

TED (10) 1018  
(Revision-2010)

**N19 - 05013**

Reg.No.....  
Signature.....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE OCTOBER/NOVEMBER-2019

**PROGRAMMING METHODOLOGY**

[Maximum marks: 100]

(Time: 3 Hours)

PART – A  
[Maximum marks: 10]

I. (Answer all questions in one or two sentences, Each question carries 2 marks)

(1). Suppose  $X=10$  and  $Y=5$ . Give the value of the following expressions:

a.  $X \% Y$                       b.  $X*Y^2$

(2). List the different types of errors in coding a program.

(3). What is ASCII code?

(4). Write a statement for storing 50 students names in an array.

(5). What is the use of EOF function?

(5 x 2 = 10)

PART – B  
[Maximum marks: 30]

II. (Answer any **five** of the following questions, Each question carries six marks)

(1). Write a pseudocode to compute and display the strike rate of a batsman, when the user inputs the number of runs and number of balls faced. (Hint: Strike rate is calculated by dividing the number of runs by number of balls faced)

(2). State the rules for choosing the name of a variable with example.

(3). Explain about the Counter Controlled loops with suitable example.

(4). Explain about Switch statement with example.

(5). Write a pseudocode that input 20 numbers in to an array and display it in reverse order.

(6). Write a brief note about Built-in Function with suitable examples.

(7). The sequential file 'Grade' contain the details of student such as Student Name and Mark.

Write a pseudocode to display the contents of file 'Grade'.

(5 x 6=30)

PART – C

[Maximum marks: 60]

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

- III. (a) Describe about program development cycle. (8)
- (b) Write a pseudocode to find the distance travelled by the object (s), if the user input the initial velocity (u), the time (t) and the acceleration (a). (7)
- (Hint: the formula is  $S=ut+ \frac{1}{2} at^2$ )

OR

- IV. (a) Explain about different Data types with appropriate examples. (8)
- (b) Write a pseudocode to calculate and display the total surface area of a Cylinder where the user inputs height (h) and the base radius (r). (7)
- (Hint:  $SA = 2\pi rh+2\pi r^2$ , where  $\pi = 3.14$ )

UNIT-II

- V. (a) Find the sum of even numbers and sum of odd numbers separately for a range of numbers from 1 to N, where N is input by the user. (9)
- (b) Explain about if-then and if-then –else statement with suitable examples. (6)

OR

- VI. (a) Compute the income tax due to taxable income entered by the user. The data as shown in the table.

Taxable Income	Income Tax Rate
Upto 2,50,000	Nil
2,50,001-5,00,000	5%
5,00,001-10,00,000	20%
10,00,001- and above	30%

- (9)
- (b) Explain about the different types of loop with example. (6)

UNIT-III

- VII.(a) Write a pseudocode to input 20 elements into an array and find the largest number in it? (8)
- (b) Explain about two dimensional arrays with suitable example. (7)

**OR**

- VIII. (a) Explain about Linear Searching. (8)
- (b) An array contains Register no of all students in a class. Write a pseudocode to arrange them in ascending order. (7)

**UNIT-IV**

- IX. (a) Write a pseudocode to find the area and perimeter of a circle. (Use separate sub programs to input the radius, and display result. Use separate functions to calculate the area and perimeter. (9)
- (Hint: Area =  $\pi r^2$  and Perimeter =  $2\pi r$ , where r is the radius)
- (b) Explain recursion with suitable example. (6)

**OR**

- X. (a) An integer is said to be prime if it is divisible by 1 and itself. Write a sub program that determines if a given no is prime or not. (9)
- (b) Explain the step to create a sequential file. (6)
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