

**BSc DEGREE EXAMINATION DECEMBER 2017**

(Fifth Semester)

Branch - **ELECTRONICS****INDUSTRIAL AND POWER ELECTRONICS**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A go Marks)**Answer **ALL** questions**ALL** questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Expand SCR and TRIAC.
- 2 What is circuit breaker?
- 3 What is induction heating?
- 4 Define sequence timer.
- 5 What is the frequency range for ultrasonic waves?
- 6 State two non-electrical quantities.
- 7 Define humidity.
- 8 What is local cell?
- 9 What are the chemicals used for etching PCB?
- 10 Name two types of PCB.

**SECTION - B (25 Marks)**Answer **ALL** Questions**ALL** Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Explain the operations of static circuit breaker.  
OR  
b Explain any two thyristor protection circuits.
- 12 a Explain ignitron contactor circuit.  
OR  
b Explain energy storage welding systems.
- 13 a Explain the generation of ultrasonic waves.  
OR  
b Explain the ultrasonic method of level measurements.
- 14 a Explain the control of quench oil temperature using thermistor.  
OR  
b Explain the strip tension controller.
- 15 a Explain artwork preparation method in PCBs.  
OR  
b Discuss the soldering techniques in PCBs.

**SECTION - C (30 Marks)**Answer any **THREE** Questions**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain the fan regulator circuit using TRIAC.
- 17 Explain in detail about types of resistance welding.
- 18 Explain strain gauge method of displacement measurement with suitable example.
- 19 Discuss in detail about the control of relative humidity in a textile moistening process.
- 20 Explain the different types of PCBs and its layout preparation.