorithm.
9. Consider a system that contains five processes P1, P2, P3, P4, P5 and the three resource types A, B and C. Following are the resources types: A has 10, B has 5 and the resource type C has 7 instances.

   A.WhatwillbethecontentoftheNeedmatrix?

   B.Isthesysteminasafestate?IfYes,thenwhatisthesafesequence?

   C.What will happen if process P1 requests one additional instance of resource type A and two instances of resource type C?

Process	Allocation			Max			Available		
	A	B	C	A	B	C	A	B	C
P1	0	1	0	7	5	3	3	3	2
P2	2	0	0	3	2	2			
P3	3	0	2	9	0	2			
P4	2	1	1	2	2	2			
P5	0	0	2	4	3	3			

10. Write a short on swapping.
11. What do you mean by internal and external fragmentation.
12. Write a note on paging.
13. Explain the concept of segmentation.