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MCA-11

June - Examination 2016

MCA IInd Year Examination

Operating System

Paper - MCA-11

Time : 3 Hours] **[Max. Marks :- 80**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A $8 \times 2 = 16$

(Very Short Answer Questions)

Note: Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

1) (i) What do you mean by belady's anomaly?

(ii) What are the content of PCB (Process Control Block)?

(iii) Give the definition of Operating System.

(iv) List some features of Real time System.

(v) What are the different states of process.

(vi) Why thread is called Light Weight Process?

(vii) When Race Condition arises?

(viii) What is Logic Bomb?

Section - B $4 \times 8 = 32$

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 8 marks.

2) What is Semaphore? Explain with example.

3) Explain the concept of segmentation with neat diagram.

4) Define the essential properties of distributed operating system.

5) What is the role of Scheduler? Differentiate Primitive and Non-Primitive Scheduling.

6) What is the significance of Virtual Memory? Explain with example.

7) Discuss the working principle of Direct Memory Access.

8) What is user authentication? Explain different types of user authentication scheme.

9) Write short note on Remote Procedure Call.

Section - C $2 \times 16 = 32$

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 16 marks.

10) Why security is needed in operating system? Discuss various security threads and goals.

11) What is Page Fault? Discuss any three page replacement algorithm with example.

12) What are the advantages of Multiprocessor Operating System? Discuss various types of Multiprocessor Operating System.

13) Discuss in detail about:

    (i) Deadlock Detection

    (ii) Banker's algorithm to avoid deadlock.

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