$\boxed{\text{BIEL-031}}$

DIPLOMA – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (DECVI)/ ADVANCED LEVEL CERTIFICATE COURSE IN ELECTRONICS AND COMMUNICATION ENGINEERING (ACECVI)

Term-End Examination

December, 2017

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BIEL-031 : MICROCONTROLLER

Time : 2 hours   *Maximum Marks : 70*

Note : *Attempt any* **five** *questions. Question no.* **1** *is* **compulsory**. *All questions carry equal marks. Use of scientific calculator is allowed.*

1. (a) What is Handshaking ?

   (b) Compare the features of 8155 and 8355.

   (c) What is the need of external and internal program memories ?

   (d) Mention any four addressing modes of 8051 microcontroller.

   (e) Differentiate between microprocessor and microcontroller.

   (f) List various assembler directives.

   (g) What is the need of peripheral devices ? *7×2=14*

2. (a) Describe various data transfer techniques with suitable examples. *7*

(b) Explain series and parallel communication with necessary diagram. *7*

3. What do you mean by Interfacing ? Explain the procedure of interfacing the temperature control system with 8085 microprocessor. *14*

4. Draw and explain Harvard and von Neumann computer architecture. *14*

5. (a) Draw and explain the pin configuration of 8051 microcontroller. *7*

(b) Compare EEPROM and FLASH memory. *7*

6. Explain various instruction sets of MCS-51 microcontroller with appropriate example. *14*

7. Write short notes on any *two* of the following : *2×7=14*

(a) Data Types and Directives of 8051

(b) Software Simulators of 8051

(c) Interfacing of D-to-A Converter with 8085 Microprocessor

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