SECTION I

Answer all questions in this section

All working must be clearly shown.

1. (a) Using a calculator or otherwise, calculate the exact value of

\[(2.67 \times 4.1) - 1.3^2\]

(3 marks)

(b) Mr. Harry who lives in St Kitts is planning to travel to Barbados.
A travel club offers the rates shown below:

| Petty’s Travel Club
| Holiday in Barbados |
|---------------------|---------------------|
| Return Air Fare     | US$356.00           |
| Hotel Accommodation | US$97.00 per night  |

(i) Calculate the TOTAL cost of airfare and hotel accommodation for 3 nights using the rates offered by Petty’s Travel Club.

(3 marks)

(ii) Another travel club advertises the following package deal.

| Angie’s Travel Club
| Holiday in Barbados |
|---------------------|---------------------|
| 3 Nights Hotel Accommodations plus Return Air Fare | ECS$1610.00 |

Calculate, in US dollars, the cost of the trip for 3 nights as advertised by Angie’s travel club.

US$1.00 = ECS$2.70

(2 marks)

(iii) State, giving a reason for your answer, which travel club (Petty’s or Angie’s) has the better offer.

(2 marks)

(iv) The ECS$1610.00 charged by Angie’s Travel Club includes a sales tax of 15%. Calculate the cost of the trip for three nights BEFORE the sales tax was added.

(2 marks)

Total 11 marks

2. (a) Solve for \(p\)

\[2(p + 5) - 7 = 4p\]

(2 marks)

(b) Factorize completely

(i) \[25m^2 - 1\]

(2 marks)

(ii) \[2n^2 - 3n - 20\]

(2 marks)

(c) A candy store packages lollipops and toffees in bags for sale.

\[x\] grams

\[y\] grams

5 lollipops and 12 toffees have a mass of 61 grams.
10 lollipops and 13 toffees have a mass of 89 grams.

(i) If the mass of one lollipop is \(x\) grams and the mass of one toffee is \(y\) grams, write two equations in \(x\) and \(y\) to represent the above information.

(2 marks)

(ii) Calculate the mass of

a) ONE lollipop

b) ONE toffee

(4 marks)

Total 12 marks