Q. P. Code: 39373

Γime: 3hrs)	(Marks: 80)	L.G. C.
compulsory.		* EXAM
has from remaining five que	stions	10 TO

- N.B. 1. Question 1 is compulsory.
  - 2. Attempt any three from remaining five questions.
  - 3. Figure in right indicate full marks

Q 1	Attempt the following (any four)  a. Define Operating System? What are its objectives?  b. Explain system call and enlist its types.  c. Differentiate short and medium-term scheduler.  d. What are advantages of multiprogramming?  e. State characteristics of good process scheduler.								5 5 5 5 5	
Q2. A	What	is dead	lock? Ex	xplain ne	ecessary a	and su	fficien	t conditi	ons for a deadlock to occur.	10
В									0.	10
Q3. A	Expla	in LINU	JX oper	rating sy	stem with	n kerne	el, men	nory ma	nagement and IO management.	10
В		Rl	R2	R3		R1	R2	R3		10
	Pl	3	2	2	Pl	1	0	0		
	P2	6	1	3	P2	- 6	1	2		
	P3	3	1	4	P3	2		1		
	P4	4	2	2	P4	0	0	2	R1 R2 R3	
	Q2. A B	Q2. A What B Expla  Q3. A Expla  P1 P2 P3	a. Defin b. Expla c. Differ d. What e. State  Q2. A What is dead B Explain in de  Q3. A Explain LINU B  R1  P1  3  P2  6  P3  3	a. Define Opera b. Explain syste c. Differentiate d. What are adve e. State characte  Q2. A What is deadlock? Explain in detail page  Q3. A Explain LINUX oper B  R1 R2 P1 3 2 P2 6 1 P3 3 1	a. Define Operating Sys b. Explain system call a c. Differentiate short an d. What are advantages e. State characteristics of  Q2. A What is deadlock? Explain no B Explain in detail page table s  Q3. A Explain LINUX operating sy B  R1 R2 R3 P1 3 2 2 P2 6 1 3 P3 3 1 4	a. Define Operating System? Wh b. Explain system call and enlist is c. Differentiate short and medium d. What are advantages of multiple. Extate characteristics of good pr  Q2. A What is deadlock? Explain necessary as Explain in detail page table structures.  Q3. A Explain LINUX operating system with B  R1 R2 R3 P1 R2 R3 P2 R3 P3 R1 R2 R3 P1 R2 R3 P1 R2 R3 P2 R3 P3 R1 R2 R3 P1 R2 R3 P1 R2 R3 P2 R3 P3 R3 R2 R3 P1 R2 R3 P2 R3 P3 R3 R3 P4 R3 P4 R3 P5 R3 P6 R3 P6 R3 P7 R3 P8 R3 P8 R4 R2 R3 P9 R3 P1 R4 R4 R3 P1 R5 R3 P1 R5 R4 R4 P3 R5 R5	a. Define Operating System? What are b. Explain system call and enlist its type c. Differentiate short and medium-term d. What are advantages of multiprogram e. State characteristics of good process  Q2. A What is deadlock? Explain necessary and su B Explain in detail page table structures.  Q3. A Explain LINUX operating system with kerner B  R1 R2 R3 P1 R1 R2 R3 P1 R1 P2 6 1 3 P2 6 P3 3 1 4 P3 P2 6 P3 3 1 4 P3 P2 6 P3 2	a. Define Operating System? What are its objective between the comparison of the com	a. Define Operating System? What are its objectives?  b. Explain system call and enlist its types.  c. Differentiate short and medium-term scheduler.  d. What are advantages of multiprogramming?  e. State characteristics of good process scheduler.  Q2. A What is deadlock? Explain necessary and sufficient conditi  B Explain in detail page table structures.  Q3. A Explain LINUX operating system with kernel, memory ma  B  R1 R2 R3  P1 R1 R2 R3  P1 R1 R2 R3  P2 G D D D D D D D D D D D D D D D D D D	a. Define Operating System? What are its objectives?  b. Explain system call and enlist its types.  c. Differentiate short and medium-term scheduler.  d. What are advantages of multiprogramming?  e. State characteristics of good process scheduler.  Q2. A What is deadlock? Explain necessary and sufficient conditions for a deadlock to occur.  Explain in detail page table structures.  Q3. A Explain LINUX operating system with kernel, memory management and IO management.  B  R1 R2 R3 P1 R1 R2 R3  P1 R1 R2 R3  P2 6 1 2 P3 3 1 4 P2 R3  P3 2 1 1 1  P4 P2 6 1 3 P3 2 1 1  P5 83 P2 R3  P6 1 2 P3 P3 2 1 1

Consider above snap shot of the system

Claim matrix C

1. Calculate available vector 2. Calculate need matrix 3. Calculate safe sequence 4. Is system in safe state?

Allocation matrix A

Q4. A	Explain the different allocation methods with reference to file system.	10
В	Explain algorithm to avoid deadlock in dinning philosopher's problem.	10
Q5. A	Compare the following disk scheduling algorithms using appropriate example – SSTF,FCFS,SCAN,C-SCAN,LOOK	10
В	What is mutual exclusion? Give software approaches for mutual exclusion.	10
Q6. A	Explain need of page replacement. Explain optimal page replacement policy with example.	10
В	Explain UNIX file system	10