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## **IT-501-CBGS**

### **B.Tech., V Semester**

Examination, December 2020

## **Choice Based Grading System (CBGS)**

### **Operating system**

*Time : Three Hours*

*Maximum Marks : 70*

**Note:** i) Attempt any Five questions.

ii) All questions carry equal marks.

iii) All parts of each question to be attempted at one place.

iv) In case of any doubt or dispute the English version question should be treated as final.

1. a) What are the different functions of an Operating System?  
Explain in brief. 7
- b) Describe Architecture of operating system. 7
2. a) Explain critical section problem with suitable example. 7
- b) Discuss the classical problem of Synchronization. 7

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3. a) What do you mean by Deadlock? Explain various methods of handling deadlock. 7
- b) Describe process, states and transition. 7
4. a) What is virtual memory? Discuss the benefits of virtual memory techniques. 7
- b) Explain Paging Memory Management in detail. 7
5. a) What do you mean by Distributed file systems? Explain its properties. 7
- b) Explain the performance Evaluation Techniques in Distributed file systems. 7
6. a) Define Monitor Program? Explain how it overcomes the Drawback of Semaphores. 7
- b) What is Multiprocessor operating system? Explain its types. 7

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7. a) What are the advantages of inter-process communication?  
How communication takes place in a shared memory  
environment? Explain. 7
- b) What is process and how does it differ from program?  
With a neat diagram, explain various states of a process. 7
8. a) Explain mutual exclusion problem. 7
- b) Describe File management. 7

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