AU–118

B.Sc. (Part—II) Semester—IV Examination

4S : ELECTRONICS

(Communication Electronics and 8085 Microprocessor)

Time : Three Hours] [Maximum Marks : 80

Note :— (1) **All** questions are compulsory.

(2) Draw neat diagram wherever necessary.

1. (A) Fill in the blanks :

(i) RAM stands for _____.

(ii) The width of address bus in 8085 is _____.

(iii) AM stands for _____.

(iv) PAM stands for _____. 2

(B) Choose the correct alternative for the following :

(i) The width of data bus of 8085 is :

(a) 2-bits (b) 4-bits

(c) 8-bits (d) None

(ii) FM is :

(a) Frequency Modem (b) Frequency Modulation

(c) Amplitude Modulation (d) None

(iii) PCM stands for :

(a) Pulse Code Modulation (b) Perfect Code Modulation

(c) Pulse Correct Code (d) None

(iv) Intel 8085 microprocessor is _____ bit microprocessor.

(a) 2-bits (b) 5-bits

(c) 16-bits (d) 8-bits 2

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

(i) State the addressing mode of LDA, 2500 H.

(ii) What is Modulation ?

(iii) What is 'Execute Cycle' ?

(iv) What is the function of data bus ? 4

EITHER

2. (A) Explain the theory of Amplitude Modulation. 6

(B) Draw the block diagram of FM transmitter and explain the function of each block. 6

OR

(P) Draw and explain diode detector circuit. 6

(Q) State the needs of modulation. 4

(R) What are the advantages of FM ? 2

EITHER

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

(B) Explain the Jointer and Coupler. 6

OR

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

(Q) What are the different types of optical fibers ? Explain. 6

EITHER

4. (A) State the difference between TDM and FDM. 6

(B) Explain PPM and PWM. 6

OR

(P) Explain PCM used in digital communication. 6

(Q) What is multiplexing ? Explain TDM. 6

EITHER

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

(B) Draw the block diagram of 8085 microprocessor and explain the function of ALU, ACC and Stack Pointer. 6

OR

(P) Draw and explain timing diagram for MOV A, B instruction. 6

(Q) What is flag ? Explain various status flags of 8085 μp with neat diagram. 6

EITHER

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

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

OR

(P) Explain the stack and stack related instruction with suitable example. 6

(Q) Draw the flow chart and write ALP for delay subroutine using register pair. 4

(R) State the addressing modes of following instructions :

(i) MOV C, B

(ii) MVI A, FFH 2

EITHER

7. (A) Explain the control word format for I/O mode of 8255 PPI. 6

(B) Draw the pin diagram of 8255 PPI and explain the function of important pins. 6

OR

(P) Explain Synchronous and Asynchronous data transfer scheme. 6

(Q) Explain memory mapped I/O and I/O mapped I/O scheme for address space allocation. 6