K22U 0100

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS – Supple./Improv.) Examination, April 2022
(2016 – 2018 Admissions)
CORE COURSE IN COMPUTER SCIENCE
6B15CSC : Computer Organization

Time : 3 Hours Max. Marks : 40

SECTION – A

1. **One** word answer. **(8×0.5=4)**
   a) Expand VLSI.
   b) Control function is boolean variable that is equal to 1 or 0 (true/false).
   c) Instruction which transfers the memory word specified by the effective address to AC.
   d) The computer can be interrupted when IEN is set to ..... (with the ION instruction).
   e) The register that holds address of the stack is called
   f) Which code is suitable for detecting burst errors occurring in the communication channel ?
   g) Which algorithm allocates a fixed-length time slice of bus time that is offered sequentially to each processor, in round-robin fashion ?
   h) The number of bits in the _____ field is equal to the number of address bits required to access the cache memory.

SECTION – B

Write short notes on **any seven** of the following questions. **(7×2=14)**

2. What is the use of instruction register ?
3. What are micro operations ?
4. What is effective address ?
5. What is control memory ?
6. What is the main advantage of micro-programmed control ?

P.T.O.

7. What is zero address instruction ?

8. What is handshaking ?

9. What is hit ratio ?

10. What is rotating daisy-chain procedure ?

11. Write down the initial sequence of each interrupt Service Routine.

SECTION – C

Write short notes on **any four** of the following questions. **(4×3=12)**

12. Explain decimal fixed point representation.

13. What are three state bus buffers ? Discuss the three states.

14. Discuss the execution of BSA instruction.

15. Explain the sequence of microinstructions performed for implementing PUSH and POP operation.

16. Describe how I/O bus is connected to input and output devices.

17. What is strobe control ? Explain its working with the help of proper diagrams.

SECTION – D

Write short notes on **any two** of the following questions. **(2×5=10)**

18. Discuss fetch and decode phases of instruction cycle with diagram.

19. Explain evaluation of arithmetic expression using an example.

20. Discuss the hardware organization of associative memory.

21. Demonstrate the chip interconnection of RAM and ROM.

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