AS–1512

B.C.A. (Part–II) Semester–III Examination

ELECTRONICS

Paper–3 ST 5

Time : Three Hours] [Maximum Marks : 60

N.B. :– (1) **ALL** questions are compulsory.

(2) All questions carry equal marks.

1. (A) Draw the block diagram of architecture of 8085 microprocessor and explain the function of various blocks. 8

(B) Explain the opcode fetch cycle with timing diagram. 4

OR

2. (P) Draw the pin diagram of 8085 microprocessor and explain the function of various pins. 8

(Q) Draw the block diagram of microcomputer and explain the function of various blocks. 4

3. (A) Explain the meaning of following instructions :

(i) LDA, IDOOH

(ii) MOV C, B

(iii) ADD B

(iv) SUB C

(v) JMP IEOOH

(vi) HLT. 6

(B) Explain the concept of subroutine with suitable example. 6

OR

4. (P) Explain the various addressing modes with suitable example for 8085 microprocessor. 6

(Q) Write ALP program for division of 8 bit number and store the remainder and quotient in suitable memory location. 6

5. (A) Explain the various schemes for data transfer scheduling. 4

(B) Draw the block diagram of 8255 PPI. 4

(C) Explain the function of various bits in control word register of 8255 PPI. 4

OR

6. (P) Give the differences between memory mapped I/O and I/O mapped I/O. 4

(Q) Draw the pin diagram of 8255 PPI and explain the function of various pins. 6

(R) What is BSR mode in 8255 PPI ? 2

7. (A) Draw the block diagram of 8086 microprocessor. 4

(B) Explain the concept of memory segmentation in 8086 microprocessor memory. 4

(C) What is physical and effective address ? 4

OR

8. (P) Draw the pin diagram of 8086 microprocessor. 4

(Q) Give the differences between minimum and maximum operating modes of 8086 microprocessor. 4

(R) Explain the function of various bit in flag register of 8086 microprocessor. 4

9. (A) Explain the meaning of following instructions :

(i) mov AX, BX

(ii) mov AX, [BX]

(iii) PUSH BX

(iv) ADD AX, [BX]

(v) SUB AL, [BX]

(vi) MUL BL 6

(B) Write ALP program to add 8 bit number in :

(i) Register addressing

(ii) Immediate addressing

(iii) Indirect addressing. 6

OR

10. (P) Explain various addressing modes of 8086 microprocessor. 6

(Q) Write ALP program for division of 8 bit number in the following addressing modes of 8086 microprocessor :

(i) Register

(ii) Register in direct. 6