AF-3016

B.Sc. (Part - I)
Term End Examination, 2017-18

COMPUTER SCIENCE

Paper - I

Time : Three Hours] [*Maximum Marks* : 50

Note : Answer **all** questions. All questions carry equal marks. Answer should be brief and to the point. Draw diagrams to justify your answers. Assume suitable data if required.

Unit-I

1. (*a*) What is Computer ? Explain their types.

(*b*) Define Decimal number system. Explain 10's complement with example.

OR

(*a*) What is programming language ? Describe the object-oriented programming language with their features.

(*b*) Convert the following :

(*i*) $(8132F)_{16} = (\ )_{10}$

(*ii*) $(57.375)_{10} = (\ )_2$

Unit-II

2. (*a*) Define computer communication code and explain 8421 code.

(*b*) Describe diode and BJD switches.

OR

Explain the following :

(*a*) EBCDIC Code

(*b*) Parity Code

(*c*) Nand Gate

(*d*) Mathematical Logic

Unit-III

3. (*a*) Draw and explain TTL circuit.

(*b*) Describe the law of Boolean algebra.

OR

(*a*) What is Adder ? Explain full adder with example.

(*b*) Define K-Map and give the example for simplification of K-Map.

Unit-IV

4. (*a*) What is flip-flop ? Explain clocked RS flip-flop with diagram.

(*b*) Explain the concept of encodes and decodes.

OR

Explain the following :

(*a*) Schmitt trigger

(*b*) Multiplexer

(*c*) Data transmission

(*d*) Edge triggered flip-flop

Unit-V

5. (*a*) Describe memory in respect of ROM and their types.

(*b*) Give the difference between Register and Counter.

OR

(*a*) Give the difference between SRAM and DRAM.

(*b*) What is Counter ? Explain synchronous counter with example.

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