

**DIPLOMA IN ELECTRICAL ENGINEERING  
(DELVI) / ADVANCED LEVEL CERTIFICATE  
COURSE IN ELECTRICAL ENGINEERING  
(ACELVI)**

**Term-End Examination**

**December, 2017**

00272

**BIEE-031 : 'C' - PROGRAMMING**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note : Question no. 1 is compulsory. Attempt five questions in all.**

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**1. Choose the correct answer :**

**7×2=14**

- (a) Which of the programming languages (level) are in the form of Mnemonics ?
- (i) Machine level
  - (ii) Assembly level
  - (iii) High level
  - (iv) None of the above
- (b) Which of the following keywords is used to find out the size of a variable ?
- (i) Datatypesize()
  - (ii) Findsize()
  - (iii) Calsize()
  - (iv) Sizeoff()

- (c) Which conversion character is used for 'long double' ?
- (i) %f
  - (ii) lf
  - (iii) ld
  - (iv) dd
- (d) Which of the following operators is used for "not equal to" in C language ?
- (i)  $\neq$
  - (ii)  $\neq!$
  - (iii)  $!=$
  - (iv)  $!$
- (e) The loop statement "for ( ; ; )" will run for \_\_\_\_\_ times.
- (i) 0
  - (ii) 100
  - (iii) 1
  - (iv) Infinite
- (f) The meaning of "a % b" is \_\_\_\_\_ in C language.
- (i) a percentage b
  - (ii) a divide b
  - (iii) a mod b
  - (iv) a swap b
- (g) What is the size of long double ?
- (i) 8
  - (ii) 10
  - (iii) 12
  - (iv) 14

2. (a) Write a C program to check if all bits of a given integer is one (i.e. 1). Also, write algorithm for the above program. 7
- (b) Write a program in C language to calculate the series and parallel equivalent of the two resistance values entered by the user. 7
3. (a) What are ASCII codes ? Write a program in C language to generate ASCII code for any character entered by the user. 7
- (b) Write a program in C to delete the duplicate word in a text file. 7
4. (a) What is a Composite Key in database ? Can a composite key be a primary key for the database ? Justify your answer with suitable example. 7
- (b) Write a C program to check if a given string is a palindrome or not. Also, draw a flowchart for the above program. 7
5. (a) Discuss the areas of electrical engineering, where the databases can improve the performance of the systems. 7
- (b) Assume the following readings of a system and answer the questions that follow.

Equipment ID	Voltage	Power
001	124	09
010	16	02
023	03	01
026	05	02
228	100	10

- (i) What should be the key of this table ? 2
- (ii) What other useful tables can be generated through this table ? 3
- (iii) Do we need multiple-keys in this table ? Justify your answer. 2
6. (a) Write a C program to check that a given number is even or odd. Also draw a flowchart for the above program. 6
- (b) What are the different types of applications and uses of CAD, CAM, CAE and CAI in electrical engineering ? 8
7. (a) With the help of a suitable diagram, explain the Computer Aided Design process. 6
- (b) Assume that the conductance 'G' and current 'I' are inputs at the command prompt by the user. Write a program in C language to find the following : 8
- (i) Voltage 'V'
- (ii) Resistance 'R'
- (iii) Power 'P'
- (iv) Energy 'E'
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