

Roll No.

Exam Code : J-21

Subject Code—52877

P.G.D.C.A. (One Year Programme)

EXAMINATION

(Main/Reappear) (Batch 2019 Onwards)

(First Semester)

OPERATING SYSTEMS

PGDCA-103

Time : 3 Hours

Maximum Marks : 80

Note : Attempt any *Five* questions. Q. No. **1** is compulsory. All questions carry equal marks.

1. Define the following terms : **8×2=16**

- (a) Real time system
- (b) Process
- (c) Monitors
- (d) Scheduling
- (e) Segmentation

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- (f) Thrashing
- (g) ANDROID
- (h) File Permissions.

Unit I

2. Compare batch operating system and time-sharing operating system with characteristics of each. **16**
3. Discuss the role of Process Control Block in process management. Illustrate the various states of a process with diagram and example. **16**

Unit II

4. Explain various types of CPU scheduling with merits and demerits of each. Illustrate with an example. **16**
5. State and explain classical process co-ordination problems and their solutions. Discuss the role of semaphores. **16**

Unit III

6. What is a Deadlock ? Explain its characteristics and methods for handling deadlocks. **16**
7. (a) Compare single contiguous allocation and multiple contiguous allocation with an example. **8**
 (b) Explain various page replacement algorithm. **8**

Unit IV

8. Explain various file access and allocation methods. Discuss various functions of file system. **16**
9. Explain various features of Linux Operating System. Compare it with windows operating system. **16**