

BCA, 2014
OPERATING SYSTEM
PAPER CODE: BC 404
PAPER ID:[B0218]

Time Allowed: 03 Hrs

M. Marks: 60

Note: Attempt all questions from Section–A and any four questions from Sections-B.

Section A

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|----|------------------------------------------------------------------------|---|
| 1 | What are various functions of operating system? Explain. | 2 |
| 2 | What are various CPU scheduling criterion? Explain. | 2 |
| 3 | What is thread? What are its types? | 2 |
| 4 | What is combined approach to deadlock handling? | 2 |
| 5 | What is critical section? Explain. | 2 |
| 6 | Define encryption? Explain its role in operating system. | 2 |
| 7 | What is PCB? What are its contents? | 2 |
| 8 | What is physical and logical address space? | 2 |
| 9 | What is mutual exclusion? | 2 |
| 10 | What is binary semaphore? How it is different from counting semaphore? | 2 |

Section B

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|---|-------------------------------------------------------------------------------------------------------------------------------------|----|
| 1 | Define operating system. Explain various operating systems with their advantages and disadvantages. | 10 |
| 2 | What is demand paging? Explain its advantages and disadvantages. | 10 |
| 3 | What is file and directory? Explain various file allocation methods with their relative merits and demerits. | 10 |
| 4 | Write note on the following:-
(a) CPU schedulers.
(b) Process state diagram. | 10 |
| 5 | What are various page replacement algorithms? Explain. | 10 |
| 6 | What is deadlock? What are necessary conditions for deadlock? Explain how deadlock avoidance is different from deadlock prevention. | 10 |

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