BCA-13

June - Examination 2026
BCA (Part-III) Examination
Operating System - II
Paper : BCA-13

[*Time: **3** Hours*] [*Maximum Marks: **70***]

Note :- The question paper is divided into three Sections A, B and C. Write answers as per the given instructions in each section.

Section-A **7×2=14**

(Very Short Answer Type Questions)

Note :- Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries **2** marks.

1. (i) What is the full form of GNU?

   (ii) What is the kernel in the Linux Operating System? Name some of them.

   (iii) What are stubs and skeletons and why are they needed in remote procedure calls?

   (iv) Define DCE cloud.

   (v) When two or more processes attempt to access the same resource simultaneously. Name the problem that occurs.

   (vi) What is a Shell Script?

   (vii) Define 'Rotational Latency' in disk scheduling.

Section-B **4×7=28**

(Short Answer Type Questions)

Note :- Answer **any four** questions. You have to delimit your each answer maximum up to **200** words. Each question carries **7** marks.

2. Explain the features of Concurrency Control in a Distributed Computing Environment.

3. Differentiate between FAT and NTFS file systems.

4. Explain the SCAN and C-SCAN disk scheduling algorithms.

5. What are the desirable characteristics of RTOS? Explain.

6. Describe in detail the various message passing semantics and synchronization mechanisms used in distributed system.

7. What are the key features of a good Distributed File System?

8. Explain the chmod command with syntax and an example. A file has got protection 744 (octal), what protection does it really have?

9. Describe file-sharing semantics in a Distributed File System.

Section-C **2×14=28**

(Long Answer Type Questions)

Note :- Answer **any two** questions. You have to delimit your each answer maximum up to **500** words. Each question carries **14** marks.

10. How is a shell script different from a programming language? Write a script to find the factorial of a given number.

11. Describe the following commands in the Linux System.
(a) ls (b) cd (c) mkdir (d) rmdir

12. Write a detailed note on System Security principles and classify program and system threats like viruses.

13. What is an RPC? Explain its architectural mode, elements and the difference between connectionless and connection-oriented RPC protocols.
