



**SCHOOL OF PRE-UNIVERSITY STUDIES
FOUNDATION PROGRAMMES**

**WRITTEN TEST 1 (SET 5)
AUGUST 2022 SEMESTER**

MODULE NAME : INTRODUCTION TO ALGORITHM

MODULE CODE : ITS30705

TIME : 1 HOUR

This paper consists of FOUR (4) printed pages.

Student Name

Student ID

Tutorial Group

Instruction to Candidates:

1. Answer all questions in the paper and the answers are to be written in either black or dark blue pen.
2. This is a closed book examination, no notes are permitted.
3. Non-programmable electronic calculators may be used.
4. Severe disciplinary action will be taken against those caught violating examination rules.

**DO NOT TURN THIS PAGE UNTIL INSTRUCTED TO DO SO.
TO BE RETURNED AT THE END OF THE TEST.**

Question 1

Create a program to calculate the area and volume of a cylinder. The program accepts radius and height of a cylinder. Pass the radius and height to a function that calculates volume and area of a cylinder and return both values so that both can be displayed in the program. Figure below shows the formula to calculate the area of a cylinder. Complete:

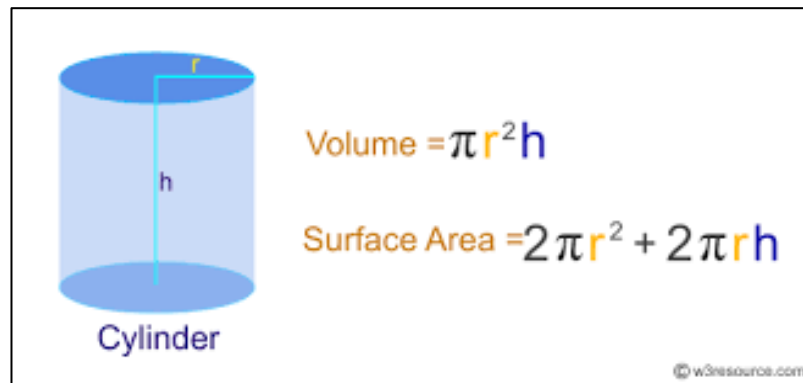


Figure 1: Area and volume of cylinder

Given:

```
Height of cylinder = 4
Radius of cylinder = 6
```

Expected result:

```
Volume is : 452.3893421169302
Surface Area is : 376.99111843077515
```

a) The pseudocode of the program

(5 marks)

b) The flowchart of the program

(5 marks)



c) The code of the program

(5 marks)



Question 2

Write a program that accept a number from a user and check whether the number entered is divisible by both 2 and 3. (5 marks)

--- END OF TEST PAPER ---