FACULTY OF ENGINEERING &TECHNOLOGY
F.E.(ALL) Year Examination-June-2015
Elements of Electronics& Comp. Engg
(Revised)

Time: Two Hours   **Maximum Marks: 40**

"Please check whether you have got the right question paper."
i) Q. No. 1 is compulsory.
ii) Attempt _any two_ questions from remaining questions.
iii) Assume suitable data wherever necessary.

SECTION-A

Q.1   Solve _any five_ questions   10
   1) Define inductance. Enlist the types of inductor.
   2) Draw the symbols of following devices (1) TRIAC (2) n-channel DMOSFET (3) NPN Transitory (4) P-channel JFET
   3) Draw the construction of MIETE opto coupler.
   4) Explain the necessity of rectifier.
   5) Define line regulation. Write its equation also.
   6) Convert the following$(11011)_2 = ( )_{10}$
   7) Draw the truth table of NAND as well as OR gate.
   8) Enlist the features of IC 7400.

Q.2   a)   Draw and explain the V-1 characteristic of p-N junction diode.   07
      b)   Compare BJT and JFET.   08

Q.3   a)   Draw and explain the block diagram of regulated power supply.   07
      b)   With neat circuit diagram explain the operation of half ware rectifier. Also draw input and output waveforms.   08

Q.4   a)   Explain basic logic gates in detail.   07
      b)   State any four Boolean algebra, prove them using truth table.   08

Q.5   Write a short note on (_any three_)   15
   1) LED
   2) IGBT
   3) IC voltage regulations
   4) Universal logic gates