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Fourth Semester B. Sc. (Part–II) Examination

4S : ELECTRONICS

(Communication Electronics and 8085 Microprocessor)

P. Pages : 7

Time : Three Hours]　　　　　　　　　　　　[Max. Marks : 80

Note : (1)　All questions are compulsory.

　　　　(2)　Draw neat diagrams wherever necessary.

1.　(A)　Fill in the blanks :—

　　　　(1)　RAM is ......

　　　　(2)　FM is ......

　　　　(3)　PPM stands for ......

　　　　(4)　The width of address bus in 8085 is ......

　　　　　　　　　　　　　　　　　　　　　　　2

　　(B)　Choose correct alternative for the following :—

　　　　(1)　There are —— sidebands in AM.

　　　　　　(a)　Two

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(b) Four

(c) Three

(d) One.

(2) 8085 is a —— bit microprocessor.

(a) 8

(b) 4

(c) 16

(d) 32.

(3) There are —— flags in 8085.

(a) 3

(b) 5

(c) 6

(d) 8.

(4) PCM stands for ——

(a) Pulse Code Modulation

(b) Perfect Code Mode

(B) Explain memory map I/O and I/O mapped I/O schemes with example. 6

OR

(P) Explain operating modes of 8255 PPI. 4

(Q) Explain synchronous and Asynchronous data transfer scheme. 4

(R) What is BSR mode ? Explain with suitable diagram. 4

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6. **EITHER**

(A) Explain addressing modes of 8085 with suitable example. 6

(B) Draw the flow chart and write ALP for subtraction of two 8 – bit numbers. 6

OR

(P) What is flow chart ? Draw and explain various flow chart symbols. 6

(Q) What is machine language ? State advantages and disadvantages of machine language. 4

(R) State the addressing modes of following instructions :—

(i) MOV A , B

(ii) STA 6500 H. 2

7. **EITHER**

(A) Draw the block diagram of 8255 PPI and explain the function of each block. 6

(c) Pulse Correct Mode

(d) None. 2

(C) Write answer in **one** sentence :—

(1) What is Bus ?

(2) What is PSW ?

(3) What is modulation ?

(4) What is the function of SP ? 4

2. **EITHER**

(A) Draw the block diagram of AM transmitter and explain the function of each block. 6

(B) Draw and explain diode detector circuit. 6

OR

(P) Explain FM theory and frequency spectrum of FM Wave. 6

(Q) Explain the need of modulation. 6

3. **EITHER**

(A) Draw and explain block diagram of fiber optic communication system. 6

(B) Explain the working of LED as an optical source. 6

OR

(P) Explain different types of optical fiber. 6

(Q) Explain the working of LASER as an optical source. 6

4. **EITHER**

(A) Differentiate between TDM and FDM. 6

(B) Explain PWM and PPM. 6

OR

(P) What is sampling theorem ? Explain. 6

(Q) Explain the classification of pulse modulation. 6

5. **EITHER**

(A) Draw the block diagram of 8085 μp and explain the function of ALU, Timing and control unit and G. P. R. 6

(B) Draw and explain timing diagram of mov r_1 , r_2 instruction using suitable example. 6

OR

(P) Explain one byte, two byte and three byte instruction with suitable example. 6

(Q) Explain the function of following pins in 8085.

(i) $\overline{RD}$

(ii) IO / $\overline{M}$

(iii) ALE

(iv) $\overline{WR}$

(v) READY

(vi) $AD_7 - AD_0$. 6

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