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| **NAME** | **:** |  |
| **STUDENT NO.** | **:** |  |
| **GROUP** | **:** |  |

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| **LESSON 1: WRITE SIMPLE PROGRAM IN C++** |
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| **QUESTION 1** |
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| Convert flowchart from ***Question 5 – Question 8*** of ***Topic 1: Class Exercise*** to its equivalent complete program in C++. |
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| **QUESTION 2** |
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| Write a program that takes a depth (in kilometers) inside the earth as input data, compute and display the temperature at this depth in degrees Celsius and degrees Fahrenheit. The relevant formulas are:  Celsius = 10 \* depth + 20  Fahrenheit = 1.8 \* Celsius + 32 |
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| **QUESTION 3** |
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| Write a program in C++ to compute quotient and remainder. |
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| **LESSON 2: CONSTANTS** |
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| Definition:  Constants are expressions with a fixed value. |
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| Table 1: Two different approaches in declaring a constant in C++ |
| |  |  | | --- | --- | | **Approach 1 - Typed constant expressions** | **Approach 2 - Preprocessor definitions** | | #include <iostream>  using namespace std;  const double pi = 3.14159;  const char newline = '\n';  int main ()  {  double r=5.0; // radius  double circle;  circle = 2 \* pi \* r;  cout << circle;  cout << newline;  } | #include <iostream>  using namespace std;  #define PI 3.14159  #define NEWLINE '\n'  int main ()  {  double r=5.0; // radius  double circle;  circle = 2 \* PI \* r;  cout << circle;  cout << NEWLINE;  } | |
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| **QUESTION 1** |
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| Write a program in C++ that can calculate the volume of a sphere. The formula for calculating the volume is given as below:  Image result for mathematical formula with pi  Hint:  1) Set the value of PI as a constant to 3.14159.  2) Radius should be entered by the user. |
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| **QUESTION 2** |
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| Write a program in C++ that is equivalent to the given flowchart below: |
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