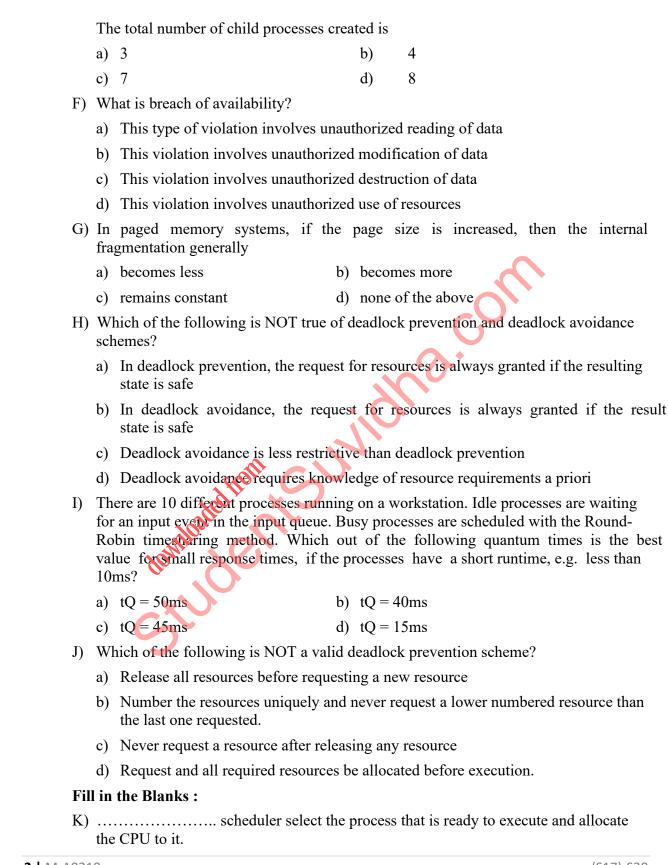
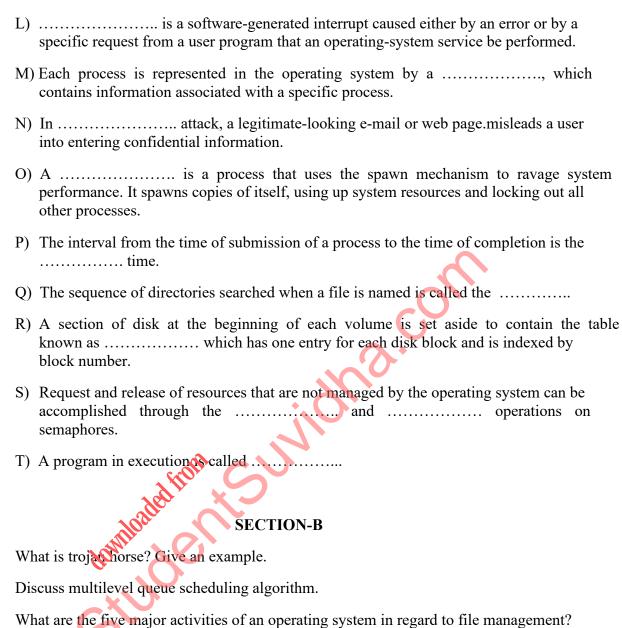
Roll No.	Total No. of Pages : 04			
Total No. of Questions : 14				
BCA (Sem.–4) OPERATING SYSTEM Subject Code : BCA-404 Paper ID : A0219				
Time: 3 Hrs.	Max. Marks : 75			
 INSTRUCTIONS TO CANDIDATES: SECTION-A will be compulsory and have 20 questions of 1 mark each. SECTION-B will have 8 short answer type questions of 5 marks each, out of which candidate will have to attempt any 5. SECTION-C will have 5 long answer type questions of 10 marks each, out of which candidate will have to attempt any 3. 				
SECT	TION-A			
1. Multiple Choice Questions:	11/0			
completed, the process goes from the a) READY state c) TERMINATED state B) Time quantum is defined in a) shortest job scheduling algorithm c) priority cheduling algorithm C) A solution to the problem of indefinit a) Starvation c) Ready queue D) A system has 6 identical resources as	b) BLOCKED stated) SUSPENDED statea b) round robin scheduling algorithm			
a) 1c) 3E) A process executes the code fork();fork();forkQ;	b) 2 d) 4			

1 M-A0219 (S17)-S30



2 M-A0219 (S17)-S30



- 2.
- 3.
- 4.
- 5. How Multitasking operating system is different from Multiprogramming operating system?
- 6. What is the significance of indexed file allocation?
- 7. Explain the difference between internal and external fragmentation.
- 8. To protect a system, we must take security measures at various levels. Explain.
- 9. Explain how deadlocks are detected and corrected.

3 | M-A0219 (S17)-S30

SECTION-C

- 10. How symmetric encryption is different from asymmetric encryption? Explain the RSA encryption algorithm in detail.
- 11. Consider the following snapshot of a system:

	Allocation	Max	Available
	ABCD	ABCD	ABCD
P0	0 0 12	0 0 12	1520
PI	10 0 0	17 5 0	
P2	13 5 4	2 3 5 6	
P3	0 6 3 2	0652	
P4	0 0 14	0656	

Use the banker's algorithm to find whether the system in a safe state? If a request from process PI arrives for (0,4,2,0), can the request be granted immediately?

- 12. Describe the following allocation algorithms with suitable example:
 - a. First fit
 - b. Best fit
 - c. Worst fit
- 13. Consider following processes, with the CPU burst time given in milliseconds.

Process	Burst Time	Priority
P1	adet 10	3
P2	Wille 1	1
P3	day. 2	3
P4	1	4
P5	5	2

Process are arrived in PI, P2, P3, P4, P5 order of all at time 0. Draw Gantt chart and calculate turnaround time and waiting time for SJF and FCFS scheduling algorithm.

14. Consider the following page reference string:

How many page faults would occur for the optimal replacement algorithm, assuming three and four frames? Remember all frames are initially empty, so your first unique pages will all cost one fault each.

NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

4 M-A0219 (S17)-S30