S.B. Roll No.....

BASIC ELECTRICAL ENGINEERING

2nd Exam/ECE/ECE-II/ETV/COMP/IT/CSc/EEE/0064/May'18

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. Do as directed. **10x1.5=15**

a. Unit of resistance is _____.
b. Define ohms law.
c. In domestic installation all the electrical appliances are connected in _____
d. Constant voltage source has _____internal impedance as compared to external load impedance.
e. Unit of magnetic flux density is _____
f. The specific gravity of fully charged cell is _____
g. Draw sinusoidal AC waveform w.r.t. angle.
h. At resonance in series RLC circuit, XL = _____
i. The formula for calculating the capacitive reactance Xc = _____
j. Fuel used in thermal power plant is _____

SECTION-B

Q2. Attempt any six questions. **6x5=30**

i. Define Resistance. On which factor resistance depends discuss.
ii. Resistance of 2ohm, 3ohm and 6ohm are connected in parallel and the combination is connected in series with a resistance of 1 ohm across a battery with an E.M.F. of 44V. find
    a. Potential difference across 1ohm resistance.
    b. Potential difference across parallel circuit.
    c. Current in each resistor.
iii. Discuss comparison between magnetic and electric circuit.
iv. Write a short note on a) Cycle b) Time period c) Frequency d) Amplitude e) Phase
v. Discuss resistance inductance and capacitance in series
vi. What do you mean by Q factor of a parallel circuit? What is its importance?
vii. Discuss nuclear power station with neat diagram
viii. Discuss Kirchhoff's voltage law.

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. State and explain the venin's theorem.
b. Explain the construction and working of Lead acid battery.
c. Explain the steam power plant with neat diagram
d. Explain the generation of alternating voltage with diagram and discuss e.m.f. equation.