No. of Printed Pages : 2

BIELE-006

DIPLOMA – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (DECVI)

00136

Term-End Examination

December, 2014

BIELE-006 : ELECTRONIC PRODUCT DESIGN

Time : 2 hours *Maximum Marks : 70*

Note : *Attempt any* ***five*** *questions. All questions carry equal marks.*

1. (a) Explain the input power consideration and protection circuit for EMI filters. *7*

(b) What do you mean by regulated DC power supply ? Explain the design steps for a regulated power supply. *7*

2. Describe the design steps for a lift controller using ASM technique. Explain the steps involved in implementation of the design. *14*

3. (a) How is ROM classified ? Explain each classification. *7*

(b) Design a 4 : 16 line decoder using 3 : 8 decoder. *7*

4. What do you mean by PLD ? Draw the PAL equivalent for the following Boolean equation : *14*

$X = abcd' + a'b'c + a$

$Y = ab' + c'd$

$Z = c + ab'$

5. (a) What do you mean by multiplexer ? Explain the difference between a decoder and a demultiplexer. *7*

(b) What do you mean by sequence detector ? Explain its working. *7*

6. Design a second order high pass filter having lower cut-off frequency 1 kHz. *14*

7. How is the relay interfaced with microcontroller ? Give your answer with suitable programming steps. *14*

8. (a) Draw the interfacing diagram of A to D Converter using microcontroller. *7*

(b) Differentiate between Combinational and Sequential logic circuits. *7*
