Roll no._____ **ID: 188422**

Semester: Level 3, Sem II
Branch: DVOC (Ref. & Air Cond., Medical Imaging Tech., Auto. Servicing, ITM, PT, SD, AMT, FP, EMS)
Subject Name: Basic Electricity

Time Allowed : 2 Hrs. **MM:50**

Section –A

Note: Multiple Choice questions. All questions are compulsory. **5x1=5**

Q.1 Filament of a bulb is made up of:
a. Copper b. Iron c. Zinc d. Tungsten

Q.2 L in LED stands for:
a. Lamp b. Light c. Lite d. Lower

Q.3 Capacitor is used to store _____:
a. Charge b. Power c. Current d. Resistance

Q.4 When two capacitors of capacitance C are connected in parallel, effective capacitance will be:
a. C/2 b. C c. 2C d. 4C

Q.5 Value of power factor lies between:
a. 0, 2 b. 0,1 c. 1, 2 d. -1, 1

Section-B

Note: Objective type questions. All questions are compulsory. **5x1=5**

Q.6 Define power factor?
Q.7 What is r.m.s. value?
Q.8 Tube light is used to convert electrical energy into light. (True/False)
Q.9 Battery is used to store DC. (True/False)
Q.10 Define Q-Factor?

Section –C

Note: Short answer type Questions. Attempt any six questions out of eight questions. **6x5=30**

Q.11 Differentiate between AC and DC.
Q.12 Explain Kirchhoff's law with suitable diagram and mathematical expression?
Q.13 List any five differences between primary and secondary cell?
Q.14 Define: Frequency, Peak Value, Form Factor, Capacitance, Phase Difference
Q.15 Explain Faraday's laws of electromagnetic induction?
Q.16 Derive the equation for energy stored in an inductor?
Q.17 Explain the concept of force acting on current carrying conductor placed in magnetic field?
Q.18 Explain ohm's law? Give its limitations?

Section D

Note: Long answer questions. Attempt any one questions out of two questions. **1x10=10**

Q.19 Define resistance? List factors on which resistance of a material depends? Derive an equation for effective resistance of two resistor connected in series and parallel?
Q.20 Draw and explain R-L-C series circuit?