

**NETTUR TECHNICAL TRAINING FOUNDATION**  
**DIPLOMA IN MECHATRONICS ENGINEERING & SMART FACTORY – CP15**  
**II SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JULY 2023**

**Subject: Electronics-II**  
**Subject Code: CP15204T**

**Total Time: 2 Hr.**  
**Total Marks: 50**

**PART B**

**1.0 ANSWER ANY EIGHT OF THE FOLLOWING** **2\*8=16**

- 1.1 Draw the symbol for two types of transistors
- 1.2 Define Voltage Gain
- 1.3 Name the transistor working regions
- 1.4 Define Bandwidth
- 1.5 Draw the ideal block diagram of differential Amplifier
- 1.6 List the different types of transistor Biasing
- 1.7 Draw the symbol of Op-Amp & label it
- 1.8 Define Slew Rate
- 1.9 Write the names of two types of MOSFET
- 1.10 Define Oscillators

**2.0 ANSWER ANY SIX OF THE FOLLOWING** **3\*6=18**

- 2.1 Draw the circuit diagram for voltage divider biasing of a transistor
- 2.2 Draw the I/p & O/p characteristics of CE with neat diagram
- 2.3 Draw the Circuit diagram for CC Amplifier
- 2.4 Explain non -inverting Amplifier with diagram
- 2.5 Write the advantages of JFET over BJT
- 2.6 Explain the classifications of filters in detail
- 2.7 Explain Barkhausen criteria of Oscillator
- 2.8 Explain the role of capacitors in RC Coupled CE Amplifier

**3.0 ANSWER ANY FOUR OF THE FOLLOWING** **4\*4=16**

- 3.1 Explain Common Emitter Configuration with circuit diagram and model graph
- 3.2 Draw & explain the block diagram of Op-Amp
- 3.3 Explain with neat diagram Zero Crossing Detector in Non- Inverting Configuration
- 3.4 Explain Instrumentation Amplifier with diagram
- 3.5 Explain the working of RC phase Shift Oscillator with neat diagram
- 3.6 Draw and explain the working of N-Channel Enhancement mode MOSFET

