

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao
F.Y.B.C.A. SEM II, MAY/JUNE SUPPLEMENTARY EXAMINATION 2017

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) Multiprogrammed Systems
- ii) Semaphores
- iii) Mount Point
- iv) Thrashing
- v) DOS attack

Q.2 Answer the following

Marks (10)

- a) What are different types of synchronization? (2)
- b) What is a monitor? What problem does it solve? (3)
- c) Write a short note on Round Robin scheduling. For the following set of processes find an allocation using Round Robin method. Assuming a time quantum of 4 ms calculate average waiting time (5)

<u>Process</u>	<u>Burst Time</u>
P1	24
P2	3
P3	3

Q.3 Answer the following

Marks (10)

- a) What is a resource allocation graph? Give an example (2)
- b) Describe briefly how does Peterson's Algorithm enforce mutual exclusion (3)
- c) Discuss different types of files system access methods and their merits and demerits (5)

Q.4 Answer the following

Marks (10)

- a) Differentiate between internal and external fragmentation. (2)

- b) Explain the basic mechanism of SSTF algorithm (3)
- c) What is paging? Explain Address Translation and implementation of page table. (5)

Q.5 Answer the following

Marks (10)

- a) List various types of program threats (2)
- b) Describe how DES encryption works. (3)
- c) Describe the advantages and resource management of Web OS. (5)