

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

Time: 3 hours

Max Marks: 70

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain in detail the mortality curve.
(b) Briefly explain the theories relating to mortality and dynamic models.
2. Explain the principle of working of FET voltmeter with necessary figures.
3. (a) Explain the process of communication between two fax machines.
(b) Discuss the methods of modulation and demodulation techniques used in fac-simile transmission.
4. (a) What are the various rules of guarding techniques? Explain with diagrams.
(b) Discuss in brief the various rules of noise reduction in the instruments.
5. (a) Explain about Ground and supply line noise related to digital PCB's.
(b) Write about component placing in analog circuit PCB's.
6. Briefly discuss about cupric chloride and explain how, cupric chloride is used in etching operation.
7. (a) State the difference between auto and variable transformer.
(b) What are pulse transformers? What are the materials used for its core?
(c) What precautions are taken while designing high voltage transformer?
(d) What are the specifications of AF transformers and AF inductors?
8. (a) Explain the design of a General purpose Pulse Transformer with the following specifications Pulse duration = 0.2ms, Pulse period = 1 ms, Pulse amplitude = 5V, Allowable Tilt at the load < 15%, Source resistance = 75 Ohms, Load resistance = 1 kOhms, Transformation ratio = 2.
(b) List the properties of the winding wires.
