COMPUTER ORGANIZATION AND ARCHITECTURE – 113

Semester - I

Time Allowed: 03 Hrs.   **Max. Marks – 70**

<u>Note</u>: 1) Attempt any *two* questions each from Sections A and Section B carrying
10.5 marks each. The Section C is compulsory carrying total of 28 marks.

2) Use of non-programmable scientific calculator is allowed.

SECTION – A

I.	What is Architecture? Explain the advantages of assembly language?	10.5
II.	What is decoder? Design 2 to 4 line decoder with NAND gate.	10.5
III.	What is stack? Explain the operations of stack organization in detail.	10.5
IV.	What are addressing modes? Explain various address modes in detail.	10.5

SECTION – B

V.	What is cache coherence problem in microprocessor system? Explain.	10.5
VI.	Explain the following:-	10.5

    a) Priority of interrupt by multiple devices

    b) DMA transfer in detail with diagram

VII.	Explain the features of RISC and CISC in detail.	10.5
VIII.	What is cache memory? Explain the various mapping techniques of cache memory.	10.5

SECTION – C

IX.   **Write Short notes on following questions:**

i.	What is JK Master-Slave?	4
ii.	What is Prefix Notation?	4
iii.	What is Instruction Cycle?	4
iv.	What is Direct Memory Access?	4
v.	Discuss about Instruction Format.	4
vi.	What is Asynchronous data transfer?	4
vii.	Discuss about daisy chain priority interrupts?	4