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 – June 2021
VI Semester

Class: III UG **Time : 3 Hours**
Major: Physics **Max. Marks: 100**

18BPHC25 Microprocessor

Course Outcomes:
CO1: Explain Microcontroller Architecture.
CO2: Write simple programs for addition, subtraction, multiplication and division.
CO3: Understand the basic concepts of memory interfacing and circuit.
CO4: Comprehend a suitable input and output peripheral.
CO5: Execute simple programs for temperature control and stepper motor.

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

1. Nibble is a group of _____ bits. CO1 K1
   a. 4 b. 8 c. 16 d. 32

2._____ is group of bits the computer recognizes & processes at a time. CO1 K2
   a. Instruction b. Program c. Word d. Byte

3. Addressing modes in 8085 is classified into _____ groups. CO2 K2
   a. 6 b. 5 c. 4 d. 7

4. In 8085 programming model, the accumulator is an _____ bit register that is a part of ALU. CO2 K5
   a. 6 b. 4 c. 8 d. 16

5. The number of output pins in 8085 microprocessor are _____ CO3 K1
   a. 17 b. 18 c. 27 d. 28

6. The time taken by the processor to execute the opcode fetch cycle is _____ CO3 K5

7. For input interfacing, the address lines are decoded by using an 8 input ____ gate. CO4 K1
   a. OR b. NAND c. AND d. NOT

8. Absolute decoding system needs _____ memory system. CO4 K2
   a. Large b. Small c. Non-volatile d. Volatile

9. PPI stands for CO5 K6
   a. Programmable Portable Interface b. Programmable Peripheral Interface
   c. Peripheral Programmable Interface d. Portable Peripheral Interface

10. DMA is used between CO5 K3
   a. Processor & I/O b. Memory & I/O c. Memory & I/P d. I/P & I/O

Part B **5 x 6 = 30**

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. Explain the functions of each component of a computer.	CO1 K4
(or)	
11.b. Classify microcomputers. Explain any two.	CO1 K2
12.a. Categorize the 8085 instruction set according to word size. Explain any one.	CO2 K4
(or)	
12.b.Write a note on signed integer and unsigned integer.	CO2 K2
13.a. Discuss the basic concept of memory interfacing.	CO3 K2
(or)	
13.b. What do you mean by bus timing in an 8085 microprocessor? Explain.	CO3 K3
14.a. Explain the data transfer scheme of 8085 & its type.	CO4 K3
(or)	
14.b.Explain Peripheral I/O instructions.	CO4 K2
15.a. Explain the features of PPI.	CO5 K2
(or)	
15.b. List out the applications of microprocessor.	CO5 K1

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Discuss about organization of a microprocessor based system.	CO1 K2
(or)	
16.b. Explain microprocessor initiated operations & 8085 bus organization.	CO1 K3
17.a. Classify the 8085 instructions set. Explain any two.	CO2 K2
(or)	
17.b. Explain the overview of the 8085 instruction set.	CO2 K3
18.a. Write a detailed note on memory read machine cycle of 8085.	CO3 K2
(or)	
18.b. Why AD_0 – AD_7 lines are multiplexed? Explain.	CO3 K6
19.a. Explain the mechanism of I/O execution.	CO4 K3
(or)	
19.b. Discuss about the interfacing output displays.	CO4 K2
20.a. Discuss about the programmable DMA controller with a neat diagram.	CO5 K2
(or)	
20.b. Explain DC motor speed control system.	CO5 K3

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