AW–1726

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) ROM stands for _____ .

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

(iii) FM stands for _____ .

(iv) PPM stands for _____ .

(B) Choose correct alternative for the following :— 2

(i) AM is _____ .

(a) Frequency modulus (b) Frequency Modulation

(c) Amplitude modulation (d) None

(ii) The width of data bus of 8085 is _____ .

(a) 2 bits (b) 4 bits

(c) 8 bits (d) None

(iii) PWM stands for _____ .

(a) Pulse width modulation (b) Pulse code modulation

(c) Pulse correct code (d) None

(iv) There are _____ Flags of 8085.

(a) 3 (b) 8

(c) 5 (d) 9

(C) Write answer in one sentence : 4

(i) What is the function of SP (Stack Pointer) ?

(ii) What is OP-code ?

(iii) What is Modulation index ?

(iv) What is the function of address bus ?

EITHER

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

(B) Explain the FM theory and frequency spectrum of FM wave. 6

OR

(P) Draw the block diagram of superheterodyne receiver ; explain its block diagram. 6

(Q) State the needs of modulation. 3

(R) What are the advantages of AM ? 3

EITHER

3. (A) Explain the working of LED as optical source. 6

(B) Explain different types of optical fibers. 6

OR

(P) Draw the block diagram of fiber optic communication system ; explain function of each block. 6

(Q) Explain the Jointer and Couplers. 6

EITHER

4. (A) Explain PAM and PWM. 6

(B) State and explain FDM with help of suitable diagram. 6

OR

(P) What is multiplexing ? Explain TDM. 6

(Q) What is PCM ? Explain PCM used in digital communication. 6

EITHER

5. (A) Draw the block diagram of 8085 microprocessor and explain the function of :

(i) ALU (ii) SP (iii) PC 6

(B) Explain one byte, two byte and three byte instructions with suitable example. 6

OR

(P) Explain various status Flags with suitable diagram of 8085 microprocessor. 6

(Q) Draw and explain timing diagram for MOV r_1, r_2 instruction. 6

EITHER

6. (A) Explain the classification of instruction set of 8085 microprocessor with example. 6

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

OR

(P) Draw the flow chart and write ALP for finding of minimum of two numbers. 6

(Q) Explain the stack and stack related instructions with suitable example. 6

EITHER

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

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

OR

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

(Q) Explain memory mapped I/O and I/O mapped I/O scheme. 6