S.No. 25

| 12PEL08 |

(For the candidates admitted from 2012–2013 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Third Semester

Electronics and Communication

EMBEDDED SYSTEM

Time : Three hours   Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1.   (a)   Discuss about the salient features of 8051 microcontroller.

Or

      (b)   Explain the various register banks and stack function in 8051 microcontroller.

2.   (a)   Write a short note on pipelining.

Or

      (b)   Explain the function of ASM assembler and its usage.

3. (a) Explain the concept of loop time subroutine.

Or

(b) Explain how the timer can be used as a capture mode.

4. (a) State the features of SSP module and also explain how to configure it.

Or

(b) With a neat diagram, explain how to produce DAC output using PIC microcontroller.

5. (a) Write a short note on baud rate accuracy.

Or

(b) With a neat diagram, explain how to interface UART with PIC microcontroller.

PART B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) With a neat diagram, explain the architecture of 8051 microcontroller and also the interrupts.

Or

(b) Explain the various addressing modes available in 8051 microcontroller with an example.

7. (a) With a neat diagram, explain the architecture of PIC 16F84 microcontroller and mention its salient features.

Or

(b) Briefly explain the arithmetic and logical instructions of PIC microcontroller with an example.

8. (a) Explain in detail how to configure the registers of Timer 2 in PIC microcontroller with an example.

Or

(b) Explain in detail the function of external interrupts and how to configure it.

9. (a) Describe the function of serial peripheral interface in PIC microcontroller.

Or

(b) Briefly explain the working of serial EEPROM with a neat diagram.

10. (a) With a neat diagram, explain the function of USART interface in PIC microcontroller.

Or

(b) With a neat diagram, explain in detail how to interface LED and keyboard with PIC microcontroller.

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