

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 diagrams wherever necessary.

1. (A) Fill in the blanks : 2

(i) ALU stands for _____.

(ii) PPI stands for _____.

(iii) RAM stands for _____.

(iv) AM is _____.

(B) Choose correct alternative for the following : 2

(i) The width of address bus of 8085 is _____

(a) 1-bit

(b) 4-bits

(c) 8-bits

(d) 16-bits

(ii) Intel 8085 is a _____ bit microprocessor :

(a) 16-bits

(b) 8-bits

(c) 4-bits

(d) none

(iii) FM is _____.

(a) Frequency multiplication

(b) Frequency modem

(c) Frequency modulation

(d) None

(iv) PAM stands for _____.

(a) Pulse Amplitude modulation

(b) Phase analogue modulation

(c) Phase arrangement modulation

(d) None

- (C) Write answer in **one** sentence each : 4
- (i) What is PPM ?
 - (ii) What is Bus ?
 - (iii) What is function of PC ?
 - (iv) What is the addressing mode of STA, 6500H instruction ?

EITHER

2. (A) Draw the block diagram of FM transmitter and explain the function of each block. 6
- (B) Draw and explain the diode detector circuit. 6

OR

- (P) Explain the theory of AM. 6
- (Q) Explain the needs of modulation. 4
- (R) What are advantages of AM ? 2

EITHER

3. (A) Explain the working of LED as an optical source. 6
- (B) Draw and explain the block diagram of fiber optic communication system. 6

OR

- (P) Explain the Jointer and Coupler. 6
- (Q) Explain advantages and disadvantages of optical fiber communication system. 6

EITHER

4. (A) State in brief various types of pulse modulation. 6
- (B) Explain sampling theorem and quantization noise. 6

OR

- (P) Differentiate between TDM and FDM. 6
- (Q) Explain PWM and PPM. 6

EITHER

5. (A) Draw the block diagram of 8085 micro-processor and explain the function of each block. 10
- (B) Explain the function of following pins :
- (i) \overline{RD}
- (ii) \overline{WR} . 2

OR

- (P) Draw and explain timing diagram of Mov r_1, r_2 instruction with suitable diagram. 6
- (Q) Explain instruction cycle, fetch cycle and execute cycle with suitable diagram. 6

EITHER

6. (A) Draw the flow chart and write ALP for subtraction of 8-bit numbers. 6
- (B) What is flow chart ? Draw and explain various flow chart symbols. 6

OR

- (P) Explain the classification of the instructions of 8085 μp . 6
- (Q) Draw the flow chart and write ALP for finding minimum of two numbers. 6

EITHER

7. (A) Explain operating modes of 8285 PPI. 6
- (B) Differentiate between memory mapped I/O and I/O mapped I/O scheme. 6

OR

- (P) Explain with suitable diagram the control word format for I/O mode of operation of 8255. 6
- (Q) Explain Synchronous and Asynchronous data transfer schemes. 3
- (R) Draw the block diagram of 8255 PPI. 3

