

**BACHELOR OF SCIENCE (COMPUTER SCIENCE) (CBCS - 2018 COURSE)**  
**T.Y.B.Sc.(Computer Science) Sem-V :SUMMER- 2022**  
**SUBJECT : SYSTEM PROGRAMMING**

Day : Friday  
Date : 1/7/2022

**S-20114-2022**

Time : 11:00 AM-02:00 PM  
Max. Marks : 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
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**Q.1** Answer **ANY TWO** of the following: **(12)**

- a) What is Directory? Explain types of directory.
- b) Explain the SJF (Shortest Job First) scheduling algorithm with suitable example.
- c) Define segmentation. Explain segment table implementation in brief.

**Q.2** Answer **ANY TWO** of the following: **(12)**

- a) Describe contiguous and indexed file allocation method.
- b) Explain page replacement algorithm with example.
- c) Define deadlock. Explain deadlock avoidance strategies.

**Q.3** Answer **ANY TWO** of the following: **(12)**

- a) Elaborate different types of file with example?
- b) Define Interrupt. Explain different types of interrupt.
- c) Explain the services provided to the user system by the operating system.

**Q.4** Answer **ANY THREE** of the following: **(12)**

- a) Explain spooling and buffering concepts.
- b) Explain direct file access method.
- c) Explain the FCFS (First Come First Serve) scheduling algorithm with example.
- d) Write note on I/O memory.

**Q.5** Answer **ANY FOUR** of the following: **(12)**

- a) Define system call? How it is implemented?
- b) Write note on simple monitor.
- c) Explain demand paging concept.
- d) Explain necessary conditions for deadlock to occur.
- e) Write operations of directory.
- f) Explain Round Robin scheduling algorithm with example.