

2016

Time: 3 hours

Full Marks: 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from **all** the Groups are directed.

Group – A

(Compulsory)

1. Choose the correct answer from the given alternatives: **1x15=15**

a) Which among the following can be considered as most advanced ROM?

- i. DRAM
- ii. EEPROM
- iii. RAM
- iv. PROM

b) Which among the following is Volatile?

- i. ROM
- ii. EPROM
- iii. DROM
- iv. RAM

c) Which are used to overcome the difference in data transfer speeds of various devices?

- i. Enhancing Circuitry
 - ii. Bridge Circuits
 - iii. Multiple Buses
 - iv. Buffer Registers
- d) Whenever CPU detects an interrupt, what does it do with current state?
 - i. Saves it
 - ii. Discards it
 - iii. Depends system to system
 - iv. First finishes it
- e) I/O processor has direct access to:
 - i. Main Memory
 - ii. Secondary Memory
 - iii. Flash Memory
 - iv. ROM
- f) The unit which decodes and translates each instruction and generates the necessary enable signals for ALU and other units is called:
 - i. ALU
 - ii. CU
 - iii. CPU
 - iv. MU
- g) Which among the following is an important data transfer technique?
 - i. CAD
 - ii. CAM
 - iii. MMA
 - iv. DMA

- h) The addressing mode, where you directly specify the operand value is.....
- i. Immediate
 - ii. Direct
 - iii. Definite
 - iv. Relative
- i) Which interrupt is unmaskable?
- i. RST 5.5
 - ii. RST 7.5
 - iii. TRAP
 - iv. None of these
- j) Expand RISC.
- k) Expand Opcode.
- l) Expand CMOS.
- m)Expand RDRAM.
- n) Expand ISA.
- o) Expand DMA.

Group – B

Answer any **five** questions of the following: 4x5=20

2. Discuss the Von Neumann concept in detail.
3. What are Flash Drives?
4. Explain the representation of floating point numbers.
5. Discuss the cache memory organization using a suitable diagram.
6. What is Vector Processing? Explain its role in computer architecture.
7. Discuss the concept and importance of pipelining in computer architecture.

8. Discuss the memory hierarchy triangle.
9. Write a brief note on the various functional units of a computer system.

Group – C

Answer any **five** questions of the following: 7x5=35

10. What are the various types of RAM? Explain in details.
11. Discuss bus architecture in computer organization with proper diagrams.
12. What is Virtual Memory? Explain its role and importance in process execution.
13. Discuss the various types of addressing modes.
14. Differentiate between Synchronous and Asynchronous data transfer mode.
15. What is Parallel Processing? Discuss the Flynn's classification.
16. Discuss the working of a microprocessor using a suitable diagram.
17. What is DMA? Explain its importance in computer architecture.

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