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Annual Examination - 2019

BCA Part - III

BCA - 303

OPERATING SYSTEM

Max.Marks: 100

Time: 3 Hrs.

- Min.Marks: 40
- **Note :** Section 'A', containing 10 very short-answer-type questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

Section - 'A'

Answer the following very short-answer-type questions in one $(2 \times 10 = 20)$ or two sentences :

- Q.1 What is OS?
- Q.2 What do you understand by protection?
- 0.3 What is scheduling concepts?
- **O**.4 Define the function of PCB.
- Q.5 What is cache memory?
- What do you mean by MVT? **O.6**
- **O**.7 Define physical file system.
- What do you mean by Indexed allocation? Q.8
- Q.9 Define Dead Lock problem.
- Q.10 What are the methods used for handling Dead Locks?

X

Answer the following short-answer-type questions with word limit 150-200 : (6 5=30)

Q.1 Discuss main functions of OS?

OR

Write a note on Batch processing OS.

Q.2 Explain CPU scheduling and their concepts.

OR

Explain Round-Robin algorithms.

Q.3 Explain Job scheduling with example.

OR

Explain Fragmentation with example.

Q.4 Explain Disk based system with example.

OR

Explain symbolic and Basic file system with example.

Q.5 What is the Dead Lock problem? Explain Dead Lock detection.

OR

Explain resource allocation graph with example.

Section - 'C'

Answer the following long-answer-type questions with word limit 300-350: (10 5=50)

Q.1 Define timesharing OS. Explain process management, I/O management in Real time OS.

OR

(3)

Discuss Multiprocessing and Multiprogramming with example.

Q.2 Describe CPU I/O burst cycle process state and Master / Slave scheduling.

OR

Differentiate between FCFS and SJF.

Q.3 Write note on MVT and compaction. Describe paging and shared page.

OR

Explain swapping and fragmentation in detail with example.

Q.4 Write notes on File concepts and File directory maintenance.

OR

Explain Linked and Indexed allocation performance with example.

Q.5 Explain Dead Lock avoidance bankers algorithms with example.

OR

Explain combined approach to Dead Lock handling with example.

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