Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – August 2020
VI Semester

Class : III UG **Time : 2 Hours**
Major : Physics **Max. Marks : 50**

15BPHC25 Microprocessor

Part A **10 x 1 = 10**
Choose the Correct Answer

1. Which of the data transfer is not possible in a Microprocessor?
   a. Memory to Accumulator b. Accumulator to Memory
   c. Memory to Memory d. I /O device to Accumulator

2. Opcode is term used
   a. to refer Microinstruction b. to refer the first part of an instruction
   c. to refer accumulator d. to refer RAM

3. OUT OBH is an example of
   a. register addressing b. register indirect addressing
   c. direct addressing d. immediate addressing

4. The instruction ORI 8bit data is ---------- byte instruction.
   a. 1 b.2
   c. 3 d. both a & b

5. The 8085 instruction cycle consists of
   a. one to six machine cycles b. one to five machine cycles
   c. one to seven machine cycles d. one to one machine cycles

6. The first operation in any instruction is
   a. operand fetch b. opcode fetch
   c. data fetch d. address fetch

7. IN and OUT instructions are
   a. one byte instruction b. thrice byte instruction
   c. two byte instruction d. zero byte instruction

8. In interfacing devices, a ____ is used for an input port.
   a. tri state buffer b. two state buffer
   c. LED d. LCD

9. DMA controller has ____ register.
   a. 3 b. 2
   c. 1 d. 4

10. In order to enter a control word in the control register of 8255, the instruction to be used is
   a. OUT 04 b. OUT 01
   c. OUT 03 d. OUT 02

Part B **3 x 6 = 18**

Answer any **Three** questions

Each answer should not exceed 400 words or two pages

11. Explain the organization of a Microprocessor Based System.

12. What are the differences between a Microprocessor and a Microcontroller?

13. Write an assembly language program to add two 8 bit numbers.

14. Write the different addressing modes available in 8085 with examples.

15. Explain about 8085 address decoding.

16. Write a short note on generating control signals.

17. Write a note on interfacing output displays with neat sketch.

18. Write down the concept of basic interfacing.

19. Explain Microprocessor based temperature control system and how temperature of a body is measured.

20. Discuss about setting / resetting port C plus bits.

Part C **2 x 11 = 22**

Answer any **Two** questions

Each answer should not exceed 800 words or four pages

21. Draw the architecture of 8085 Microprocessor and explain it.

22. Explain about: i. Machine language ii. Assembly language iii. High level language.

23. What are the classification of instruction set in 8085 and explain it?

24. Write an assembly language program to multiply two 8 bit numbers.

25. Explain the basic concepts in memory interfacing of 8085.

26. Describe the 8085 Microprocessor pin configuration with necessary diagram.

27. Discuss about I/O execution of interface system.

28. Explain the concept of interfacing I/Os using decoders.

29. Draw the block diagram of 8237 DMA controller and explain its operation.

30. Explain the functions of 8255 programmable peripheral interface with block diagram.

****