Q.P. Code – 42335

Third Semester B.Sc. Degree Examination, October/November 2019

(CBCS Scheme)

Computer Science

OPERATING SYSTEM & UNIX

Time : 3 Hours] *[Max. Marks : 90*

Instructions to Candidates : Answer ALL Sections.

SECTION – A

Answer any **TEN** questions **(10 × 1 = 10)**

1. Define an operating system.
2. Mention the advantages of multiprocessor operating system.
3. Write any one scheduling criteria.
4. Define file.
5. What is segmentation?
6. Define page fault.
7. What is KERNEL?
8. What is the purpose of input command?
9. What is a daemon?
10. Write the usage of process priority.
11. Define Boot strapping.
12. Give an example for default variable.

SECTION – B

Answer any **FIVE** questions : **(5 × 3 = 15)**

13. Explain single user and multiuser operating system.

14. Mention the difference between preemptive and non-preemptive scheduling.

15. What are the advantages of time sharing system?

16. Explain the functions of kernel.

17. Explain contiguous file allocation method.

18. Explain until loop in Unix.

19. Explain any three functions of system administrator.

SECTION – C

Answer any **SIX** questions : **(6 × 5 = 30)**

20. Explain system components with a diagram.

21. Explain different process states with a neat diagram.

22. Explain different types of schedulers.

23. Calculate turn around time and waiting time using Round Robin CPU scheduling algorithm for the following table with time quantum = 4 ms.

Process	Burstime
P_1	24
P_2	3
P_3	3

24. Explain I-node block.

25. Explain Unix system Architecture.

26. Explain free space management in detail.

27. Write a note on Grep command.

SECTION – D

Answer any **FIVE** questions : **(5 × 7 = 35)**

28. (a) Explain with advantages and disadvantages of distributed operating system.

    (b) Explain any three functions of operating system. **(4 + 3)**

29. (a) Explain FCFS process scheduling algorithm.

    (b) What is PCB? Explain. **(4 + 3)**

30. (a) Explain segmentation Memory Management Technique.

    (b) Explain disk structure. **(4 + 3)**

31. (a) Explain SSTF & SCAN disk scheduling algorithm.

    (b) Write a note on swapping. **(5 + 2)**

32. (a) Explain unix directory structure.

    (b) Explain any three file related commands. **(4 + 3)**

33. (a) Explain file permission and their modes.

    (b) Write the usage of any two communication commands. **(5 + 2)**

34. (a) What is looping? Explain forloop with an example.

    (b) Write a shell program to check whether a given string is a palindrome or not. **(4 + 3)**