

**B.TECH. SEM -VI BIO MEDICAL 2014 COURSE (CBCS) :  
WINTER - 2017**

**SUBJECT : MICROPROCESSORS & MICROCONTROLLERS**

Day : **Monday**  
Date : **20/11/2017**

Time : **10.00 AM TO 01.00 PM**  
Max. Marks : 60

**W-2017-2240**

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data if necessary.

**Q.1** Describe the structure of stacks and subroutines in 8085 microprocessor. [10]

**OR**

- a) Discuss the concept of memory mapped I/O and I/O mapped I/O. [06]
- b) Describe the flag register of 8085. [04]

**Q.2** Describe the special function registers related to timers and counters of 8051 microcontroller. [10]

**OR**

Discuss the special function registers related to interrupt in 8051 microcontroller. [10]

**Q.3** Discuss the Rotate and SWAP instructions in 8051. [10]

- a) RRA      b) RLA      c) RRC A      d) RLC A      e) SWAP A

**OR**

Give a brief note on I/O port single bit instructions in 8051 microcontroller. [10]

**Q.4** Draw and describe the interfacing of 8051 with keyboard. [10]

**OR**

Draw and describe the interfacing of 8051 with A/D converter. [10]

**Q.5** Discuss the following instructions of PIC18F with an example: [10]

- a) AADWF      c) SUBLW K      e) ANDLW K
- b) DAW      d) MULLW K

**OR**

Discuss the following in PIC18F: [10]

- a) Macros      b) Role of Assembler

**Q.6** Discuss the following concepts of interrupts in PIC18F: [10]

- a) Interrupt vs Polling      c) Interrupt Service Routine
- b) Steps in executing an interrupt      d) Enabling and Disabling an interrupt

**OR**

Discuss the following registers of Timer in PIC18F: [10]

- a) T0 con (Timer 0 Control) Register
- b) T1 con (Timer 1 Control) Register

\* \* \* \*