BCA (Honours) 3rd Semester Examination, 2022

Subject : Computer Application

Course : BCA-302

(Computer Organization and Architecture)

Time: 4 Hours **Full Marks: 80**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Answer Question No. 1 *and* any four *from the rest.*

1. Answer *any eight* questions: 2×8=16

   (a) Write down the features of Neumann Architecture.

   (b) What do you mean by the term 'Register Transfer Language'?

   (c) What is Micro operation?

   (d) What is Common BUS System?

   (e) Explain the function of a PC.

   (f) Define STACK.

   (g) What is vectored interrupt?

   (h) Explain the function of Micro programmed controller.

   (i) What is 'Address Sequencer'?

   (j) Write down the different mode of data transfer technique between CPU and I/O.

   (k) Define Pipelining.

   (l) Compare between strobe based and handshake based communications.

2. (a) Explain stored programme concept.

   (b) Discuss CPU organization with registers.

   (c) Briefly explain strobe based communication of I/O transfer. 2+8+6

3. (a) Briefly discuss about the generation of computers.

   (b) Write a short note on data movement among Registers.

   (c) With the help of a block diagram explain the building blocks of a computer. 8+4+4

4. (a) With the help of diagram explain the format of different types of Instructions.

   (b) How subroutine and interrupt can be handled with the help of a stack?

   (c) Discuss different types of Addressing modes. 6+4+6

Please Turn Over

5. (a) What do you mean by Interrupt? Explain the different types of Interrupts. How an Interrupt is processed?

   (b) Why do we use DMA? Explain DMA mode with example.

6. (a) What is Instruction Pipeline?

   (b) Write on different stages of Instruction Pipeline.

   (c) Discuss on priority Interrupt.

7. Write short notes on *any two*:

   (a) Bus Systems

   (b) Fetch and execution cycles

   (c) Evolution of Computer
