

U.G. 4th Semester Examination - 2022**BCA****[HONOURS]****Course Code : BBCASEHT 405****Course Title: Computer Organization**

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate marks.

Answer **all** the following questions by choosing the correct alternative out of four options: $2 \times 25 = 50$

1. Which type of memory cannot be directly accessed by the CPU?
 - a) Primary Memory
 - b) Cache Memory
 - c) Secondary Memory
 - d) Registers

2. Which Cache mapping technique is also known as Many-to-Many Mapping?
 - a) Direct Mapping
 - b) Associative Mapping
 - c) Set-Associative Mapping
 - d) None of the above

3. Which of the following is/are the ways of implementing Hardwired Control Unit?
 - a) State Table Method
 - b) Delay Element Method
 - c) Sequence Counter Method
 - d) All of the above

4. Match the following:

List-I (Addressing Modes)	List-II (Implementation)
A. Indirect Addressing Mode	I. Loops
B. Immediate	II. Pointers
C. Auto-Increment	III. Constants

- a) A-II, B-III, C-I
 - b) A-II, B-I, C-III
 - c) A-I, B-III, C-II
 - d) A-III, B-I, C-II
5. Which Addressing Mode is suitable for passing array as parameter?
 - a) Indirect Addressing Mode
 - b) Indexed Addressing Mode
 - c) Relative Addressing Mode
 - d) Implied Addressing Mode

6. XCHG, MOV, PUSH and POP are examples of which types of instruction?
- Data Manipulation Instructions
 - Data Transfer Instructions
 - Program Control Instructions
 - Logical Instructions
7. Wilkes Design is used to implement—
- Parallel Computers
 - Hardwired Control Unit
 - Micro Programmed Control Unit
 - Multi Programming Control Unit
8. Micro Programs are usually stored in ____.
- Micro Memory
 - Secondary Memory
 - Control Memory
 - Nano Memory
9. Which of the following is not a property of Static RAM?
- They are used to implement Cache Memory
 - Refresh Circuit is needed
 - Made up of Flip-flops and MOSFET's (transistors)
 - Consumes more power

10. The full form of RISC is:
- Reduced Instruction Set Computer
 - Random Instruction Set Computer
 - Register Instruction Set Computer
 - Register Input Sequence Counter
11. Zero Address instruction are commonly found in which type of CPU organisation?
- Single Accumulator Organisation
 - General Register Organisation
 - Stack Organisation
 - None of the above
12. Consider a cache with 128 blocks of 16-words each. CPU generates 16 bit address. What is the tag size if 4-way set associative mapping is used?
- 6 bits
 - 7 bits
 - 8 bits
 - 9 bits
13. Which of the following register keeps track of the instructions stored in the program stored in memory?
- Accumulator
 - Address Register
 - Program Counter
 - Index Register

14. A group of bits that tell the computer to perform a specific operation is known as—
- a) Instruction code
 - b) Micro-operation
 - c) Accumulator
 - d) Register
15. Which bus is used to connect the various parts in order to provide a direct connection to CPU—
- a) Processor inter-connectivity bus
 - b) Processor bus
 - c) Memory bus
 - d) Control bus
16. The sub-routine service procedure, is similar to that of the interrupt service routine in ____.
- a) Method of context switch
 - b) Returning
 - c) Process execution
 - d) Both (a) and (c)
17. When an instruction is read from the memory, it is called—
- a) Memory Read cycle
 - b) Fetch cycle
 - c) Instruction cycle
 - d) Memory write cycle

18. The disadvantage/s of the hardwired approach is ____.
- a) It is less flexible
 - b) It cannot be used for complex instructions
 - c) It is costly
 - d) Less flexible and cannot be used for complex instructions
19. What is the formula for Hit Ratio?
- a) $\text{Hit}/(\text{Hit} + \text{Miss})$
 - b) $\text{Miss}/(\text{Hit} + \text{Miss})$
 - c) $(\text{Hit} + \text{Miss}) / \text{Miss}$
 - d) $(\text{Hit} + \text{Miss}) / \text{Hit}$
20. Individual control words of the micro routine are called—
- a) Micro task
 - b) Micro operation
 - c) Micro instruction
 - d) Micro command
21. To read the control words sequentially ____ is used.
- a) Program counter
 - b) Instruction register
 - c) Micro program counter
 - d) None of the above

22. Advantages of Pipelining are—
- a) The cycle time of the processor is reduced
 - b) It increases the throughput of the system
 - c) It makes the system reliable
 - d) All of the above
23. EPROM is used for—
- a) Erasing the data of ROM
 - b) Reconstructing data of ROM
 - c) Duplicating ROM
 - d) Erasing and reconstructing data of ROM
24. The technique that extends storage capacities of the main memory beyond the actual size of the main memory is known as—
- a) Multitasking
 - b) Multiprocessing
 - c) Virtual storage
 - d) Multiprogramming
25. How is the effective address of base-register calculated?
- a) By addition of index register contents to the partial address in instruction
 - b) By addition of implied register contents to the partial address in instruction
 - c) By addition of index register contents to the complete address in instruction
 - d) By addition of implied register contents to the complete address in instruction
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