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CC-683

M.C.A. EXAMINATION, Dec. 2017

(Third Semester)

(B. Scheme) (Main & Re-appear)

MCA-505

OPERATING SYSTEMS

Time : 3 *Hours*] [*Maximum Marks :* 75

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

Note : Attempt any *Five* questions from Sections A, B, C and D, selecting at least *one* question from each Section. All questions carry equal marks.

Section A

1. (a) Differentiate between network and distributed operation system. **6**

(b) Define a virtual machine ? How does an operating system work as a VM manager ? **9**

2. What are the services offered by an operating system to its users ? Briefly discuss each. **15**

Section B

3. Can a system detect that some of its processes are starving ? If your answer is yes, explain how it can ? If your answer is no, explain how the system can deal with starvation problem ? **15**

4. (a) Explain multilevel feedback queue scheduling with suitable example. **10**

(b) Differentiate between long term and short term scheduler. **5**

Section C

5. Define Thrashing. What is the cause of it ? How does system detects it ? Once the system defects thrashing, what can it do to eliminate this problem ? Discuss with suitable example. **15**

6. What do you mean by memory segmentation ? Explain, why is it easier to share a re-entrant module using segmentation than it is to do so when pure paging is used ? **15**

Section D

7. Why do some systems keep track of the type of the files, while others leave it to the users or simply do not implement multiple file types ? Which system is better and why ? **15**

8. What are the possible actions an algorithm may initiate after the discovery of the deadlock situation in a system ? Explain each option briefly. **15**