2020

ELECTRONICS — GENERAL

Fourth Paper

(Group - A)

Full Marks : 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

SET - 3

Answer ***question no.* 1** and ***any four*** questions from the rest, taking at least ***one*** from each of the ***Unit - I*** and ***Unit - II.***

1. Answer briefly ***any five*** of the following questions : 2×5

(a) What are the values of power supply voltage and clock frequency of 8085 μp?

(b) What is the function of ALE signal in 8085?

(c) Mention the purpose of SID and SOD lines in a 8085 microprocessor.

(d) What is the role of temporary registers?

(e) Explain the difference between JMP instruction and CALL instruction.

(f) What is syntax error in C programming?

(g) Which types of variables are supported by C?

(h) Name the header files in C-programming.

Unit - I

(8085 Microprocessor)

2. (a) How $\overline{\text{MEMR}}$ and $\overline{\text{IOR}}$ signals can be generated from the control signals using logic gates?

(b) How H-L pair is used as memory pointer?

(c) Explain – (i) ADI 57H (ii) XRA A. 4+2+(2+2)

3. (a) State the functions of the instruction decoder and incrementor / decrementor latch.

(b) Write an assembly language program to find the smaller of the two numbers stored in two memory locations and store the result in another memory location. (2+2)+6

Please Turn Over

4. (a) What is stack pointer register?

(b) Explain the role of HOLD, READY, INTR and $\overline{\text{INTR}}$ signals.

(c) What is the function of accumulator? 2+(1½×4)+2

5. (a) Write an assembly language program to subtract two 8-bit numbers stored in two memory locations by 2's complement method and store the result in another memory location.

(b) Explain – (i) Instruction cycle (ii) Machine cycle. 6+(2+2)

Unit - II

(Computer Programming)

6. (a) What do you understand by the library function in 'C'?

(b) Explain how loop is used to generate delay.

(c) What are the types of errors occurred in C-program? 2+5+3

7. (a) Describe the role of DVD drive and flash memory in PC.

(b) Write a 'C' program to check whether a number is prime or not.

(c) What is the use of `clrscr()`? 2+5+3

8. (a) Explain, with example, the increment and decrement operators in 'C' programming.

(b) Compare `while` and `do-while` loops in C programming. Explain with example.

(c) What is the role of `getch()`? Mention the corresponding header file. 4+4+2

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