BSI302
[ET]

Enroll. No. -_____

ODD SEMESTER EXAMINATION: NOV./ DEC, 2017

DIGITAL AND COMPUTER ORGANIZATION

(Only for Repeaters)

Time :3 Hrs

Maximum Marks :70

Note: Attempt questions from all sections as directed.

Section - A : ***Attempt any five questions out of six. Each question carries 06 marks.*** **[30 Marks]**

Q1. List the major differences that exist between the central computer and peripherals.How can we resolve these issues.

Q2. An instruction is stored at location 300 with its address field at location 301.The address field has the value 400.A processor register R1 contains the number 200.Evaluate the effective address if the addressing mode of the instruction is

(a) Direct
(b) Immediate
(c) Relative

Q3. Explain the difference between hardwired control and microprogrammed control.Is it possible to have a hardwired control associated with a control memory.

Q4. Discuss the Flynn's classification which divides computers in different groups.

Q5. What do you understand by handshaking method of data transfer.Draw the block diagram.timing diagram and sequence of events for destination initiated Handshaking.

Q6. Discuss the register set available in 8085 microprocessor

Section – B : ***Attempt any two questions out of three. Each question carries 10 marks.*** **[20 Marks]**

Q7. Describe in words and by means of block diagram how multiple matched words can be read out from an associative memory.

Q8.(a)Write the an assembly language program to evaluate the arithmetic statement

$X=(A+B)[C(D+E)+F]$

using a stack organized computer with zero address operation instruction.

(b)Show the stack operations for evaluating the numerical result:

$(3+4)[10(2+6)+8]$

Q9. Explain briefly about the following microoperations:

(i)Shift Microoperations
(ii)Logical Microoperations

Section - C : *Compulsory* ***question*** [20 Marks]

Q10. (a)What do you mean by microoperations.Discuss all its types.Explain shift microperations in detail with its hardware implementation.

(b)The 8 bit registers AR,BR,CR and DR initially have the following values:

AR=11110010
BR=11111111
CR=10111001
DR=11101010

Determine the 8 bit values in each register after the following sequence of microoperations

AR <-----AR + BR
CR <-----CR Λ DR
BR<------BR + 1
AR<-----AR - CR
DR<-----asrDR