

Roll No.

97639

BCA 4th Semester (New) 2011-12

Examination – May, 2013

OPERATING SYSTEMS ORGANIZATION AND UNIX

Paper : BCA-206

Time : Three hours]

[Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any five questions. All questions carry equal marks.

1. (a) What is an 'Operating System' ? Discuss the services provided by an operating system.
(b) Explain in detail the Operating system architecture.
2. (a) What is scheduling ? Discuss in detail the different levels of scheduling.
(b) What is a kernel of an operating system ? What functions does a kernel normally perform ?

97639-4,750-(P-2)(Q-8)(13)

P. T. O.

3. Explain the following :
- (a) Process states and process hierarchies,
 - (b) File sharing and file locking.
4. (a) Explain the role and working of interrupt handlers.
- (b) What do you understand by "Protection" ? How does this differ from "Security" ? Explain.
5. (a) What are various types of files under UNIX ? What are the various operations needed in handling a file in UNIX ? Explain.
- (b) What are the salient features of UNIX operating system ? Explain.
6. (a) What are Semaphores ? How do they implement mutual exclusion ? Explain.
- (b) Define the concept of Bernstein's condition in the context of concurrent programming.
7. (a) What is deadlock ? What are the various conditions that result in deadlock ?
- (b) Describe the concept and working of memory segmentation.
8. (a) How is memory managed in a time-sharing system ? Explain.
- (b) Explain the following :
- (i) Sequential and concurrent process,
 - (ii) Virtual Memory.