Roll No .....

EC-403

B.E. IV Semester

Examination, December 2015

Digital Electronics

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

UNIT - I

1. a) Convert the gray code 1011 to binary.
   b) Draw the diagram of AND gate and draw its truth table.
   c) Convert 1011101_2 to decimal.
   d) Explain Karnaugh's Map method with example.

OR

Define Demorgan's theorem in detail.

UNIT - II

2. a) Write the difference between Half adder and Full adder.
   b) Draw the diagram of BCD adder.
   c) What do you mean by universal gate? Explain in brief.
   d) Write short notes on:
      i) FDM ii) TDM.

OR

Draw the diagram of demultiplexer and explain its working.

UNIT - III

3. a) Draw the circuit diagram of 555 timer.
   b) Write the application of register.
   c) Distinguish between monostable, astable and bistable.
   d) Draw the circuit diagram of master Slave JK flip flop and explain its working.

OR

What do you mean by counter? Explain different types of counter in brief.

UNIT - IV

4. a) What do you mean by memory?
   b) Write the difference between RAM and ROM.
   c) What do you understand by PLA?
   d) Explain SRAM and DRAM in detail.

OR

Explain PROM, EPROM and EEPROM in detail.

UNIT - V

5. a) What do you mean by interfacing?
   b) What is ECL?
   c) Write the difference between NMOS and CMOS.
   d) Write short notes on :
      i) RTL ii) DTL

OR

Write short notes on :
i) TTL ii) TIL

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