B.Sc. 3rd Semester (Programme) Examination, 2019-20
COMPUTER SCIENCE

Course ID : 31518 **Course Code : SP-CSC-301/C-1C**

Course Title: Operating Systems

Time: 1 Hour 15 Minutes **Full Marks: 25**

The figures in the right hand side margin indicate marks.
Candidates are required to give their answers in their own words
as far as practicable.

1. Answer *any five* questions: 1×5=5

 (a) Why operating system is called as "Resource Manager"?

 (b) Write differences between MS-DOS and UNIX.

 (c) What do you mean by IPC?

 (d) Write advantages of multiprocessing system.

 (e) What do you mean by thrashing?

 (f) Write differences between physical and logical addresses.

 (g) What do you mean by throughput of an Operating System?

 (h) What is page fault?

2. Answer *any two* questions: 5×2=10

 (a) Explain layered structure of operating system. Write down its advantages and disadvantages.
   3+2=5

 (b) Define PCB. Write differences between process and program. Explain different components of PCB. 1+1+3=5

 (c) What is system call? Explain any four system calls briefly. 1+4=5

 (d) What is shell? Explain basic types of shells in Unix. 1+4=5

3. Answer *any one* question: 10×1=10

 (a) What do you mean by CPU Scheduling? Explain the important criteria of CPU Scheduling. Explain SJF Scheduling with example. 2+4+4=10

 (b) What is page replacement? Explain the basic concept of page replacement mechanism with example. What is Belady's anomaly? 2+6+2=10

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