F 3670

Reg. No................................

Name................................

B.TECH. DEGREE EXAMINATION, NOVEMBER 2014

Fifth Semester

Branch : Electrical and Electronics Engineering
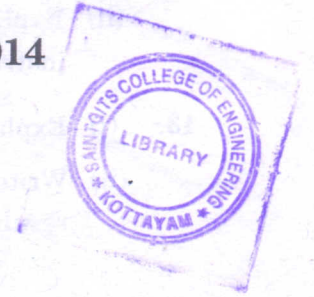
EE 010 506 – MICROPROCESSORS AND APPLICATIONS (EE)

(New Scheme – 2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours   Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. What is the difference between microprocessor and microcontroller? Explain.

2. What is an ALP? Explain with an example.

3. Explain the types of interrupt with an example.

4. Differentiate ROM from RAM. Explain the difference.

5. Explain the concept of memory segmentation.

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. Discuss the evolution of microprocessors in detail.

7. Explain any *three* addressing modes of intel 8085 in detail.

8. What are SIM and RIM instructions? Explain.

9. What is the concept of DMA controller? Explain in detail.

10. Enumerate the addressing modes of INTEL 8086 . Explain any *two* in detail.

(5 × 5 = 25 marks)

Part C

Answer all questions.

Each full question carries 12 marks.

11. (i) Explain the architecture of 8085 with a neat diagram.

(ii) Explain the structure of ALU with a neat diagram.

Or

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12.   (i)   Explain the timing diagram and its significance.

      (ii) Explain the terms T state, Machine cycle and instruction cycle with respect to execution of instructions.

13.   (i)   Explain the classification of instructions of intel 8085 in detail.

      (ii) Write an ALP to multiply two 8-bit numbers stores at 2000H and 2001H and display the result in the address field of the microprocessor kit.

Or

14.   (i)   Write an ALP to arrange numbers in a data array in ascending and descending orders.

      (ii) Write an ALP to find smallest and largest number in a given data array.

15.   (i)   Explain the subroutines with examples.

      (ii) Give an account on "Vectored and non-vectored interrupts".

Or

16.   (i)   Explain the interfacing of 8279 key board with a neat diagram.

      (ii) Draw the block diagram of 8251 and explain it detail.

17.   Explain the block diagram of IC 8255 in detail.

Or

18.   (i)   Explain the following in detail :

            (a)   PPI.

            (b)   Interfacing I/Os using decoders.

      (ii) Give an account on "memory mapped I/O and I/O mapped I/O schemes".

19.   (i)   Explain the logic pin diagram of intel 8086 in detail.

      (ii) Explain the operating modes of intel 8086 with examples.

Or

20.   (i)   Explain the addressing modes of intel 8086 in detail.

      (ii) Explain the purpose of memory banks with an example.

(5 × 12 = 60 marks)