Total No. of Questions : 5]

SEAT No. :

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T.Y. B.Sc.
COMPUTER SCIENCE
CS-361 : Operating Systems-II
(Rev. 2019 Pattern) (Semester - VI)

Time : 2 Hours] *[Max. Marks : 35*

Instructions to the candidates:

1) ***All questions are compuslory.***
2) ***Figures to the right indicates full marks.***

Q1) Attempt any Eight of the following : **[8 × 1 = 8]**

a) List any four file attributes.

b) Define starvation.

c) What do you mean by full stroke lime ?

d) Define Distributed systems.

e) List the limitations of single level directory.

f) What is mobile operating system ?

g) Kernel is core of any operating system. Justify True/False.

h) Define deadlock.

i) What do you mean by disk Bandwidth ?

j) What do you mean by Grid Computing ?

P.T.O.

Q2) Attempt any Four of the following : **[4 × 2 = 8]**

a) Write features of mobile operating system.

b) List the different types of Distributed systems.

c) Explain any two Disk performance parameters.

d) Explain resource allocation Graph.

e) What do you mean by absolute path and relative path.

Q3) Attempt any Two of the following : **[2 × 4 = 8]**

a) Explain Design goals of distributed systems.

b) Write short note on Disk Mangement.

c) Consider the following snapshot of the system A, B, C, D are the resource types.

	Allocation				Max				Available			
	A	B	C	D	A	B	C	D	A	B	C	D
P_0	0	0	1	2	0	0	1	2	1	4	2	0
P_1	1	1	0	0	1	7	5	0				
P_2	1	3	5	4	2	3	5	6				
P_3	0	6	3	2	0	6	5	2				
P_4	1	0	1	4	1	6	5	6				

Answer the following questions using Banker's Algorithm.

i) What are the contents of need array.

ii) If the system is in safe state give the safe sequence.

iii) If the request from process P_1 arrived for (0, 4, 2, 0) can it be granted immediately.

Q4) Attempt any Two of the following : **[2 × 4 = 8]**

a) Explain the necessary conditions for a Deadlock to occur.

b) Explain linked Allocation of file in detail.

c) Explain iphone Architecture in detail.

Q5) Attempt any one of the following: **[1×3=3]**

a) Write Advantages and Disadvantage of Distributed systems.

b) Assume there are total 200 tracks are presents on each surface of the disk. If request quecee is 30,140,20,170,60,190 and initial position of the head is 120. Apply following disk scheduling Algorithms & calculate total head movement.

i) FCFS

ii) SSTF