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BIEL-026

DIPLOMA – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (DECVI) / ADVANCED LEVEL CERTIFICATE COURSE IN ELECTRONICS AND COMMUNICATION ENGINEERING (ACECVI)

00480

Term-End Examination

December, 2014

BIEL-026 : PCB DESIGN AND TESTING

Time : 2 hours *Maximum Marks : 70*

Note : *Question no. **1** is **compulsory**. Answer any **four** questions from the rest.*

1. (a) Define active and passive components.

(b) Discuss the various aspects of power supply.

(c) List the parameters for layout design.

(d) How is the schematic diagram helpful in PCB designing ?

(e) What is photolithography ?

(f) Describe solder and paste application.

(g) Explain the concept of hot air soldering. *7×2=14*

2. Compare active and passive components. Provide the simple testing procedure for both, with the help of suitable examples. *14*

3. What are the different artwork generation methods ? Explain each in detail. *14*

4. (a) List the processes involved for manufacturing PCB. Explain each of them. *7*

(b) Why is it required to preprocess the base board ? Explain. *7*

5. Write short notes on drilling, electroplating and board testing. *14*

6. (a) Describe the following : *7*

(i) Tombstoning

(ii) Shadowing

(b) State the advantages and disadvantages of SMD technology. *7*

7. (a) Explain the role of simulation softwares in PCB circuit simulation. *7*

(b) Write a note on P-SPICE. *7*

8. Write short notes on any ***four*** of the following : $4 \times 3\frac{1}{2} = 14$

(a) Package density

(b) Assembly related faults

(c) Mass soldering

(d) Universal PCB

(e) Adhesive applications

(f) Multi-Sim