



K19P 0918

Reg. No. :

Name :

II Semester M.C.A. Degree (Reg./Suppl./Imp.)
Examination, July 2019
(2014 Admission Onwards)
MCA2C09 : COMPUTER ORGANIZATION

Time : 3 Hours

Max. Marks : 80

SECTION - A

Answer **any ten** questions. **Each** question carries **three** marks.

1. Define the terms :
 - a) Program
 - b) Data.
2. How a binary floating-point number can be represented ?
3. Write a note on second generation of computer.
4. What are the uses of Exceptions in operating system ?
5. What is the difference between a subroutine and interrupt-service routine ?
6. What are the issues involved in handling multiple devices ?
7. What is branching ? Write any 2 branch instructions.
8. Distinguish between restoring and non-restoring division.
9. What are the possibilities of enhancing performance ?

P.T.O.



10. Write the formula of the average access time experienced by the processor in a system and define each terms used in the notation.
11. What are the pipelining issues ?
12. Distinguish between conditional branching and unconditional branching. (10×3=30)

SECTION – B

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

13. a) Explain in detail the straight-line sequencing with suitable figure. 10

OR

- b) What are the two different styles of instruction set ? Explain each style with suitable program. 10

14. a) What is program-controlled I/O ? Explain the concept of program-controlled I/O for two essential I/O devices for human-computer interaction with suitable figure. 10

OR

- b) What is PCI Bus ? Explain its features and device configuration in detail. 10

15. a) i) Write and explain the RISC-style program that initializes and handles interrupts. 5
- ii) Explain the concept of carry-save addition of summands with suitable figure. 5

OR

- b) Explain the concept of implementing floating-point operations using suitable Block diagram. 10



16. a) Describe the structure of organization of a $8\text{ M} \times 32$ memory using $512\text{ K} \times 8$ static Memory chip. Explain. **10**

OR

b) Explain the concept of semiconductor RAM S with suitable figure. **10**

17. a) What is multiprocessor ? Explain the shared-memory multiprocessor with suitable figure. **10**

OR

b) Explain the snoopy-cache technique with suitable situations. **10**

Answer any ten questions. Each question carries three marks.

1. Define the terms
a) Program
b) Data
2. How a binary floating point number is represented?
3. Write a note on serial and parallel computer.
4. What are the uses of cache memory?
5. What is a differentiator between a main and interrupt service routine?
6. What are the issues involved in handling multiple devices?
What is branching? Write any 2 branch instructions.
8. Distinguish between restoring and non-restoring division.
9. What are the possibilities of enhancing performance?

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