

02774

**DIPLOMA - IN - ELECTRONICS AND
COMMUNICATION ENGINEERING (DECVI)**

Term-End Examination

June, 2011

BIEL-031 : MICRO CONTROLLER

Time : 3 hours

Maximum Marks : 70

Note : *Answer any Five questions. Each question carry equal marks. Question No 1 is compulsory.*

1. Attempt all questions - each carries two marks.
Choose the correct answer from the given four alternatives. **7x2=14**
- (a) Which one is Fastest data transfer method
- (i) Programmed IO
 - (ii) Interrupt Drivern IO
 - (iii) DMA
 - (iv) None
- (b) Highest priority Interrupt is.
- (i) TRAP (ii) RST 7.5
 - (iii) RST 6.5 (iv) RST 5.5
- (c) BSR mode is related with
- (i) 8085 (ii) 8255
 - (iii) 8259 (iv) 8051

- (d) Number of Address line needed to access 32KB RAM
- (i) 14 (ii) 15 (iii) 16 (iv) 12
- (e) For Branching which instruction is not used.
- (i) Jump (ii) JNZ
- (iii) Call (iv) MOV
- (f) In 8051 the RAM capacity is
- (i) 256 byte (ii) 128 byte
- (iii) 512 byte (iv) None
- (g) Example of Immediate Addressing is
- (i) M θ I A,O5H (ii) MOV B,C
- (iii) ANA B (iv) IN,O2H.

2. Attempt *any two*

2x7

- (a) Discuss the difference between RISC and CISC.
- (b) Draw and discuss the different components proposed in von - Neumann architecture.
- (c) Compare the different types of memory used in processor according to their technology.

3. Attempt *any two* 2x7
- (a) Draw and discuss the Architecture of 8255 and explain its mode of operations.
 - (b) If a LED is connected at PC_6 of 8255, write a program to switch on and off this LED continuously after 1 mili second.
 - (c) 8085 microprocessor is interfaced with PPI in IO mapped system. Draw the interfacing if Address of PA is 80H, Address of PB is 81H.
4. Attempt *any two* 2x7
- (a) Draw and discuss the interfacing at DTOA converter with 8085.
 - (b) Discuss the Assembler and linker used for assembly Language Programming.
 - (c) Discuss about the software used to execute the programs of 8051.
5. Attempt *any two* 2x7
- (a) Draw the architecture of 8051 and discuss about DPTR and PC.
 - (b) How much capacity of RAM is available in 8051 ? Draw and discuss its internal Architecture.
 - (c) What is PSW in 8051 ? Discuss the Flag Register in detail.

6. Attempt *any two* 2x7
- (a) Explain the Addressing modes of 8051 with examples.
 - (b) Write a program to find the 2's complement of given Number.
 - (c) Write a program to Add two Hex Numbers and store the result at memory location 2050 H.
7. Write short notes on *any two* : 2x7
- (a) Assembler Directives
 - (b) Data transfer techniques
 - (c) Boolean Processors.
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