



K20P 0552

Reg. No. :

Name :

II Semester M.C.A. Degree (C.B.S.S. – Reg./Suppl./Imp.)

Examination, May 2020

(2014 Admission Onwards)

MCA 2C09 : COMPUTER ORGANIZATION

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **any ten** questions. **Each** question carries **three** marks. **(10×3=30)**

1. What is the IEEE standard for Binary floating point numbers ?
2. What are the differences between 2 and 3 address instructions ?
3. Mention the different types of instruction formats.
4. List few advantages of the memory-mapped I/O techniques.
5. What are the significant features of SATA ?
6. Mention the importance of I/O interface module.
7. For a RISC machine, the effective value of S is 1.25 and the average value of N is 200. If the clock rate is 500 MHz, calculate the total program execution time.
8. What are the features of the Hardware implementation for signed magnitude data ?
9. Define the memory hierarchy.
10. Mention the importance of Virtual memory.
11. What are the uses of parallel processing ?
12. List the issues related to pipelining.

P.T.O.



SECTION – B

Answer **all** questions. **Each** question carries **ten** marks. (5×10=50)

13. a) With an example for each, explain the addressing modes available in MIPS. 10

OR

b) Describe basic operational concepts of computer in detail. 10

14. a) Explain in detail, the different modes of data transfer between the processor or memory and I/O devices in a computer system. 10

OR

b) Discuss in detail, the differences between subroutine and interrupt service routines. 10

15. a) Draw and explain the addition and subtraction of floating point numbers. 10

OR

b) Describe the Booth's multiplication algorithm. 10

16. a) Explain ROM and RAM with respect to their block diagrams. 10

OR

b) Draw a neat block diagram of memory hierarchy in a computer system. Compare the parameters size, speed and cost per bit in the hierarchy. 10

17. a) Discuss the characteristics of multiprocessor system. 10

OR

b) Explain the data transfer procedure for source initiated using handshaking. 10