

PROGRAMMING BASICS

COMPUTER SCIENCE

Topic: Programming Basics

Duration: 50 minutes

INSTRUCTIONS

- Carry out every instruction in each task.
 - Answer **all** questions.
 - Use a black or dark blue pen.
 - You may use an HB pencil for any diagram, graphs or rough working.
 - **Calculator Not Allowed.**
 - Show your workings if relevant.
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INFORMATION

- The total marks for this paper is **35 marks**.
- The number of marks for each question or part question is shown in brackets [].

1. Write a Python program to find the factorial of a number. [7]
 - $n! = n*(n-1)*(n-2)*...*1$
 - Example: factorial of 5 = $5*4*3*2*1 = 120$
 - The program should take the number as input from the user.
 - The program should print the factorial of the number.
2. Write a Python program to calculate the sum of first 20 odd numbers. [10]
3. Write a Python program that:
 - (a) Declares a function to calculate the area of a circle. $\text{Area} = \pi r^2$. [5]
 - (b) Include exception handling to check if the argument is a number. [3]
 - (c) Call the function with radius = 5 and print the area. [2]
4. Write a Python program to find the sum of all elements in a list. [8]
 - You can declare the list with elements of your choice.
5. Write a Python program to check if a number is positive, negative or zero. [5]