

**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