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EXAMINATION : JUNE/JULY- 2022
SEMESTER - I

Sub: Operating System (BCA-146-20/BCA-CS-146-20)

Date : 04/07/2022

Total Marks : 60

Time: 10.00 am to 12.30 pm

Instructions:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagrams wherever necessary.

Q.1. Fill in the blanks.

(5)

1. Most popular 16-bit operating system is _____.
 a. MS-DOS
 b. TRS-DOS
 c. UNIX
 d. CP/M
2. DOS stands for _____.
 a. Disk separation scheme
 b. Disk operating system
 c. Disk open system
 d. Dependent solar system
3. Multiprogramming was made possible by _____.
 a. Operating systems
 b. Both (a) and (c)
 c. Input/output units that operate independently of the CPU
 d. Neither (a) nor (b)
4. The operating system manages _____.
 a. Disks & I/O devices
 b. Processor
 c. Memory
 d. All of these
5. Time quantum is defined in _____.
 a. Shortest job scheduling algorithm
 b. Round robin scheduling algorithm
 c. Priority scheduling algorithm
 d. Multilevel queue scheduling algorithm

Q.2. State True / False.

(5)

1. The scheduler is the part of an Operating System that determines the priority of each process.
2. A user-level process cannot modify its own page table entries.
3. An operating system is defined as hardware that converts software into a useful form for applications.
4. Threads within the same process can share data with one another by passing pointers to objects on their stacks.
5. The static portion of an address space cannot contain any data.

Q.3. Answer the following. (Solve any 5) (10)

1. Define shell.
2. List types of operating systems.
3. Define starvation.
4. Define best fit algorithm.
5. What are semaphores?
6. List all the components of operating system.

Q. 4. Answer the following in detail. (Solve any 6) (30)

1. Explain file types and file attributes.
2. Describe deadlock situation.
3. Explain Virtual memory.
4. Distinguish between paging and segmentation.
5. Explain services of operating system.
6. Explain directory structure with diagram.
7. Difference between preemptive and non-preemptive scheduling.

Q. 5. Answer the following in detail. (Solve any 1) (10)

1. Explain page replacement policies.
2. Describe operating system architecture using diagram.
