

II-B.Tech II-Semester Supplementary Examinations (BR20), JULY - 2022  
OPERATING SYSTEMS (CSE, CSE(AI&DS))

Time: 3 hours

Max. Marks: 70

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*Question Paper consists of FIVE units, each carrying 14 marks  
Each unit has TWO questions; either of them should be answered  
All parts of a question must be answered at one place*  
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- 1.a) Define Operating System. Explain different functions of Operating System. (7M)
- 1.b) Explain briefly about Operating System Structure. (7M)
- (OR)**
- 1.c) Explain various services of Operating System. (7M)
- 1.d) Discuss about Operating System Interface. (7M)
- 2.a) Define a Process. Explain about process scheduling in detail. (7M)
- 2.b) Write short notes on Multi-threading issues in Operating Systems in detail. (7M)
- (OR)**
- 2.c) Explain in detail about critical section problem. (7M)
- 2.d) Write Short notes on Semaphores in detail. (7M)
- 3.a) Briefly discuss about Page replacement in detail. (14M)
- (OR)**
- 3.c) Briefly discuss about Continuous Memory allocation? (7M)
- 3.d) Define Virtual Memory. Explain importance of Virtual memory. (7M)
- 4.a) Write short notes on Banker's algorithm to avoid deadlock in Operating system. (14M)
- (OR)**
- 4.c) Explain about resources where deadlock arises in Operating System. (7M)
- 4.d) Elaborate Deadlock detection and recovery in detail. (7M)
- 5.a) Explain various Disk Storage Structures in detail. (14M)
- (OR)**
- 5.c) Briefly discuss about Files, Directories and File System implementation in Operating Systems. (14M)

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