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BIEL-026

02402

DIPLOMA - VIEP - ELECTRONICS & COMMUNICATION ENGINEERING - III SEM

Term-End Examination

June, 2011

BIEL-026 : Dip - ECE PCB Design & Testing

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any seven** questions. Each question carries **10** marks. Assume any missing data if any.*

1. (a) Explain testing procedure of Transistor using Digital Multimeter. 5
   (b) Explain the use of signal generator in troubleshooting electronic equipment. 5

2. (a) Explain briefly the testing procedure of SCR using multimeter. 5
   (b) Explain the use of digital multimeter in troubleshooting. 5

3. (a) Explain Multi - layer boards and flexible printed circuit boards. 5
   (b) Explain the procedure for making PCB layout. 5

4. Explain in general, mechanical and electrical considerations while checking the PCB layout. 10

5. (a) Explain the equipment required for art - work preparation. 5

(b) Explain the art work check and inspection procedure. 5

6. (a) Explain underetching and overhang. 5

(b) Explain etching operation with Cupric Chloride. 5

7. (a) What is soldering ? Explain soft soldering and hard soldering. 5

(b) Explain briefly about solder and flux. 5

8. (a) Explain briefly steps involved in the assembly process. 5

(b) Explain wave soldering. 5

9. (a) Explain general PCB design considerations. 5

(b) What are the general considerations for a good layout design ? 5

10. Write short notes on *any two* of the following : 2x5=10

(a) Pspice

(b) MATLAB

(c) Oscilloscope