

III B.Tech I Semester Supplementary Examinations, May 2005
ELECTRONIC EQUIPMENT DESIGN
(Electronics & Instrumentation Engineering)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Briefly discuss the ergonomic aspects of electronic equipment design.
(b) Differentiate between conductive and tactile displays.
2. Draw the basic block diagram of an oscilloscope. Explain the function of each block in detail.
3. Explain the feature and functions of the following electronic workshop equipment.
 - (a) Digital readout
 - (b) Rotary encoders
 - (c) Tool check
 - (d) Assemblers.
4. (a) What is meant by capacitive, inductive and electromagnetic interferences? Explain in brief about each of them.
(b) What is shielding? What do single shielding and double shielding mean?
5. Write about PCB layout check related
 - (a) General Consideration
 - (b) Mechanical considerations
 - (c) Electrical considerations.
6. Write about Dyeing, Touch up, post backing and stripping related to wet film resists.
7. (a) Define the quality factor of a coil.
(b) What is the function of a shield? What materials are used for it?
(c) How can loose coupling and tight coupling be achieved between two inductors.
(d) What is meant by Ferromagnetism?
8. (a) List the characteristics of an ideal transformer.
(b) Explain the blocking oscillator Pulse transformer designing with the following specifications $V_{CC} = 10$ Ohms, breakdown voltage of zener diode combination: $V_r = 6V$, $V_{bb} = 0.5V$, $R_e = 500$ Ohms. A suitable pulse transformer with turns ratio, $n=1$ is required for this circuit to give a period of 20.2 microsec and a duty cycle of 0.51.
