

2017**M. Sc.****1st Semester Examination****ELECTRONICS****PAPER—ELC-105****(Practical)***Full Marks : 50**Time : 3 Hours*

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

(Computation and Programming Laboratory)

Answer any one question selecting it by a lucky draw.

1. Write a program in 'C' to generate Fibonacci series upto 'n' terms. Where 'n' enter through keyboard.
2. Write a program in 'C' to find the value of $\sin(x)$ with the help of sine series considering the accuracy of 0.000001 and also find the number of terms calculated to achieve the desired accuracy.
3. Write a program in 'C' to check a number whether it is odd or even.

(Turn Over)

4. Write a program in 'C' to convert a binary number to its decimal equivalent.
5. Write a program in 'C' to check a number whether it is palindrome or not.
6. Write a program in 'C' to find the roots of a quadratic equation where the coefficient a, b and c must be entered through keyboard.
7. Write a program in 'C' to find out whether a number entered through keyboard is prime or not.
8. Write a program in 'C' that will read a positive integer and determine its binary equivalent.
9. Write a program in 'C' to evaluate the first 20 terms of the following series :

$$1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \dots$$

10. Write a program in 'C' to check a number whether it is Armstrong or not.
11. Write a program in 'C' to find ten smallest number from an array of 'n' numbers.
12. Write a program in 'C' to check a Year whether it is leap Year or not.

13. Write a program in 'C' to find the value of $\cos(x)$ with the help of cosine series considering the accuracy of 0.000001 and also find the number of terms calculated to achieve the desired accuracy.
14. Write a program in 'C' to sort an array of 'n' numbers in descending order considering Bubble Sort technique.
13. Write a program in 'C' to find the sum of the following series :

$1^2 + 2^2 + 3^2 + 4^2 + \dots$ upto 10th term.

Distribution of Marks

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|-------------------------|---|-----------------|
| Program | : | 10 Marks |
| Execution | : | 20 Marks |
| Discussion and Accuracy | : | 05 Marks |
| Viva-Voce | : | 10 Marks |
| Laboratory Note Book | : | 05 Marks |
| Total | : | <u>50 Marks</u> |