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## **MCS-504**

## **Operating System**

Master of Computer Application (MCA-20) 1<sup>st</sup> Semester, Examination June 2022

Time: 2 Hours Max. Marks:80

Note: This paper is of eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

## Section-A

(Long Answer-type questions)

Note: Section 'A' contains Five (05) long-answer-type questions of Twenty (20) marks each. Learners are required to answer any two (02) questions only.

 $(2 \times 20=40)$ 

- Q.1 What is Deadlock? Describe four conditions for deadlocking.
- Q.2 Explain the concept of Virtual Memory with suitable example.

P.T.O.

- Q.3 What is real time system? What are the characteristics of real time system? How is it different from other types of operating system?
- Q.4 What is process management? State any four functions of process management.
- Q.5 Explain file system of LINUX Operating System?

## Section-B

(Short Answer-type questions)

Note: Section 'B' contains Eight (08) short-answer-type questions of Ten (10) marks each. Learners are required to answer any four (04) questions only.

 $(4 \times 10=40)$ 

- Q.1 What is an Operating System? Explain the types of operating system in detail.
- Q.2 Explain the difference between internal and external fragmentation.
- Q.3 Differentiate between pre-emptive and non-pre-emptive scheduling.

P.T.O.

- Q.4 Differentiate between short-term and long-term scheduler.
- Q.5 Draw and explain process control block in detail.
- Q.6 Explain the features of UNIX operating system.
- Q.7 Describe microkernel structure of operating system.
- Q.8 Differentiate between multi-tasking and multi-programming.

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