



Class Test Script

Class Test

SL NO:

Course Code: CSE-3211

Class Test

03

Invigilator's Signature & Date

Course Title: Operating System

Exam Date: 11-03-21

Batch: 7th

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CSE

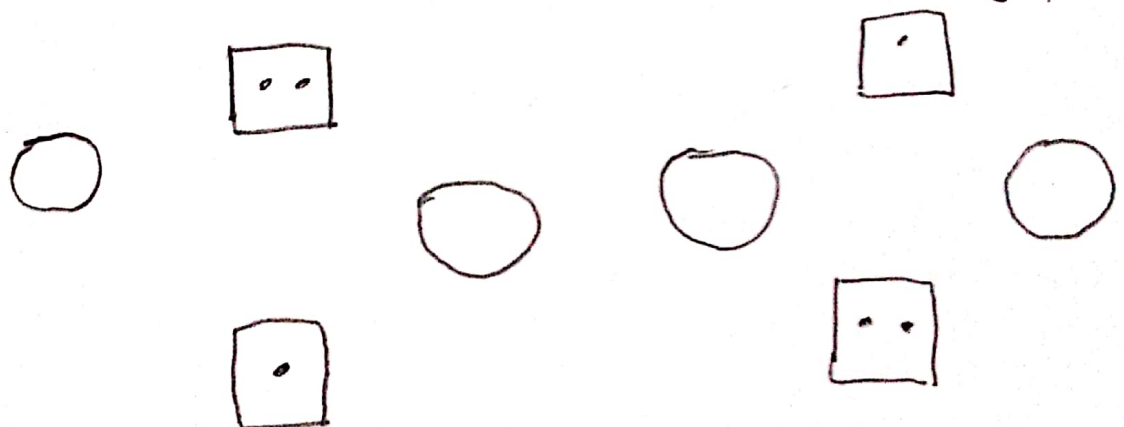
Section:

ID NO: 18104050

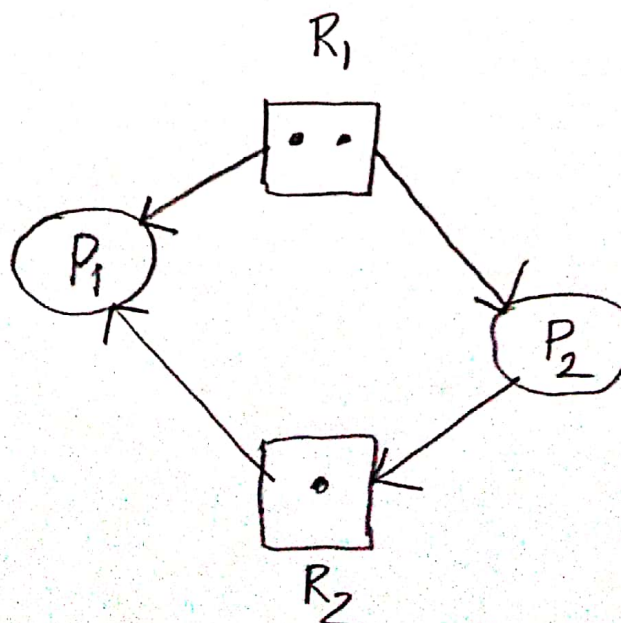
Obtained Mark:

(Please answer questions from here)

1. Ans: Given Resource-Allocation Graph, Fig 1.



Now,



At first here no cycle create,
 so no possibilities of deadlock. But
 there is a some possibilities of
 starvation here. But when P_1 complete
 work, after free all resources.
 Then P_2 get chance to complete
 work. So. safe sequence is
 $(P_1 \rightarrow P_2)$

Again,

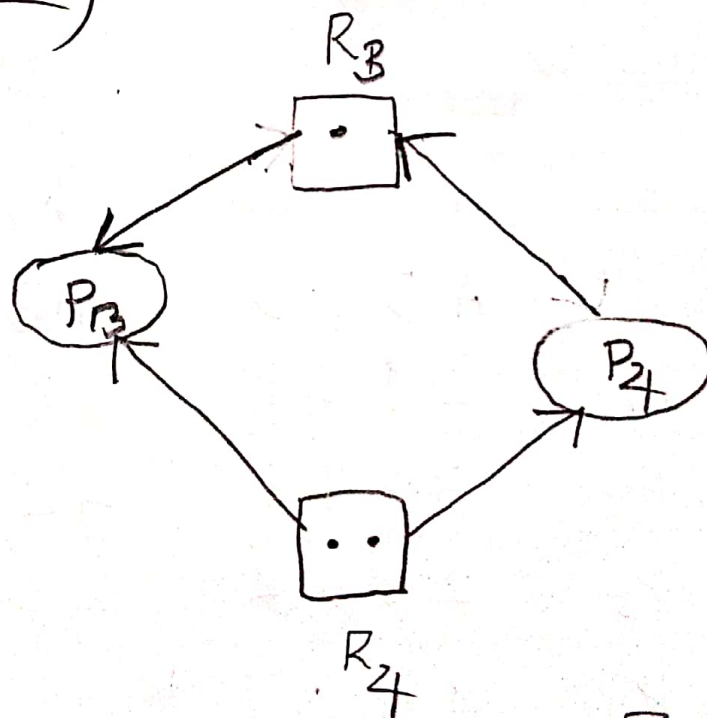
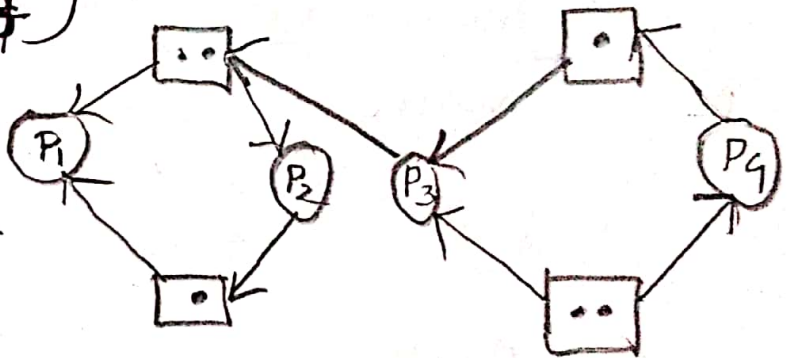


Fig: Safe sequence for
 graph 2

Here, also no cycle create so
 no chance for deadlock.

Here At first P_2 complete task, then P_1 get ~~resor~~ instance and after that P_1 complete the process. So here some possibilities of starvation. Here safe sequence is, $(P_3 \rightarrow P_4)$. So, now merge that,

$P_1 \rightarrow P_2 \rightarrow P_3 \rightarrow P_4$



2.

Ans: (i) Here,

Process	Allocation	Max	Available	Need
	A B C D	A B C D	A B C D	A B C D
$\checkmark P_1$	2 1 1 1	5 2 3 4	4 4 4 2	3 1 2 3
$\checkmark P_2$	3 2 1 1	4 2 5 2	7 6 5 3	1 0 4 1
$\checkmark P_3$	2 1 1 2	2 3 1 7	8 10 8 4	0 2 0 5
$\checkmark P_4$	1 4 3 1	2 5 4 3	10 11 9 5	1 1 1 2
			12 12 10 7	

Safe sequence: $P_2 \rightarrow P_4 \rightarrow P_1 \rightarrow P_3$

In here no deadlock occurs.
There is possibilities of little
starvation. But according to the
safe sequence no deadlock occurs.

(ii) Ans. Here our available is
(4, 4, 4, 2). So when
a request from process P_2
arrives for (0, 3, 0, 2) then
the request ~~be~~ can be
granted. Now we need to
check after giving P_2 , the
other process will run ~~safe~~
execute safe sequence. So,
after calculations the need.
The safe sequence is
 $P_2 \rightarrow P_4 \rightarrow P_1 \rightarrow P_3$

So, P_2 request can be granted
and no deadlock occur.