

- Q.28 State and explain ohm's law.
- Q.29 Explain the current flow through a N-type semiconductor at room temperature.
- Q.30 What is P-N Junction diode? Write its mechanism of current flow.
- Q.31 Explain distribution system in detail.
- Q.32 What is earthing? Explain its importance.
- Q.33 Explain working of Half-wave rectifier.
- Q.34 Give advantage of electrical energy over other forms of energy.
- Q.35 Explain De-Morgans's theorem.

SECTION-D

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

- Q.36 Explain construction and working of 3-phase induction motor with the help of neat sketch.
- Q.37 Write short note on:
- PNP and NPN transistors
 - Active and passive components
- Q.38 How foundations are classified? Explain any two types of foundations with neat sketch.

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Roll No.

3rd Sem / Plastic Engineering/ Chem Engg (Spl. Paint Tech). Rubber Tech., Chem Engg. (Spl. Polymer Engg)
Subject:- Engg. Fundamentals

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Ohm's law cannot be applied on _____
- insulators
 - conductors
 - semi-conductors
 - small resistors
- Q.2 The resistivity of a wire depends on _____
- length
 - diameter
 - material
 - all of these
- Q.3 Unit of resistance is _____.
- ampere
 - ohm
 - emf
 - none of these
- Q.4 Which of the following logic gates are known as universal gates?
- NOR, NAND, XNOR
 - XOR, NOR, NAND
 - NOT, AND, OR
 - NOR, NAND

- Q.5 A circuit breaker is a _____.
- Fuse
 - switch
 - Resettable protective device
 - resistor
- Q.6 In DOL fuses are provided to protect against
- Short circuit protection
 - Over voltage
 - Over current
 - Over load
- Q.7 In gases the flow of current is due to
- Electrons only
 - Positive ions only
 - Electrons and positive ions
 - Electrons, positive ions and negative ions
- Q.8 Temperature coefficient of resistance is expressed in terms of
- Ohms/°C
 - Mhos/ohm°C
 - Ohms/ohm°C
 - Mhos/°C
- Q.9 The filament of an electric bulb is made of
- Carbon
 - Aluminium
 - Tungsten
 - Nickel
- Q.10 The most commonly used semiconductor is _____
- Germanium
 - Silicon
 - Carbon
 - Sulphur

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SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 An ideal crystal diode has _____ forward resistance.
- Q.12 Define power factor.
- Q.13 What is truth table?
- Q.14 Give one advantage of full wave rectifier.
- Q.15 What is meant by dressing of stone.
- Q.16 Draw symbol for NOT gate.
- Q.17 What is overload.
- Q.18 C.R.O stands for _____.
- Q.19 Standard size of break is _____.
- Q.20 Name two types of timber.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain different type of foundations.
- Q.22 Explain A/D converter.
- Q.23 Give applications of PLC.
- Q.24 Explain brick masonry.
- Q.25 Explain C.R.O and its uses.
- Q.26 What are the requirements of good building stone.
- Q.27 Write basic defects in timber.

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