

- Q.28 Define current and energy with its unit, explain the instrument by which it measure.
- Q.29 Draw a multimeter block diagram of a CRO.
- Q.30 Explain the principle of measurement of DC current.
- Q.31 Define semiconductor, explain in detail extrinsic semiconductor.
- Q.32 Define Digital electronics, explain binary and hexadecimal number.
- Q.33 Explain the general principle of D/A conversion techniques.
- Q.34 Explain EX and OR gate with its symbols.
- Q.35 What is PLC, Draw its block diagram.

### **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Define electric motor, explain connection of three phase motor by star delta starter.
- Q.37 Explain :-
- Boolean Algebra
  - Demorgan Theorem
- Q.38 Define Foundation, also explain the various foundations using heavy and light machine.

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**3rd Sem / Plastic Engineering**  
**Subject:- Engineering Fundamentals**

Time : 3Hrs.                                M.M. : 100

### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Name the instrument by which power is measured.
- Wattmeter
  - Energy meter
  - Voltmeter
  - Ammeter
- Q.2 An ammeter is an electrical instrument used to measure.
- Current
  - Voltage
  - Resistance
  - None of them
- Q.3 Current flow in a circuit.
- A switch is open
  - A switch is closed
  - Switch is neutral
  - There is no voltage
- Q.4 How many types of semiconductor are.
- 1
  - 2
  - 4
  - 3
- Q.5 Bridge rectifier is an alternative for.
- Full wave rectifier
  - Half wave rectifier

- c) Peak rectifier      d) None of them  
 Q.6 A zener diode has \_\_\_\_\_ Breakdown voltage.  
 a) Undefined      b) Sharp  
 c) Zero      d) None of them  
 Q.7 Machine Foundation is subjected to.  
 a) Dynamic Load      b) Static Load  
 c) Wind Load      d) Both a and b  
 Q.8 The current which change its direction is known as.  
 a) Direct current      b) Indirect current  
 c) Steady direct current d) none of them  
 Q.9 Electric motor converts electric energy in to \_\_\_\_\_ energy.  
 a) Light      b) Heat  
 c) Chemical      d) Mechanical  
 Q.10 An auto transformer starter is suitable for.  
 a) Star connected induction motor  
 b) Delta connected induction motor  
 c) Both a and b  
 d) None of them

### **SECTION-B**

**Note:** Objective type questions. All questions are compulsory.  $(10 \times 1 = 10)$

- Q.11 Define electrical energy.

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- Q.12 Give the instrument by which energy measure.  
 Q.13 What is the symbol of AND gate.  
 Q.14 Define power.  
 Q.15 How many types of vibration.  
 Q.16 Write name of the different types of vibration.  
 Q.17 Full form of PLC  
 Q.18 Define starter  
 Q.19 Define frequency.  
 Q.20 Define Hexadecimal number.

### **SECTION-C**

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions.  $(12 \times 5 = 60)$
- Q.21 Define the following electrical quantities :-  
 a) Electrical Energy  
 b) Electrical Power with their units  
 Q.22 Define motor, explain three phase motor with its application.  
 Q.23 Explain full wave rectifier with neat sketch.  
 Q.24 Define NOR and NOT gate with its symbol.  
 Q.25 Define foundation and their salient features.  
 Q.26 Write a short note on construction material.  
 Q.27 Explain the general methods for alignment/ leveling of a machine.

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