CHRIST (DEEMED TO BE UNIVERSITY),BENGALURU - 560029
End Semester Examination March/April - 2019
Bachelor of Computer Applications II SEMESTER

Code: BCA233 **Max.Marks: 100**
Course: OPERATING SYSTEMS **Duration: 3Hrs**

SECTION A

Answer all the questions. **10X2=20**

1   Identify any four functionalities of Operating system.
2   List out the four major components of an OS.
3   What is Bootstrap program? Justify the need of BIOS.
4   List out different types of queues used in scheduling.
5   Define message passing and list its types.
6   Infer the need of IPC in process management.
7   List out any two CPU scheduling algorithms.
8   Define disk scheduling mention types of disk scheduling.
9   Justify the use of page table in memory management.
10 What is a frame in memory management? List the usage of frame in memory management.

SECTION B

Answer any five questions. **5X6=30**

11 With a neat diagram describe the Symmetric multiprocessing architecture.
12 With a suitable real world example justify the need of multiprocessing operating systems.
13 Construct a process construct block (PCB) and theme out its need in process management.
14 Explain multi-threading concept in operating system.
15 Explain the concept of preemptive scheduling with suitable example.
16 Explain the concept of continuous memory allocation and provide the solutions to overcome its limitations.
17 Examine the role of OS in File management and Device management.

SECTION C

Answer any five questions. **5X10=50**

18 Conclude the role operating system with any example of any real world open-source OS.
19 Discuss various system calls with example.
20 Write a shell script to simulate working of any four process commands.
21 Explain SCAN and FCFS diisk Scheduling technique for the following disk readings: 95, 180, 34, 119, 11, 123, 62 and 64. Calculate the average seek time.
22 Explain FCFS Scheduling and calculate the avg waiting time and turn around time for the following 3 processes
Process: P1 P2 P3
Arrival time: 0 4 2
Burst time: 10 3 2
23 Explain the working of a page table with an example.
24 Write a short note on Memory management