

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

Term-End Examination

June, 2012

BIEL-031 : MICROCONTROLLER

Time : 2 Hours

Maximum Marks : 70

*Note : Attempt any five questions. All questions carry
equal marks. Question number 1 is compulsory.*

- 1.** Attempt all questions. Each question carry two marks. All are objective type questions. Choose the correct answer from the given four alternatives.

2x7=14

- (a) Lowest priority interrupt in 8085 is :
- | | |
|---------------|--------------|
| (i) TRAP | (ii) INTR |
| (iii) RST 7.5 | (iv) RST 6.5 |
- (b) Number of address line needed to access 16 KB RAM :
- | | |
|----------|---------|
| (i) 12 | (ii) 13 |
| (iii) 14 | (iv) 16 |
- (c) Which one is fastest data transfer method ?
- | | |
|--------------------|--------------------|
| (i) DMA | (ii) Programmed IO |
| (iii) Interrupt IO | (iv) None |

- (d) In built RAM is available in :
- (i) 8085 (ii) 8051
 (iii) 8255 (iv) 8259
- (e) Example of direct addressing is :
- (i) LDA 2010 H (ii) MOV B,C
 (iii) ADD B (iv) None
- (f) For Branching which instruction is used ?
- (i) Jump (ii) MOV
 (iii) ADD (iv) Push
- (g) B.S.R mode is related with :
- (i) 8085 (ii) 8255
 (iii) 8259 (iv) 8051

2. Attempt *any two* :

2x7=14

- (a) Discuss the different data transfer techniques for the system.
- (b) Draw and discuss the different components proposed in Harvard Architecture.
- (c) Compare the different types of memory used in processor according to their technology.

3. Attempt *any two* :

2x7=14

- (a) Draw and discuss the architecture of 8255 and also explain its mode of operations.
- (b) PPI is interfaced with 8085 in programmed IO system with the address of PA=8CH and PB=8DH, draw the Interfacing.
- (c) A LED is connected at PC4 of 8255. Write a program to switch on this LED.

4. Attempt *any two*. 2x7=14
- (a) Discuss the Editor and Assembler used for Assembly language programming.
 - (b) Draw and discuss the interfacing of D to A converter with 8085.
 - (c) Discuss about the software simulator used to execute the program of 8051.
5. Attempt *any two* : 2x7=14
- (a) Draw the internal architecture of 8051 and discuss the register organization of 8051.
 - (b) How the port of 8051 is differs from 8255, also discuss the power saving options in 8051.
 - (c) What is PSW in 8051 ? Discuss the Flag Register in details.
6. Attempt *any two* : 2x7=14
- (a) Write a program to subtract two Hex number and store the result at memory location 5020H.
 - (b) Write a program to find 2's complement of given number.
 - (c) Discuss the addressing mode of 8051 with the examples.
7. Attempt *any two* : 2x7=14
- (a) RICS & CISC
 - (b) Boolean Processor.
 - (c) Assembler Directives.
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