BIT 2118 APPLICATION PROGRAMMING I CAT 1

Answer all questions

1. Distinguish between the following terms as applied in VB.NET. [8 marks]
   i). Fundamental and custom-defined data types.
   ii). Value and reference type data types.
   iii). Option Strict and Option Explicit.
   iv). Module and Class

2. Write Code segments performing each of the following tasks.

   i). Declare an array that should store temperature readings for patients in a ward, read at interval of 2hrs within a period of 8hrs. Every ward has 4 beds. [2 marks]

   ii). Increase the number of beds to 6. Do not affect the already recorded temperature readings. [3 marks]

   iii). Update the reading of 4th patient in the 2nd interval reading to 38. [2 marks]

   iv). Compute the average reading for each Patient and print alongside the interval readings. [5 marks]

3. Suppose you save $100 *each* month into a savings account with the annual interest rate 5%. So, the monthly interest rate is 0.05 / 12 = 0.00417. After the first month, the value in the account becomes100 * (1 + 0.00417) = 100.417. After the second month, the value in the account becomes (100 + 100.417) * (1 + 0.00417) = 201.252. After the third month, the value in the account becomes (100 + 201.252) * (1 + 0.00417) = 302.507 and so on. Write an application that prompts the user to enter an amount (e.g., **100**), the annual interest rate (e.g., **5**), and the number of months (e.g., **6**) and displays the amount in the savings account after the given month using **Do...Until Loop**. [7 marks]

4. Consider the following declarations
   Dim x as Double =23.72
   Dim y as Single= 54.8
   Write three (3) different expressions whose output is **54.823.72**. [3 marks]