Bachelor of Computer Application (Hons.) (BCA)

3rd Semester (Batch 2024-28) (CBGS)

OPERATING SYSTEMS

Paper : BCA03011T

Time Allowed—3 Hours]   [Maximum Marks—100

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. Discuss the evolution of Operating System. How does modern OS differ from traditional OS?

2. (a) Differentiate between Program, Process, and Thread. What is the use of PCB?

   (b) What are process scheduling criteria?

SECTION—B

3. What is IPS? Discuss any two classical problems of Synchronization.

4. What are contiguous and non-contiguous memory management techniques? How does Segmentation work?

SECTION—C

5. Give the meaning of Page Fault and Page Replacement. Which are various Page Replacement Algorithms?

6. Write the reasons why deadlock occurs. What is the difference between techniques of deadlock avoidance and deadlock prevention?

SECTION—D

7. How does OS help in authentication, authorization, and preventing memory access violations and Denial of service attacks?

8. Compare the OS security features provided by Windows and Linux.