



D-003-004301 Seat No. _____

B. Sc. (IT) (Sem. III) Examination

March - 2022

Operating System : CS-13

Faculty Code : 003

Subject Code : 004301

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) All questions carry equal marks.
(2) Attempt any five of the following questions.

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| 1 | (a) Explain types of operating system. | 14 |
| | (b) Explain service of operating system. | |
| 2 | (a) Explain structure of operating system. | 14 |
| | (b) Explain process state and process control block. | |
| 3 | (a) Explain multiple processor scheduling. | 14 |
| | (b) Explain real time scheduling. | |
| 4 | (a) Explain classical problem of synchronization. | 14 |
| | (b) Explain deadlock characterizations. | |
| 5 | (a) Explain deadlock avoidance and detection. | 14 |
| | (b) Explain process scheduling in linux. | |
| 6 | (a) Explain logical versus physical address space. | 14 |
| | (b) Explain segmentation. | |
| 7 | Explain page replacement algorithms with example. | 14 |
| 8 | (a) Explain file attributes. | 14 |
| | (b) Explain file system implementation. | |
| 9 | (a) Explain principles of I/O hardware. | 14 |
| | (b) Explain principles of I/O software. | |
| 10 | (a) Explain disk scheduling. | 14 |
| | (b) Explain disk management. | |