

**DIPLOMA - VIEP
(DECVI)**

**Term-End Examination
December, 2012**

BIEL-036 : MICROPROCESSOR

Time : 2 hours

Maximum Marks : 70

Note : Question No.1 is compulsory. Answer any four from rest.

1. (a) A 32-bit processor has : **7x2=14**
- (i) 32 registers.
 - (ii) 32 I/O devices.
 - (iii) 32 Mb of RAM.
 - (iv) 32-bit bus & 32 bit registers.
- (b) A 20-bit address bus allows access to a memory of capacity :
- (i) 1Mb
 - (ii) 2Mb
 - (iii) 32Mb
 - (iv) 4Gb
- (c) The circuit in 8085 μ p that provides the arithmetic and logic function is called :
- (i) CPU
 - (ii) ALU
 - (iii) I/O
 - (iv) Control Unit

- (d) Which of the following has highest priority ?
- (i) HOLD
 - (ii) RST 6.5
 - (iii) TRAP
 - (iv) CALL
- (e) RAL instruction is meant for :
- (i) Rotate accumulator left one bit.
 - (ii) Rotate accumulator left through carry.
 - (iii) Rotate program counter left.
 - (iv) None of the above.
- (f) The starting address of memory containing program is stored in _____ register.
- (i) Code segment
 - (ii) Data segment
 - (iii) Index Register
 - (iv) Stack segment
- (g) The Peripheral Chip select signals are asserted during execution of :
- (i) IN instruction
 - (ii) OUT instruction
 - (iii) Both (i) & (ii)
 - (iv) None of the above

2. (a) Explain the following Instructions : **5x2=10**
- (i) STAX B
 - (ii) XTHL
 - (iii) DAA
 - (iv) PUSH PSW
 - (v) CMC
- (b) State the purpose of HOLD pin and RESET pin. **2x2=4**

3. (a) State the merit & demerit of memory mapped I/O technique over I/O mapped I/O technique. 7
(b) What do you mean by Program Control Instructions ? State two examples of it. 7
 4. Draw the timing diagram for CALL instruction and explain. 14
 5. With neat block diagram explain different modes of operation of 8255. 14
 6. Interface ADC 0801 convertor with 8085 microprocessor using memory mapped I/O and interrupt 5.5. Write an interrupt routine to read the output data of the convertor. 14
 7. With neat block diagram of 8051 micro-controller, discuss the features of it. 14
 8. Write short notes on *any two* of the following : $2 \times 7 = 14$
 - (a) Internal architecture of 8086 μ p.
 - (b) Interrupt structure of 8085 μ p.
 - (c) Programmable Interval Timer.
-