

**B.Sc. (Part-II) Semester-IV Examination
ELECTRONICS**

(Communication Electronics and 8085 Microprocessor)

Time : Three Hours]

[Maximum Marks : 80

1. (A) Fill in the blanks :

- (1) SP stands for _____.
- (2) CPU stands for _____.
- (3) The width of address bus is _____.
- (4) FM stands for _____.

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(B) Choose correct alternative for the following :

- (1) The width of data bus is _____.
 (a) 1-bit (b) 4-bit
 (c) 8-bit (d) 16-bit
- (2) AM is stands for _____.
 (a) Amplitude modulation (b) Frequency modulation
 (c) Demodulation (d) Rectification
- (3) There are _____ side bands in AM .
 (a) one (b) two
 (c) three (d) four
- (4) 8085 μ p have _____ general purpose register.
 (a) 4 (b) 8
 (c) 7 (d) None

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(C) Write answer in **one** sentence :

- (1) What is Bus ?
- (2) What is function of SP ?
- (3) What is the addressing mode of LDA2500H instruction ?
- (4) What is PWM ?

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EITHER

2. (A) Draw and explain block diagram of super heterodyne receiver. 6

(B) Draw the block diagram of FM transmitter and explain the function of each block. 6

OR

- (P) Explain the FM theory and frequency spectrum of FM wave. 8
 (Q) Explain the need of modulation. 4

EITHER

3. (A) Explain the working of LED as an optical source. 6
 (B) Explain the jointer and coupler. 6

OR

- (P) Draw and explain the block diagram of fiber optic communication system. 6
 (Q) Explain any two optical detectors. 6

EITHER

4. (A) Differentiate between TDM and FDM. 6
 (B) Explain sampling theorem and quantization noise. 6

OR

- (P) Explain the classification of pulse modulation. 6
 (Q) Explain PWM and PPM. 6

EITHER

5. (A) Explain the instructions format of 8085 μ p. 6
 (B) Draw the block diagram of microcomputer and explain the function of each block. 6

OR

- (P) Explain various status flags of 8085 μ p with neat diagram. 6
 (Q) Draw and explain timing diagram of $\text{mov } r_1, r_2$ instruction. 6

EITHER

6. (A) Draw the flow chart and write ALP for addition of two 8-bit numbers. 6
 (B) Explain classification of instruction set of 8085 μ p with neat diagram. 6

OR

- (P) Explain instruction cycle, fetch cycle and execute cycle with suitable diagram. 6
 (Q) Draw and explain flow chart symbols with suitable diagram. 6

EITHER

7. (A) With suitable diagram explain control word format of I/O mode of 8255 PPI. 6
 (B) Explain Synchronous, Asynchronous and Interrupt driven data transfer schemes. 6

OR

- (P) Draw the block diagram of 8255 PPI and explain the working of each block. 6
 (Q) Explain control word format for BSR mode with suitable diagram and example. 6