

**B.Tech. SEM -VI Bio Medical 2014 Course (CBCS) : WINTER - 2018**

**SUBJECT: MICROPROCESSORS AND MICROCONTROLLERS**

Day: Tuesday  
Date: 13/11/2018

**W-2018-2507**

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

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**N.B:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw a neat diagram **WHEREVER** necessary.
  - 4) Assume suitable data, if necessary.
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**Q.1** Describe the concept of Stacks and Subroutines in 8085 Microprocessor. **(10)**

**OR**

Differentiate the following: **(10)**

- i) Microprocessor and Microcontroller
- ii) RISC and CISC Microcontroller

**Q.2** Describe the interrupt structure in 8051 Microcontroller. **(10)**

**OR**

- a) Discuss the interrupt priority in the 8051 Microcontroller. **(06)**
- b) Briefly describe the concept of RESET in 8051 Microcontroller. **(04)**

**Q.3** Describe the following Microcontroller 8051 instructions with the help of example. **(10)**

- i) ADDC ii) SUBB iii) CPL iv) ANL v) CJNE

**OR**

List out different single bit operations with CY of 8051 Microcontroller. **(10)**

**Q.4** Design and draw the interfacing of 8051 Microcontroller with LCD. **(10)**

**OR**

Design and draw the interfacing of 8051 Microcontroller with LED. **(10)**

**Q.5** Discuss the following instruction of PIC18F Microcontroller with an example. **(10)**

- i) ADDWF ii) ANDWF iii) COMF iv) DECF v) MOVF

- a) Describe the PIC status register of PIC18F Microcontroller in detail. **(06)**
- b) Describe the concept of Macros in PIC18F Microcontroller. **(04)**

**Q.6** Discuss the interrupt handling process in PIC18F Microcontroller. **(10)**

**OR**

How serial I/O protocol and SPI protocol is implemented in PIC18F Microcontroller? **(10)**

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