SIXTH SEMESTER UG DEGREE EXAMINATION, APRIL 2025

(Regular/Improvement/Supplementary)

BCA

GBCA6B12T: OPERATING SYSTEMS

Time: 2 Hours   **Maximum Marks: 60**

SECTION A: Answer the following questions. Each carries *two* marks.
(Ceiling 20 marks)

1. What is real time operating system? Give example.
2. Write any *four* file attributes.
3. What do you understand by the term Bash?
4. Comment on dynamic linking.
5. When does page fault occur?
6. Differentiate between break and continue in shell scripting.
7. What is Process control block?
8. Which Linux command is used to remove an empty directory?
9. Define segmentation.
10. What is authorization?
11. Mention the goals of system protection.
12. Write any *two* Android libraries and its functions.

SECTION B: Answer the following questions. Each carries *five* marks.
(Ceiling 30 marks)

13. Discuss about Linux directory layout.
14. Give an account on the kernel architecture of UNIX OS.
15. Explain free space management. What are the methods to free space management?
16. Discuss the use of *ls* command in Linux? Explain different options of *ls* command.
17. What is deadlock? Explain the four necessary conditions for the occurrence of deadlock.
18. What is semaphore? Explain its implementation.
19. Explain different methods available for implementing security in operating system.

SECTION C: Answer any *one* question. The question carries *ten* marks.

20. Write short notes on:
    a) Critical section problem.
    b) File allocation methods.
21. Consider the reference string 1,2,3,4,2,1,5,6,2,1,2,3,6,7,3,2,1,2,5,3.
    How many page faults will occur while using FCFS and Optimal page replacement algorithm using 3 frames?

(1 × 10 = 10 Marks)