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

Term-End Examination

00759   December, 2017

BIEL-026 : PCB DESIGN AND TESTING

Time : 2 hours   *Maximum Marks : 70*

*Note : Attempt any **five** questions. All questions carry equal marks. Question no. **1** is **compulsory**. Attempt any **four** questions from the remaining. Missing data may be suitably assumed.*

1. Draw the schematic symbols for the following electronic components :   *7×2=14*

    (a) Variable resistance

    (b) Inductor

    (c) Electrolytic capacitor

    (d) Zener diode

    (e) SCR

    (f) n-p-n transistor

    (g) p-channel FET

2. Explain the characteristics of the following active components : $4 \times 3\frac{1}{2} = 14$

   (a) Diode

   (b) n-p-n transistor in CB configuration

   (c) p-n-p transistor in CC configuration

   (d) n-channel JFET

3. Explain the procedure for measuring the frequency and the phase of a signal using an oscilloscope. 14

4. Differentiate between the following types of PCBs : $2 \times 7 = 14$

   (a) Single-sided and Double-sided

   (b) Multilayer and Flexible

5. Explain the procedure involved in designing a single-sided PCB of a two-stage transistor amplifier circuit. 14

6. Explain the various steps involved in the fabrication of a PCB. 14

7. Write short notes on the following : $4 \times 3\frac{1}{2} = 14$

   (a) Etching Methods

   (b) Simulink

   (c) Specifications of Power Supply

   (d) Analog Multimeter