Class: MCA First Semester 2017-18

M.M. : 20   Subject: **Digital Computer Organization**(Code:CA3103)   M. Hrs: One & Half

Note: 1.ALL Questions are compulsory.
2.Write ALL parts of a question together in one attempt NOT here & there.
3.Write to the point. Make & State necessary assumptions.

Q.No.1 (a) Both our text followed in Class detail **Block diagram** of Digital Computer. Compare them. (01)

(b)Define the following circuits with their one practical application:
(i) IC (ii) Decoder (iii) Encoder (iv) Multiplexer (v) Binary Counters (vi) Flip-Flop (03)

(c) What do you mean by **Memory Addressing capacity of a Microprocessor**? What is
Memory Addressing capacity of 8085 Microprocessor? (01)

Q.No.2(a) How Status Flags in 8085 Microprocessor are **set**? Explain. (01)

(b) Define "Addressing Modes". Define ALL addressing modes of **8085 Microprocessor** with
One example in each. (03)

Q.No.3 Write down an 8085 Assembly language Program for the following with proper comments. Make &
State necessary assumptions. (**Write Addressing MODEs of each Instructions ALSO.**)

"**Addition of list of 5 One Byte Numbers & Result is also one Byte.**" (03)

Q.No.4 A digital Computer has a Common Bus System for 16 Registers of 32 bits each. The BUS is
constructed with Multiplexers. Answer the following with JUSTIFICATION: (03)
(a) How many selection inputs are there in each Multiplexer?
(b) What size of Multiplexers are needed?
(c) How many Multiplexers are there in the BUS?

Q.No.5(a) Explain in brief Construction & Working of **Hard disk Drive** OR **CD-ROM**. (02)

(b) Differentiate **CD-R(WORM) Vs CD-RW.** Compare them technically. (01)

(c) Define (i) FIRM Ware (ii) POST. What is their importance? (01)

(d) **What is CROSS-Assembler? Give one Example & Justify why it is CROSS-Assembler.**
(01)

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