B.Sc DEGREE (CBCS) SPECIAL REAPPEARANCE EXAMINATIONS, FEBRUARY 2025

Fifth Semester

B.Sc Computer Science Model III

CORE COURSE - CC5CRT04 - SYSTEM SOFTWARE AND OPERATING SYSTEM

2022 Admission Only

BF9A6DE0

Time: 3 Hours   Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is Static Binding?

2. What is mnemonics table?

3. What is a compiler?

4. Define program relocation.

5. What is memory management?

6. What is nonpreemptive scheduling?

7. Why process synchronization is required?

8. Define bounded waiting.

9. Differentiate between deadlock detection and recovery.

10. What is address binding?

11. Differentiate frames and pages.

12. What is the significance of clusters in linked allocation?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What is the role of analysis phase in language processing?

14. Name the basic elements of assembly language.

15. Explain the operation of a deterministic finite state automaton (DFA).

16. Explain the aspects of compilation.

17. Explain Batch Processing System.

18. What is message passing system? Explain synchronization and buffering.

19. Differentiate binary semaphores and counting semaphores.

20. Explain about resource allocation graph with suitable examples.

21. Discuss FIFO page replacement and optimal page replacement.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. What do you mean by code optimization? Explain local and global optimization.

23. Explain how process management done in operating systems.

24. Explain deadlock avoidance with the help of Banker's algorithm and suitable illustrations.

25. Compare fixed partition and variable partition scheme.

(2×15=30)