Reg. No ..... Name .....

BCA DEGREE END SEMESTER EXAMINATION - MARCH 2020

SEMESTER 2 : MOBILE APPLICATIONS AND CLOUD TECHNOLOGY

COURSE : **19U2CRBCA4 : OPERATING SYSTEM**

(For Regular - 2019 Admission & Improvement/Supplementary - 2018,2017,2016 Admissions)

Time : Three Hours Max. Marks: 75

Section A
Answer All the Following (1 mark each)

1. Write any two examples for file management system calls.
2. Which are the functions of an assembler?
3. What is turnaround time?
4. Define waiting time?
5. Define Non- preemptive scheduling algorithms.
6. Explain about FIFO page replacement algorithm with an example.
7. What is demand paging?
8. Define Proportional allocation.
9. Can you provide a definition for cryptography?
10. Can you provide a definition for encryption?

(1 x 10 = 10)

Section B
Answer any 8 (2 marks each)

11. What are the activities of an operating system concerning error handling?
12. What are the system calls used for device management?
13. What are necessary conditions for dead lock?
14. What is a Semaphore? Also give the operations for accessing semaphores.
15. What is producer consumer problem? How it can illustrate the classical problem of synchronization? Explain.
16. Distinguish between Logical and Physical address space.
17. What is boot control block?
18. Can you distinguish between authentication and authorization?
19. What is domain of protection?
20. Differentiate between the security division 'B' and the security division 'C'.

(2 x 8 = 16)

Section C
Answer any 5 (5 marks each)

21. Explain the monolithic structure of operating system with neat diagram.
22. Differentiate between real time operating system and time sharing operating system.
23. What is a thread? What are the advantages of threads?
24. Write a short note on client- sever communication
25. What are the requirements for solving the critical-section problem?
26. Discuss various issues involved in selecting appropriate disk scheduling algorithm.
27. Explain language based protection with examples.

(5 x 5 = 25)

Section D
Answer any 2 (12 marks each)

28. What is operating system? What are functions of operating system?
29. How does deadlock avoidance differ from deadlock prevention? Write about deadlock avoidance algorithm in detail.
30. What are the various disk space allocation methods? Explain them.
31. What is access matrix? Explain various methods to implement an access matriix.

(12 x 2 = 24)