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328454(28)

B. E. (Fourth Semester) Examination, April-May 2021

(New Scheme)

(ET&T Engg. Branch)

MICROPROCESSOR and INTERFACES

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *Attempt all questions. Part (a) of each unit is compulsory. Solve any* **two** *parts from (b), (c) and (d) of each unit.*

Unit-I

1. (a) Why accumulator is special type of Register. 2

   (b) Explain generation of Control Signal in 8085. 7

(c) Explain Demultiplexing of bus with diagram in detail. 7

(d) Explain the following : 7

(i) Program Counter

(ii) Stack Pointer

(iii) Flag Register

Unit-II

2. (a) Describe use of H-L Register Pair. 2

(b) Explain various type of addressing mode of 8085 in detail with example. 7

(c) Describe following instruction : 7

(i) MOV A, M

(ii) LDAXB

(iii) LXI H, 2000

(iv) LDA 8000 H

(d) Write a program to convert 2 digit BCD to binary. 7

Unit-III

3. (a) What are different types of memory. 2

(b) Explain different type of data transfer scheme. 7

(c) Compare Memory Mapped I/O and I/O mapped I/O. 7

(d) What is the difference between absolute decoding and linear decoding. 7

Unit-IV

4. (a) What are Hardware Interrupts. 2

(b) Explain Interrupt structure of 8085 in detail. 7

(c) Explain RIM and SIM Instructions. 7

(d) Explain Handshaking signal to interface I/O device and O/P device. 7

Unit-V

5. (a) Define the term control word register. 2

(b) Draw and explain 8255 in detail. 7

(c) Explain 8253/8254 block diagram. 7

(d) Explain USART (8251) block diagram. 7