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