



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