F 7023

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

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

B.TECH. DEGREE EXAMINATION, NOVEMBER 2017

Fifth Semester

Branch : Information Technology

IT 010 502—MICROPROCESSORS AND MICROCONTROLLERS (I.T.)

(New Scheme—2010 Admission onwards)

[Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 3 marks.

1. Define: temporary memory banks.

2. What is instruction set ?

3. What is a hard disk interface.

4. What are the I/O ports ?

5. What are the advantages of interfacing interrupts ?

(5 × 3 = 15 marks)

Part B

Answer all questions.
Each question carries 5 marks.

6. Write the operating modes of 8086 microprocessor.

7. Write the importance of assembler.

8. State the programmable interval timer.

9. Write the importance of the microcontroller.

10. Write the ALP for interfacing 8051 with switches.

(5 × 5 = 25 marks)

Turn over

Part C

*Answer **all** questions.*
Each question carries 12 marks.

11. Explain in detail about the 8086 microprocessor architecture with neat sketch.

Or

12. Write the minimum and modes of 8086 and draw the timing diagram of it.

13. Explain in detail about the addressing modes of 8086 and its types.

Or

14. Write in detail about the interrupts for 8086 and its types.

15. Write the programmable peripheral interface 8255 in detail with neat sketch.

Or

16. Explain the memory and I/O addressing and its types in detail.

17. Explain in detail about the architecture of 8051 microcontroller.

Or

18. Write in detail about the addressing modes of 8051 microcontroller and its types.

19. Explain the memory organization and its types in detail.

Or

20. Write the ALP for interfacing with stepper motor.

(5 × 12 = 60 marks)

B.TECH. DEGREE EXAMINATION, NOVEMBER 2017

Fifth Semester

Branch : Information Technology

IT 010 503—DATA COMMUNICATION (IT)

(New Scheme—2010 Admission onwards)

[Improvement/Supplementary]

Time : Three Hours   Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 3 marks.

1. Explain different Network Topologies with figures.
2. What is meant by Channel capacity ? Explain.
3. What is Asynchronous transmission ? Explain.
4. Explain the types of Twisted Pair Cables.
5. What is GPRS ? Explain.

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 marks.

6. With a diagram explain the working of Token Bus.
7. Draw the frequency spectrum of an ASK signal. How transmission bandwidth of the ASK signal is found out ?
8. Explain a Full Duplex system. Compare it with Half duplex system.
9. Explain the types of Digital Subscriber Line.
10. Discuss the salient features of FDMA.

(5 × 5 = 25 marks)

Part B

Answer **all** *questions.*
Each full question carries 12 marks.

11. (i) With diagram explain OSI model.
    (ii) What is FDDI ? Explain.

Or

Turn over

12. What are the significance of I E E E standards ? Explain some of the I E E E standards with its frame format.

13. Explain Frequency Division Multiplexing with diagram. Compare it with statistical time Division Multiplexing.

Or

14. Explain the following :

    (i) FSK.

    (ii) PSK.

15. Explain different types of Transmission mode in detail.

Or

16. Discuss the basic principles of circuit switching and packet switching.

17. Describe different types of guided media used for Data Transmission.

Or

18. Discuss on :

    (a) Multidrop Lines.

    (b) Cable TV Networks.

19. Explain TDMA with its frame structure and concepts of working.

Or

20. Write notes on :

    (a) GSM.

    (b) Frequency Allocation.

(5 × 12 = 60 marks)