



Library  
Brainware University  
390, Ramkrishna Road, Barasat  
Kolkata, West Bengal-700125

# BRAINWARE UNIVERSITY

Term End Examination 2023-2024  
Programme – B.Sc.(ANCS)-Hons-2023  
Course Name – Computer Peripherals and OS  
Course Code - VAC00004  
( Semester I )

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Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :
  - (i) Identify the primary disadvantage of using SSDs as compared to traditional hard disk drives.
    - a) Limited storage capacity
    - b) Higher cost per gigabyte
    - c) Slower data access times
    - d) Susceptible to mechanical failures
  - (ii) Identify, which of the following is an advantage of computers.
    - a) Increased physical activity.
    - b) Enhanced human memory without the need for storage devices.
    - c) Reduction in productivity.
    - d) Instantaneous communication with anyone worldwide.
  - (iii) Select one of the main disadvantages of computers.
    - a) Improved efficiency in tasks.
    - b) Increased productivity in the workplace.
    - c) Health risks due to prolonged usage.
    - d) Enhanced creativity and imagination.
  - (iv) Digital computers represent data using which format.
    - a) Decimal digits
    - b) Continuous values
    - c) Analog signals
    - d) Binary digits
  - (v) Predict the type of operating system which aims to maximize the use of CPU and other resources by overlapping the execution of multiple programs.
    - a) Single-user operating system
    - b) Multiprogramming operating system
    - c) Time-sharing operating system
    - d) Multiuser operating system
  - (vi) The multiprogramming operating system allows multiple programs to:
    - a) Be executed simultaneously
    - b) Be stored in secondary storage devices
    - c) Be developed in different programming languages
    - d) Be protected from viruses
  - (vii) Predict the type of operating system which is commonly used in mainframe computers and allows multiple users to access the system simultaneously.
    - a) Single-user operating system
    - b) Multiprogramming operating system

- c) Time-sharing operating system  
d) Multiuser operating system
- (viii) A mouse that connects to a computer using a USB port is referred to as a:  
a) Wireless mouse  
b) USB mouse  
c) Bluetooth mouse  
d) Infrared mouse
- (ix) Select the type of keyboard interface that communicates wirelessly using radio frequency or Bluetooth technology.  
a) Wireless keyboard  
b) USB keyboard  
c) Mechanical keyboard  
d) Infrared keyboard
- (x) A keyboard matrix is a grid of:  
a) Rows and keys  
b) Columns and rows  
c) Keys and circuits  
d) Rows and circuits
- (xi) The control unit communicates with the ALU using which type of bus.  
a) Address bus  
b) Control bus  
c) Data bus  
d) Expansion bus
- (xii) Predict the fullform of CMOS in the context of computer memory.  
a) Complementary Metal Oxide Semiconductor  
b) Centralized Memory Operation System  
c) Control Memory Operating System  
d) Configurable Memory Output System
- (xiii) Predict that a dual-core CPU typically has:  
a) Two CPUs on the same die  
b) Two separate CPU chips on the motherboard  
c) Two cache levels for improved performance  
d) Two threads per core
- (xiv) Predict the fullform of EEPROM in the context of computer memory.  
a) Electrically Erasable Programmable Read-Only Memory  
b) Electronically Erasable Programmable Read-Only Memory  
c) Erasable Electronically Programmable Read-Only Memory  
d) Erasable Electrically Programmable Read-Only Memory
- (xv) Predict the term which refers to the physical interface that connects a CPU to the motherboard.  
a) Socket  
b) Slot  
c) Chipset  
d) Bus

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Classify the different types of monitor technologies. (3)
3. Predict the file systems that is being used by flash memory devices. (3)
4. Differentiate between static and dynamic RAM. (3)
5. Define cache memory and its role in a CPU. (3)
6. Categorize the components that are commonly found on a motherboard. (3)

OR

- Compare the structure of a GPT differ from an MBR in a hard disk. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Define RAM (Random Access Memory) and explain its role in a computer system. (5)
8. Distinguish between DDR2, DDR3, and RDRAM (Rambus DRAM) in terms of their features and performance. (5)
9. Explain the HDD geometry and its concepts of sector, track, cluster, and cylinder. (5)
10. Discuss the role of memory bus in connecting the CPU to RAM and the impact of bus speed on memory performance. (5)

11. Describe the motherboard form factor and its importance in determining the physical dimensions and layout of a computer system. (5)
12. Distinguish between CISC (Complex Instruction Set Computer) and RISC (Reduced Instruction Set Computer) in CPU design types. (5)

**OR**

Explain the different types of processor modes, including real mode and virtual real mode, and their significance in a computer system. (5)

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