K19U 2508

Reg. No. : .....

Name : .....

III Semester B.C.A. Degree (CBCSS-Reg./Supple./Imp.)
Examination, November - 2019
(2014 Admn. Onwards)
CORE COURSE
3B06 BCA - COMPUTER ORGANIZATION

Time : 3 Hours Max. Marks : 40

SECTION - A

Answer **ALL** questions. ½ mark each. **(8×½ =4)**

1. a) The register that holds an address for memory unit is called_____.
   b) Expand RISC.
   c) _____ register always points towards the top of stack.
   d) _____field in the instruction format specifies the way the operand or the effective address is determined.
   e) SHRA instruction is used for _____
   f) _____ is used to supervise and synchronise all input and output transfers between CPU and peripheral.
   g) The third state of three state bus buffer is _____
   h) _____ memory directly communicates with CPU.

SECTION - B

Answer any **7** questions. Each question carries **2** Marks. **(7×2=14)**

2. What are the different ways to represent a negative integer ?
3. What are microoperations?
4. Explain relative addressing mode.
5. What is the use of register transfer language ?
6. What are the address sequencing capabilities required in a control memory?

P.T.O.

7. What are the different phases in instruction cycle ?
8. Explain floating point representation.
9. What is control word ?
10. What are the different types of control characters in ASCII ?
11. What is the advantage of microprogrammed control ?

SECTION - C

Answer any **4** questions. Each question carries **3** Marks. **(4×3=12)**

12. Draw the block diagram of a bus system for four registers.
13. Discuss the control functions and microoperations required for register-reference instructions.
14. Demonstrate the general configuration of a microprogrammed control unit.
15. Write the procedure to evaluate an expression using stack and RPN.
16. Explain any four dynamic arbitration algorithms.
17. Explain 2's complement addition and 2's complement subtractions.

SECTION - D

Answer any **2** questions. Each question carries **5** Marks. **(2×5=10)**

18. Draw the block diagram and explain the functional units in a computer system.
19. What is mapping ? Explain the different types of mapping procedures in cache memory.
20. Explain direct memory access in detail.
21. Explain the different types of computer instructions.
