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Shree Damodar College of Commerce & Economics, Margao
F.Y.B.C.A. SEM II, May/June Supplementary Examination 2018

OPERATING SYSTEM CONCEPTS

Duration: 2 Hours

Total Marks: 50

- Instructions:** 1) All Questions are **Compulsory**.
2) Figures to the right indicate Full Marks.
3) Start each new question on a fresh page

Q.1 A) Define the following

Marks (5 x 2 =10)

- i) Critical-section
- ii) Turnaround Time
- iii) File and its attributes
- iv) Swapping
- v) Priority Scheduling

Q.2 Answer the following

Marks (10)

- a) Briefly explain the main objectives of an operating system. (2)
- b) Explain Process Creation and Process Termination (3)
- c) For the following set of processes find the scheduling and calculate average waiting time using FCFS and SJF scheduling algorithms. (5)

<u>Process</u>	<u>Burst Time</u>
P1	6
P2	8
P3	7
P4	3

Q.3 Answer the following

Marks (10)

- a) Differentiate between single and multi-threaded processes. (2)
- b) What is meant by CPU scheduling? Differentiate between pre-emptive and non-pre-emptive scheduling. (3)
- c) Discuss Acyclic and General graph directory structure (5)

Q.4 Answer the following

Marks (10)

- a) Explain Best fit and Worst Fit in dynamic memory allocation (2)
- b) Perform SSTF disk scheduling algorithm on the following (3)
- Work Queue: 23, 89, 132, 42, 187
 - there are 200 cylinders numbered from 0 - 199
 - the diskhead starts at number 100
- c) What is paging? Explain Address Translation and implementation of page table. (5)

Q.5 Answer the following

Marks (10)

- a) What is Access Matrix (2)
- b) List the benefits of Distributed system (3)
- c) Describe various types of program threats. (5)