

**B.Sc. (Part-II) Semester-IV Examination  
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 : 2
- (i) PC stand for \_\_\_\_\_.
  - (ii) BSR stand for \_\_\_\_\_.
  - (iii) The width of data bus of 8085 microprocessor is \_\_\_\_\_.
  - (iv) FM is \_\_\_\_\_.
- (B) Choose correct alternative for the following : 2
- (i) AM is \_\_\_\_\_
    - (a) Amplitude modem (b) Amplitude modulation
    - (c) Frequency modulation (d) None.
  - (ii) Modulation is opposite process of \_\_\_\_\_.
    - (a) Demodulation (b) Rectification
    - (c) Multiplexing (d) None
  - (iii) There are \_\_\_\_\_ sidebands in AM.
    - (a) One (b) Two
    - (c) Three (d) Four
  - (iv) There are \_\_\_\_\_ flags in 8085.
    - (a) 3 (b) 8
    - (c) 5 (d) 9
- (C) Write answer in one sentence : 4
- (i) What is PPM?
  - (ii) What is the function of SP?
  - (iii) What is fetch cycle?
  - (iv) Give the addressing mode of STA 6500 H.

**EITHER**

2. (A) Draw the block diagram AM transmitter and explain the function of each blocks. 6
- (B) Explain the FM theory and frequency spectrum of FM wave. 6

**OR**

- (P) Draw and explain the block diagram of superheterodyne receiver. 8  
(Q) Explain the need of modulation in communication. 4

**EITHER**

3. (A) Explain the working of photodiode as an optical detector. 6  
(B) Explain different types of optical fibers. 6

**OR**

- (P) Explain total Internal reflection and numerical aperture. 6  
(Q) Explain Laser diode as optical source in optical communication system. 6

**EITHER**

4. (A) Explain the classification of pulse modulation. 6  
(B) State and explain FDM with the help of suitable diagram. 6

**OR**

- (P) Explain PAM and PCM. 8  
(Q) What is quantization? Explain. 4

**EITHER**

5. (A) Draw the block diagram of microcomputer and explain the function of each block. 6  
(B) Explain the function of following pins in 8085 microprocessor :  
(i)  $\overline{RD}$  (ii)  $\overline{WR}$   
(iii)  $IO/\overline{M}$  (iv) HOLD  
(v) READY (vi)  $D_0$  to  $D_7$  6

**OR**

- (P) State and explain the general purpose registers of 8085 microprocessor. 4  
(Q) Explain various status flags with suitable diagram of 8085 microprocessor. 5  
(R) Explain one byte, two byte and three byte instructions with suitable example. 3

**EITHER**

6. (A) What is addressing modes? Explain different types of addressing modes with suitable examples. 6  
(B) Draw the flow chart and write ALP for addition of two 8-bit numbers using 8085 microprocessor. 6

**OR**

- (P) Explain the classification of instruction set of 8085 microprocessor. 6  
(Q) Draw the flow chart and write ALP for finding of maximum of two numbers. 6

**EITHER**

7. (A) Draw the block diagram of 8255 PPI & explain the working of each block. 6  
(B) Explain memory mapped I/O and I/O mapped I/O scheme. 6

**OR**

- (P) Explain control word format for BSR mode with suitable diagram and example. 6  
(Q) Explain various data transfer schemes. 6