higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

INTRODUCTION TO SYSTEMS DEVELOPMENT

(Second paper)

NQF LEVEL 2

13 March 2020

This marking guideline consists of 8 pages.

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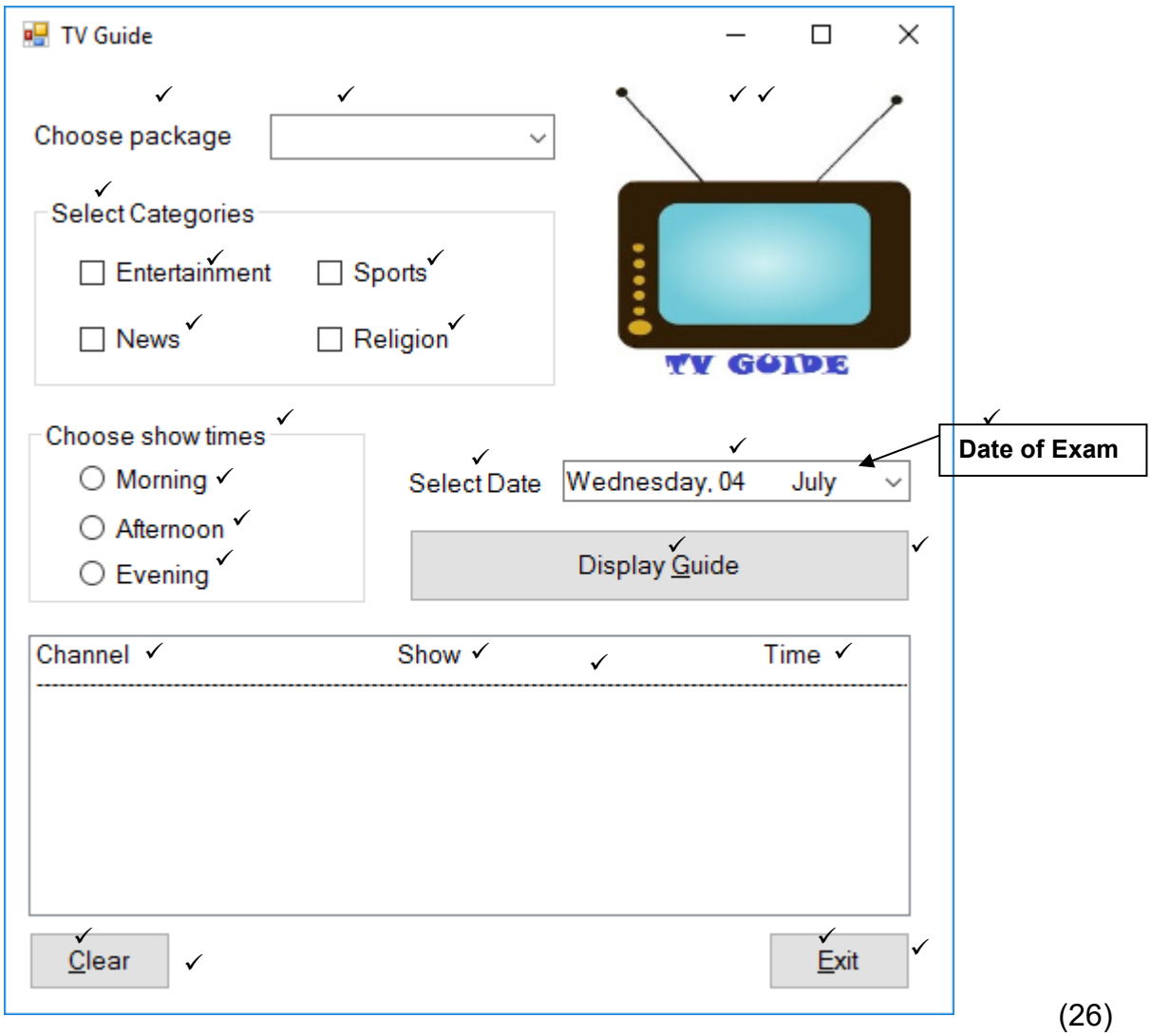
QUESTION 1

1.1 – 1.9



(26)

1.10 EXAMINATION NUMBER + PRINTOUT OF FORM. (2)
[28]

QUESTION 2

2.1 2.1.1

```
Dim intNumber As Integer = 0 ✓
Dim intProduct As Integer = 0 ✓
```

(2)

2.1.2

```
intNumber = CInt(txtNumber.Text) ✓
```

(1)

2.1.3

```
For i = 1 To 10 ✓✓
```

(2)

2.1.4

```
intProduct = intNumber *✓ i ✓
```

(2)

2.1.5

```
lstDisplay.Items.Add(intNumber✓& " x " & i✓ & " = "✓ &
intProduct)✓
```

(4)

2.2 2.2.1
```
txtNumber.Clear()✓
```

2.2.2
```
lstDisplay.Items.Clear()✓
```

2.2.3
```
txtNumber.Focus()✓
```

(3 × 1) (3)

2.3
```
Close() ✓
```
(1)
[15]

QUESTION 3

3.1 3.1.1
```
cboTerm.Items.Add("10")
cboTerm.Items.Add("15")  } ✓
cboTerm.Items.Add("20")
```
(1)

3.1.2
```
cboTerm.SelectedIndex = 0✓
```
(1)

3.2 3.2.1
```
Dim decLoanAmount As Decimal = 0✓
Dim decInterest As Decimal = 0 ✓
Dim intTerm As Integer = 0
Dim decExtras As Decimal = 0
Dim decBasicInstallment As Decimal = 0
Dim decMonthlyInterest As Decimal = 0
Dim decTotalInstallment As Decimal = 0 ✓
Dim decLifetimeInterest As Decimal = 0
Dim decTotalBondRepayment As Decimal = 0 ✓
```
(Any 2 input and any 2 output variables) (4)

3.2.2
```
decLoanAmount = CDec(txtLoanAmount.Text) ✓
decInterest = CDec(txtInterest.Text) ✓
```
(2)

3.2.3
```
If decInterest < 7 Or decInterest > 18 Then ✓
     MessageBox.Show("Please enter an interest rate between
     7% and 18%", "Interest Error", MessageBoxButtons.OK,
      MessageBoxIcon.Error) ✓
      txtInterest.Focus()✓
      Exit Sub ✓
End If
```
(4)

3.2.4
```
Select Case cboTerm.SelectedIndex ✓
      Case 0 ✓
          intTerm = 120 ✓
      Case 1
          intTerm = 180✓
      Case 2
          intTerm = 240
End Select
```
(Any 2 correct cases) (4)

3.2.5
```
If chkProtection.Checked = True Then
      decExtras = 15000 ✓
End If
If chkLegal.Checked = True Then
      decExtras = decExtras + 25000 ✓
End If
If chkInitiation.Checked = True Then
      decExtras = decExtras + 12000  ✓
End If
```
(3)

3.2.6
```
decBasicInstallment = decLoanAmount / intTerm ✓✓
decMonthlyInterest = decLoanAmount * (decInterest/100)/50✓✓
decTotalInstallment=decMonthlyInterest+decBasicInstallment✓✓
decLifetimeInterest = decMonthlyInterest * intTerm✓✓
decTotalBondRepayment = decLoanAmount +decLifetimeInterest✓✓

lblBasicMonthly.Text = decBasicInstallment.ToString("C2")✓
lblMonthlyInterest.Text = decMonthlyInterest.ToString("C2")✓
lblTotalMonthly.Text = decTotalInstallment.ToString("C2")✓
lblLifetimeInterest.Text =decLifetimeInterest.ToString('C2')✓
lblTotalRepayment.Text =decTotalBondRepayment.ToString('C2')✓
```
(15)

3.2.7
```
lblExtras.Text = decExtras.ToString("C2")✓
```
(1)

3.3
```
txtLoanAmount.Clear()      } ✓
txtInterest.Clear()        }
chkInitiation.Checked = False
chkLegal.Checked = False       } ✓
chkProtection.Checked = False
lblBasicMonthly.Text = ""
lblMonthlyInterest.Text = ""
lblTotalMonthly.Text = ""      ✓
lblLifetimeInterest.Text = ""
lblTotalRepayment.Text = ""
lblExtras.Text = ""
cboTerm.SelectedIndex = 0 ✓
```
(4)

3.4
```
Close()✓
```
(1)

[40]

QUESTION 4

4.1–4.2

```
Option Strict On
Option Explicit On
Public Class Form1
    Dim✓decTotalDue As Decimal = 0

    Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
        'Add Items to combo box
        cboBaseMeal.Items.Add("Make Selection")
        cboBaseMeal.Items.Add("Burger")
        cboBaseMeal.Items.Add("Steak")
        cboBaseMeal.Items.Add("Pasta")
        cboBaseMeal.SelectedIndex = 0 ✓ (change to 0)
    End Sub
    Private Sub cboBaseMeal_SelectedIndexChanged(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
cboBaseMeal.SelectedIndexChanged
      'Add items to Meal combo box based on selection in base meal
        Select Case cboBaseMeal.SelectedIndex
            Case 0
                cboMeal.Items.Clear()✓
            Case 1
                cboMeal.Items.Clear()
                cboMeal.Items.Add("Cheese Burger")
                cboMeal.Items.Add("Chicken Burger")
                cboMeal.SelectedIndex = 0
                                        ✓✓ (swap cases, or change case numbers)
            Case 2
                cboMeal.Items.Clear()
                cboMeal.Items.Add("Sirloin")
                cboMeal.Items.Add("Rump")
                cboMeal.SelectedIndex = 0
            Case 3
                cboMeal.Items.Clear()
                cboMeal.Items.Add("Ravioli")
                cboMeal.Items.Add("Lasagne")
                cboMeal.SelectedIndex = 0
        End Select ✓
    End Sub
    Private Sub btnTotalDue_Click(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles btnTotalDue.Click
        Dim decMealCost As Decimal = 0
        Dim decDrinkCost As Decimal = 0
        Dim decExtrasCost As Decimal = 0
         'Determine Meal Cost
        Select Case cboBaseMeal.SelectedIndex
            Case 0
                MessageBox.Show("Please make a base selection")
                Exit Sub
            Case 1
                If cboMeal.SelectedIndex = 0 Then
                    decMealCost = 25
                ElseIf cboMeal.SelectedIndex = 1 Then
                    decMealCost = 29
```

```
                End If
            Case 2
                If cboMeal.SelectedIndex = 0 Then
                    decMealCost = 79
                ElseIf cboMeal.SelectedIndex = 1 Then
                    decMealCost = 69
                End If
            Case 3
                If cboMeal.SelectedIndex = 0 Then
                    decMealCost = 35
                ElseIf cboMeal.SelectedIndex = 1 Then
                    decMealCost = 44
                End If
        End Select
        'Determine drink cost
        If radSoda.Checked = True Then
            decDrinkCost = 17
        ElseIf radJuice.Checked = True ✓Then    (change to True)
            decDrinkCost = 22
        ElseIf radShake.Checked = True Then
            decDrinkCost = 35
        End If
         'Determine Extras cost
        If chkChips.Checked = True Then
            decExtrasCost = 15
        End If
        If chkSauce.Checked = True Then
            decExtrasCost = decExtrasCost + ✓✓10
        End If
        If chkVeggies.Checked = True Then
            decExtrasCost = decExtrasCost + 18
        End If
        'Calculate Total Due
        decTotalDue = decMealCost + decDrinkCost + decExtrasCost
        lblTotalDue.Text = decTotalDue.ToString("C2")

        'Enable Amount Paid textbox and Change button
        txtAmountPaid.Enabled = True ✓
        btnChange.Enabled = True
    End Sub
    Private Sub btnChange_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnChange.Click
        Dim decAmountPaid As Decimal = 0
        Dim decChange As Decimal = 0

        decAmountPaid = CDec(txtAmountPaid.Text)
         'Determine if amount paid was enough
        If decAmountPaid <✓✓ decTotalDue Then (change to "<")
            MessageBox.Show("Not enough money to make payment",
"Insufficient Amount", MessageBoxButtons.OK, MessageBoxIcon.Error)
            txtAmountPaid.Clear()
            txtAmountPaid.Focus()
            Exit Sub
        End If
         'Calculate and display change
        decChange = decAmountPaid - decTotalDue
        lblChange.Text = decChange.ToString("C2")
    End Sub
```

✓✓ (swap 0 and 1)

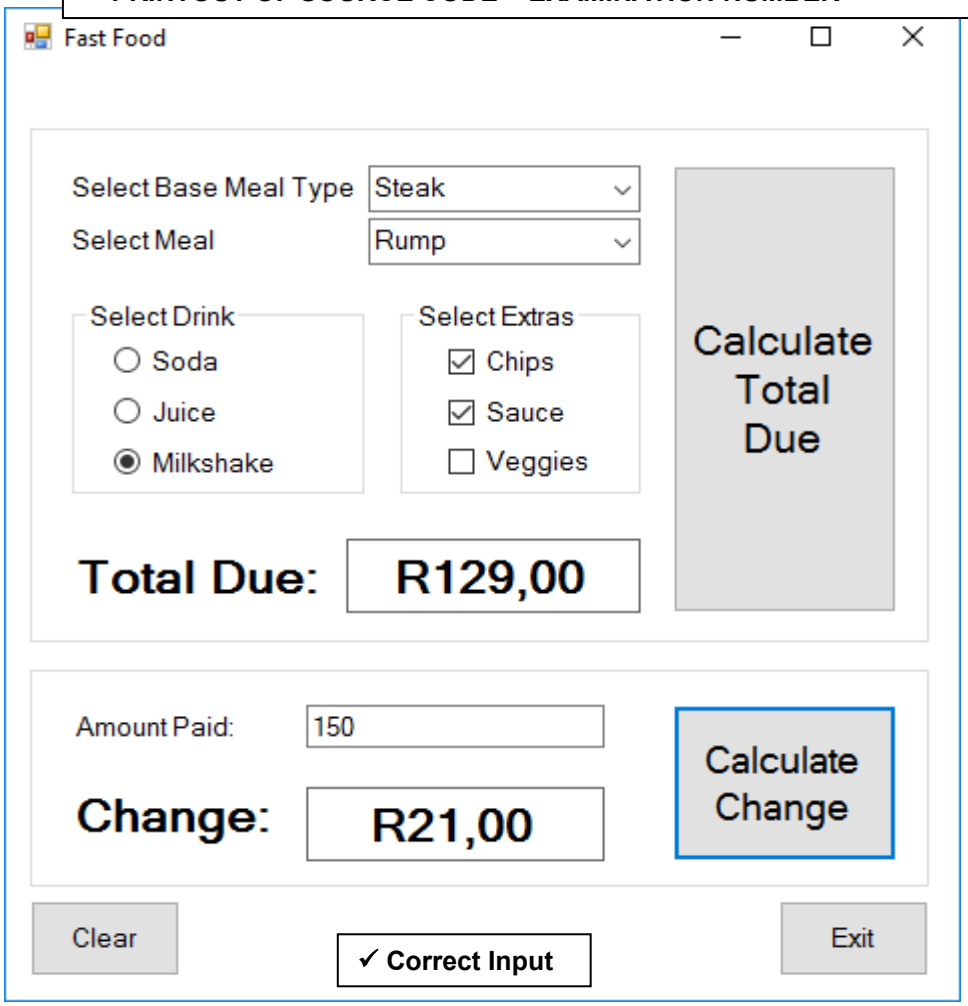
```
    Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnClear.Click
        'Clear controls
        cboBaseMeal.SelectedIndex = 0
        cboMeal.Items.Clear()
        cboMeal.Text = ""
        radSoda.Checked = False
        radJuice.Checked = False
        radShake.Checked = False
        chkChips.Checked = False
        chkSauce.Checked = False
        chkVeggies.Checked = False
        lblTotalDue.Text = ""
        txtAmountPaid.Clear()
        lblChange.Text = ""
        txtAmountPaid.Enabled = False
        btnChange.Enabled = False
    End Sub

    Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles btnExit.Click
        Close()
    End Sub
End Class
```

(15)

4.3

✓ **PRINTOUT OF SOURCE CODE + EXAMINATION NUMBER**



✓ **Correct Input**

(2)

[17]

TOTAL: 100

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