QPC: RJ18001151 AR - 18 Reg. No.

GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, June – 2021

(Sixth Semester)

BCSOE6051 / BCSOE6050 – OPERATING SYSTEMS

(Common to AEI and E.C.E)

Time: 2 hrs Maximum: 50 Marks

Answer ALL Questions

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions) (1 x 10 = 10 Marks)

Q.1. Answer ***ALL*** questions		[CO#]	[PO#]
a.	Time sharing systems of computer system have	1	1
	(i)Clusters (ii)nodes		
	(iii)File system (iv)both (i) and (ii)		
b.	Which is the Linux operating system?	1	1
	(i) Private operating system (ii) Windows operating system		
	(iii) source operating system (iv) Open-source operating system		
c.	When a thread needs to wait for an event it will	1	1
	(i)block (ii)execute		
	(iii)Terminate (iv)update		
d.	If a process is executing in its critical section, then no other processes can be executing in their critical section. This condition is called?	2	1
	(i) mutual exclusion (ii) synchronous exclusion		
	(iii) critical exclusion (iv) asynchronous exclusion		
e.	Common technique used for protecting a critical section in Linux is the	2	1
	(i) Lock Step (ii) Program lock		
	(iii) Spinlock (iv) None		
f.	A process refers to 5 pages, A, B, C, D, E in the order : A, B, C, D, A, B, E, A, B, C, D, E. If the page replacement algorithm is FIFO, the number of page transfers with an empty internal store of 3 frames is?	2	1
	(i)8 (ii)10		
	(iii)7 (iv)9		
g.	A single processor executes a single instruction stream to operate on data stored in a single	3	1
	(i)Computer (ii)System		
	(iii)Memory (iv)Device		
h.	When does page fault occur?	3	1
	(i) The page is present in memory (ii) The deadlock occurs		
	(iii) The page does not present in memory (iv) The buffering occurs		
i.	Where are placed the list of processes that are prepared to be executed and waiting?	4	1
	(i) Job queue (ii)Process queue		
	(iii)Ready queue (iv)Execution queue		
j.	Which one of the following is the deadlock avoidance algorithm?	4	1
	(i) Banker's algorithm s (ii) round-robin algorithm		

(iii) elevator algorithm (iv) karn's algorithm

PART – B: (Short Answer Questions) **(2 x 5 = 10 Marks)**

Q.2. Answer ***ALL*** questions	[CO#]	[PO#]
a. What are Operating system services?	1	1
b. List out any four process control system calls.	1	1
c. When will deadlock occur?	2	1
d. Define Process Scheduling	3	1
e. Name the operations that can be performed on a Directory.	4	1

PART – C: (Long Answer Questions) **(6 x 5 = 30 Marks)**

Answer ***ANY FIVE*** questions	Marks	[CO#]	[PO#]
3. Explain operating system functions and services in detail.	(6)	1	1
4. Briefly Explain Virtual Machines.	(6)	1	1
5. Discuss about Semaphore	(6)	2	1
6. Write about various CPU scheduling algorithms.	(6)	2	1
7. What is thrashing? Explain the methods to avoid thrashing.	(6)	3	1
8. Write about the techniques for structuring the page table	(6)	3	1
9. What is Access matrix? Explain implementation of Access matrix in detail.	(6)	4	1
10. Write short note on a) The concept of a file b) Access Methods	(6)	4	1

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