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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
SPECIALIZATION IN CYBER SECURITY (CS)

EXAMINATION : MAY - 2024

SEMESTER - I

Sub: Operating System

(BCA146-20/BCA146-18/BCA23-104/BCAC23-104/BCA-CS-146-20)

Date : 27/05/2024

Total Marks : 60

Time: 2.00 pm To 4.30 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.
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Q.1. Fill in the blanks (5)

1. Time quantum is defined in _____.
 - a) a. Shortest job scheduling algorithm
 - b. Round robin scheduling algorithm
 - c. Priority scheduling algorithm
 - d. Multilevel queue scheduling algorithm
2. The operating system manages _____.
 - a. Disks & I/O devices
 - b. Processor
 - c. Memory
 - d. All of these
3. Which of the following is the extension of Notepad?
 - a) .txt
 - b) .xls
 - c) .ppt
 - d) .pdf
4. What is the full name of FAT?
 - a) File attribute table
 - b) File allocation table
 - c) Font attribute table
 - d) Format allocation table
5. When was the first operating system developed?
 - a) 1948
 - b) compiler
 - c) 1950
 - d) application software

Q.2. State True/False (5)

1. The abstraction that the OS provides for the CPU is a virtual address space.
2. With dynamic relocation, hardware dynamically translates an address on every memory access.
3. Two processes reading from the same virtual address will access the same contents.
4. A user-level process cannot modify its own page table entries.
5. Threads within the same process can share data with one another by passing pointers to objects on their stacks.

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

1. Define file extension in operating systems
2. List components of operating system.
3. List types of OS.
4. Define Multi OS.
5. Define starvation.
6. Define best fit algorithm.

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

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

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

1. Describe operating system architecture using diagram.
 2. Explain various disk scheduling algorithms.
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