

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

Term-End Examination

00046

June, 2016

BIEE-031 : 'C' - PROGRAMMING

Time : 2 hours

Maximum Marks : 70

Note : Answer any **four** questions from questions no. 2 to 7. All questions carry equal marks. Question no. 1 is **compulsory**.

1. Choose the correct answer.

7×2=14

(a) What is the range of long int ?

- (i) 0 to 65535
- (ii) - 32768 to + 32767
- (iii) - 2147483648 to + 2147483647
- (iv) - 2147423648 to + 2147423647

(b) Which one of the following format specifiers is used for long double ?

- (i) %d
- (ii) %Lf
- (iii) %lf
- (iv) %ld

- (c) Which one of the following operators has lowest precedence ?
- (i) * Multiplication
 - (ii) > Greater than
 - (iii) , Comma
 - (iv) / Divide
- (d) What will be the value of the expression $-5 \% 2 * 4 / 3$?
- (i) - 2
 - (ii) - 1
 - (iii) 1
 - (iv) None of these
- (e) How many bytes will be taken by data type int in memory on 32 bit system ?
- (i) 2
 - (ii) 8
 - (iii) 4
 - (iv) None of these
- (f) Which one of the following is *not* a valid variable declaration ?
- (i) int abc
 - (ii) flot simple interest
 - (iii) double c_i
 - (iv) char a

- (g) Which operator provides size of data types in bytes ?
- (i) size()
 - (ii) sizeof()
 - (iii) datasize()
 - (iv) sizeinbytes()
2. (a) Differentiate between while and do .. while loop with a suitable example. Write a program to print all the prime numbers between 1 to 1000 by using while loop. 7
- (b) Write a menu driven program to calculate the area of circle, rectangle, square and triangle with switch .. case statement. 7
3. (a) Define array. Write a program to multiply two matrices of order $n \times n$. The program also prints the result in matrix format. 7
- (b) Explain nested if-else statement. Write a program to calculate the percentage of marks obtained in five different subjects by a student and decide whether he has passed with 1st, 2nd, 3rd division or has failed. 7
4. (a) What are the different ways to initialize an array ? Write a program to read the marks of 60 students in a subject and print the average marks of this subject. 7
- (b) How can programming be helpful in analysis of circuit design in electrical engineering components ? Explain with the help of a suitable example. 7

5. (a) Discuss the various software that can be used in different fields of electrical engineering. 7
- (b) Define operator. Describe the logical bitwise and relational operators with the help of an example of each. 7
6. (a) Write a program to find the value of one number (say a) raised to the power of another number (b) i.e. a^b . 7
- (b) What is a database ? How can it be created ? Explain the process of querying the database file on a single key. 7
7. Write short notes on any *four* of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) goto statement
- (b) CAM
- (c) Information storage
- (d) Primary and foreign keys in database
- (e) break and continue statement
- (f) CAD
-