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Total No. of Pages : 02

Total No. of Questions : 09

M.Sc.(IT) (2015 Onwards) (Sem.-1)

OPERATING SYSTEM

Subject Code : MSIT-104

Paper ID : [72520]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.
3. Any missing data may be assumed appropriately.

SECTION A

Q1 Write a short on Layered, Monolithic and Microkernel architecture of operating system.

Q2 Explain the different services provided by Operating System.

SECTION B

Q3 Find Waiting Time and Turnaround time for given Process using FCFS and SCF Algorithms :

Process	Arrival Time(ms)	Burst Time (ms)
P1	1	4
P2	1	3
P3	2	5
P4	2	2

Q4 What are deadlocks? Write its prevention and avoidance Strategies.

SECTION C

- Q5 Explain the Memory Management policies in Operating Systems.
- Q6 What is page fault? Explain the working of various algorithms used for page replacement policies?

SECTION D

- Q7 Discuss the need of Disk Scheduling. Explain any one algorithm by taking suitable example.
- Q8 Write the various policies and mechanisms to secure and protect the operating system.

SECTION E

Q9 Answer briefly :

- a) What are Time sharing systems?
- b) What is Non Preemptive scheduling?
- c) Draw block diagram of Process Control Box.
- d) Discuss Internal and External Fragmentation.
- e) What are system calls?
- f) What is multithreading?
- g) Define critical section.
- h) Differentiate paging and segmentation.
- i) Discuss sequential access file structure.
- j) What are file attributes?