

**NETTUR TECHNICAL TRAINING FOUNDATION
COMMON FOR CP08 & CP09**

I SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JAN 2023

Subject: Basics of Electrical & Electronics

Total Time: 2 Hr.

Subject Code: CP08105T/CP09105T

Total Marks: 50 Marks

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING

2*8=16

- 1.1 Draw the symbol of resistor and write the unit of resistance
- 1.2 What is meant by threshold or knee voltage?
- 1.3 What is forbidden energy gap?
- 1.4 Define frequency and time period
- 1.5 Find the value of resistance for the color band: Brown, Black, Orange, and Gold
- 1.6 What is diode? Draw its symbol
- 1.7 Write the function of rectifier in a circuit
- 1.8 List out the four types of number system.
- 1.9 Which logic gates are called as universal gates?
- 1.10 Write the difference between AC & DC

2.0 ANSWER ANY SIX OF THE FOLLOWING

3*6=18

- 2.1 Write the difference between power and energy
- 2.2 State Kirchhoff's current law and voltage law
- 2.3 Write any three characteristics of capacitor.
- 2.4 Write the difference between intrinsic and extrinsic semi-conductor
- 2.5 Determine the 2's complement of the binary numbers a) 1101001 b) 1110101
- 2.6 Write the differences between analog system and digital system
- 2.7 Draw the symbol & truth table of AND, OR, NOT logic gates
- 2.8 Convert the decimal number 217 into binary value

3.0 ANSWER ANY FOUR OF THE FOLLOWING

4*4=16

- 3.1 Draw the circuit of 3 resistance connected in series and parallel and write down the equations for total resistance.
- 3.2 How solids are classified on the basis of energy bands? Explain with diagram
- 3.3 Draw and explain the VI characteristics of a PN junction diode
- 3.4 What is an LED? How it is constructed?
- 3.5 Draw and explain the working of a half wave rectifier with neat diagram
- 3.6 Explain the construction & working of capacitor with neat diagram

