Subject: Industrial electronics   **Total Time: 2 Hr.**
Subject Code: CP15304T   **Total Marks: 50 Marks**

PART B

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

1.1 List out any four applications of power electronics

1.2 Draw the symbol of SCR and mark its terminals

1.3 List out any 3 applications of GTO

1.4 How protection circuits helps to safe guard the devices?

1.5 List out any 4 applications of chopper

1.6 List out the types of DC-DC converters.

1.7 Write the different methods to control the output of inverter

1.8 What are the different types of Cycloconverters?

1.9 Name the different methods to control the speed of AC motor

1.10 List out 4 applications of pulse circuit using SCR.

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

2.1 List out any four difference between normal diode and power diode.

2.2 How latching current and holding current can be differentiated.

2.3 Draw and explain the circuit diagram of Buck converter

2.4 Explain in detail about the classification of inverter.

2.5 With a neat block diagram, explain the working principle of V/F control.

2.6 Draw and explain the block diagram of a linear power supply.

2.7 Elaborate the role of SCR in a fully controlled bridge rectifier.

2.8 How DC is converted to AC in single phase half wave invertor?

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

3.1 Draw the structure of IGBT and explain its working

3.2 Draw the V-I characteristics of TRIAC and mark the forward conduction region.

3.3 Draw the circuit diagram and explain the working of a single phase cyclo converter.

3.4 With a neat block diagram, explain the working of SMPS circuits.

3.5 Explain about various braking modes of DC drives

3.6 Explain the different types of UPS

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Subject: Measuring System   **Total Marks : 50**

Subject Code: CP15 03 05   **Total Time : 2H**

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

1. 1   Define the following: a) Absolute Pressure b) Vacuum Pressure

1. 2   What is the need of measuring system?

1. 3   Draw the various shapes of the bourdon tubes.

1. 4   What is Diaphragm?

1. 5   Write a short note on LM2907

1. 6   What is true value?

1. 7   Design a voltage to frequency converter for output frequency of 5KHz.

1. 8   Write a short note on D.C Tachometer

1. 9   Define temperature.

1. 10   What are the limitation of load cell?

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

2. 1   List LM2907 advantages & applications

2. 2   Write short notes on Bellows

2. 3   Draw neat diagram of Bimetallic strips explain its working.

2. 4   What is reluctance pressure transducers? Name its types.

2. 5   List the features of 8038 IC

2. 6   What is digital shaft encoder?

2. 7   Explain about AD590 & LM35

2. 8   Write short notes on calibration

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

3. 1   List different types of mechanical tachometer & explain anyone

3. 2   Explain about potentiometric pressure transducers

3. 3   Explain Working of thermocouple and its types

3. 4   Draw and explain the functional block diagram of IC8038.

3. 5   Explain principle, operation and Application of LVDT for displacement measurement

3. 6   Explain how diodes can be used as a temperature sensor with neat sketch

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