K16U 0675

Reg. No. : .....

Name : .....

**Fourth Semester B.C.A. Degree (CBCSS-2014 Admn. Regular) Examination, May 2016**
**Core Course**
**4B08 BCA : OPERATING SYSTEM**

Time : 3 Hours Max. Marks : 40

SECTION – A

1. One word answer :
   a) _____ is a program that manages the complex hardware and act as an intermediary between a user and computer the computer hardware.
   b) Each process is represented in operating system by means of _____
   c) A program in execution is known as _____
   d) In _____ memory management technique, the logical address space is viewed as a collection of logically related entities such as library routines, data structures, symbol tables, main program etc.
   e) The percentage of time that a particular page number is found in TLB is called _____
   f) A _____ device is allocated to a job for the Job's entire duration.
   g) The function of _____ is to map the user's symbolic reference to an ID.
   h) Which option of ls command used to view file permissions ? (8× ½ =4)

SECTION – B

Write short notes on **any seven** of the following questions :

2. Explain how an operating system acts as a resource manager ?
3. Explain about real time operating systems.
4. Define context switch.
5. What data structure is used by an operating system to keep track of process information ? Explain.

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6. Distinguish between logical and physical address.
7. Define the concept of a thread.
8. What is relocation in memory management ?
9. What do you mean by the term hit-ratio ?
10. What is buffering ?
11. List the basic responsibilities of a Physical File System. **(7×2=14)**

## SECTION – C

Answer **any four** of the following questions :

12. What are the different views of an operating system ?
13. What are interrupts ? How are they handled by the operating system ?
14. What is a deadlock ? What are the necessary conditions for the occurrence of a deadlock ? Explain.
15. Differentiate between preemptive and non-preemptive scheduling algorithms.
16. Explain the three major techniques for managing and allocating devices.
17. What are the different components of a Linux operating system ? Explain. **(4×3=12)**

## SECTION – D

Write an essay on **any two** of the following questions :

18. Explain in detail, the demand paging system with emphasis to handle page faults.
19. Explain various I/O management schemes.
20. Describe the necessary conditions for Deadlock. Explain various methods for handling deadlocks.
21. Write short notes on :
    a) Virtual devices
    b) Process scheduling in Linux. **(2×5=10)**

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