# INFORMATION TECHNOLOGY

**Grade 10**

###### Paper 01 Memo

###### FINAL EXAMINATIONS – 2016

Suggested Code & Pseudocode provided.

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| Question | Mark | Learner |
| **Question 1**  1.1  procedure TfrmPartyPlanner.btnQuoteClick(Sender: TObject);  var  iChildren, iAdults, iGuests, iCost :integer; ✓  rVat, rDisc : real; //used in 1.3 & 1.5  begin  //Question 1  memQ1.Lines.Add('Customer Name: '+edtNameQ1.Text); ✓  iChildren := sedChildrenQ1.Value; ✓  iAdults := sedAdultsQ1.Value; ✓  iGuests := iChildren + iAdults; ✓  memQ1.Lines.Add('Number of Guests: '+ IntToStr✓ (iGuests)); ✓  \*\*variables may be declared differently or not used – marker discretion | **25**  7 |  |
| 1.2  ✓ for variable iCost  iCost := (iChildren \* 35) ✓ + (iAdults \* 50) ✓;  memq1.Lines.Add('Cost: R'+IntToStr✓ (iCost)); ✓ | 5 |  |
| 1.3  rVat✓ := Round✓ (iCost\*0.14) ✓;  memQ1.Lines.Add('VAT: R'+FloatToStr✓ (rVat)); ✓  \*\*FloatToStrF also acceptable. | 5 |  |
| 1.4  memQ1.Lines.Add('Total: R'+FloatToStr✓ (rVat+iCost)); ✓ | 2 |  |
| 1.5  if iGuests>9 then✓  begin  rDisc := Round((rVat+iCost)\*0.1); ✓✓  memQ1.Lines.Add('Discount: R'+FloatToStr(rDisc)); ✓  memQ1.Lines.Add('Final : R'+FloatToStr((rVat+iCost)-rDisc)); ✓✓  end;  end; | 6 |  |
| **Question 2**  2.1  procedure TfrmPartyPlanner.btnGenerateClick(Sender: TObject);  var  sChild, sMonth, sGender, sCode : string; ✓  iNum, iAge, iTheme :integer; ✓  begin  //Question 2  sChild := edtChildQ2.Text; ✓  iAge := sedAgeQ2.Value; ✓  if rgpGenderQ2.ItemIndex=0 then✓✓  begin  sGender := 'M'; ✓  end  else //can also use 2 if stmts✓  begin  sGender := 'F'; ✓  end;  iTheme := lstThemeQ2.ItemIndex; ✓  sMonth := cmbMonthQ2.Items✓ [cmbMonthQ2.ItemIndex]; ✓  \*\*screen fields must be retrieved into variables to get these marks. | **35**  12 |  |
| 2.2  sCode := ''; ✓  sCode := Upcase(sChild[1]); ✓  sCode := sCode + Upcase(sChild[Length(sChild)]); ✓✓✓  iNum := RandomRange(1,11); ✓✓  sCode := sCode + IntToStr(iNum); ✓  sCode := sCode + Lowercase(sMonth[1]) ✓+ Lowercase(sMonth[2]) ✓+Lowercase(sMonth[3]); ✓ //copy can be used but wasnt expected  sCode := sCode + IntToStr✓ (iAge); ✓  sCode := sCode + sGender; ✓  sCode := sCode + IntToStr✓ (iTheme); ✓  if (Length(sChild) mod 2) = 0 then✓✓✓  begin  sCode := sCode + '\*\*\*'; ✓  end  else✓  begin  sCode := sCode + '$$$'; ✓  end;  pnlQ2.Caption := sCode; ✓  end;  \*\*correct use of any of the Random functions is acceptable | 23 |  |
| **Question 3**  procedure TfrmPartyPlanner.btnPartyPacksClick(Sender: TObject);  var  //given variables  iCount, iGirls, iBoys, iNumPacks : integer;  sName, sGender : String ;  I: Integer;  begin  iCount := 0; ✓  iBoys := 0; ✓  iGirls := 0; ✓  if cbx1.Checked ✓then  Inc(iCount); ✓✓  if cbx2.Checked✓ then  Inc(iCount);  if cbx3.Checked✓ then  Inc(iCount);  if cbx4.Checked✓ then  Inc(iCount);  if cbx5.Checked✓ then  Inc(iCount);  if cbx6.Checked✓ then  Inc(iCount);  if cbx7.Checked✓ then  Inc(iCount);  if cbx8.Checked✓ then  Inc(iCount);  if ✓iCount>5 ✓then  begin  ShowMessage('Only select 5 options'); ✓✓  end  else ✓  begin  redQ3.Lines.Add('Party Guests'); ✓  redQ3.Lines.Add(''); ✓  iNumPacks := sedPacksQ3.Value; ✓  for I := 1 to iNumPacks do✓✓  begin  sName := InputBox('Name','Enter name of child',''); ✓✓  sGender := InputBox('Gender','Enter gender of child M/F',''); ✓✓  if sGender='M' then✓  Inc(iBoys) ✓  else✓  Inc(iGirls); ✓  redQ3.Lines.Add(sName+#9+sGender); ✓✓  end; //endloop  redQ3.Lines.Add('');  redQ3.Lines.Add('Boys: '+IntToStr(iBoys)); ✓  redQ3.Lines.Add('Girls: '+IntToStr(iGirls)); ✓  if iBoys>iGirls then✓✓  redQ3.Lines.Add('There are more boys than girls') ✓  else✓  redQ3.Lines.Add('There are more girls than boys'); ✓  end //endif  end; | **40** |  |
| **Question 4**  procedure TfrmPartyPlanner.btnCalcClick(Sender: TObject);  var  rCostPerChild, rCost : real; ✓  iSweetPerChild, iLeftOverSweets,iNumchildren, iNumSweets : integer; ✓✓  begin  memQ4.Lines.Add('Sweet Calculation'); ✓  memQ4.Lines.Add(''); ✓  iNumchildren := StrToInt(edtChildrenQ4.Text); ✓  iNumSweets := StrToInt(edtNumSweetsQ4.Text); ✓  rCost := StrToFloat(edtCostQ4.Text); ✓  if iNumSweets<iNumchildren then✓✓  begin  ShowMessage('Not enough sweets!'); ✓✓  end  else✓✓  begin  iSweetPerChild := iNumSweets div iNumchildren; ✓✓  iLeftOverSweets := iNumSweets mod iNumchildren; ✓✓  rCostPerChild := rCost/iNumSweets\*iSweetPerChild; ✓✓  memQ4.Lines.Add('Calculation for '+edtSweetQ4.Text); ✓  memQ4.Lines.Add('Sweets per child: ' + IntToStr(iSweetPerChild)); ✓  memQ4.Lines.Add('Left over Sweets: ' + IntToStr(iLeftOverSweets)); ✓  memQ4.Lines.Add('Cost per child: '+FloatToStrF(rCostPerChild,ffCurrency,6,2)); ✓✓  end; | **25** |  |
| **Total** | **125** |  |
| **Total /125\*150** | **150** |  |

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| Question | Mark | Learner |
| **Question 1**  1.1  Declare variables ✓  Output customer name to memo✓  Retrieve number of adults and children and total✓ ✓✓  Output number of guests to memo ✓✓ | **25**  7 |  |
| 1.2  Declare variable ✓  Calculate cost correctly ✓✓  Output cost to memo ✓✓ | 5 |  |
| 1.3  Declare variable✓  Calculate VAT at 14% and round ✓✓  Output VAT to memo ✓✓ | 5 |  |
| 1.4  Calculate total cost and output ✓✓ | 2 |  |
| 1.5  if more than 9 guests✓  calculate 10% discount✓✓  Output discount to memo ✓  Calculate and output final cost after discount✓✓ | 6 |  |
| **Question 2**  2.1  Declare appropriate variables✓✓  Get child name✓  Get age✓  Get gender selected– use if..else and check itemindex or get select item caption ✓✓✓✓✓  Get theme index✓  Get month text✓✓ | **35**  12 |  |
| 2.2  Initialise code✓  Upcase first letter and to code✓  Upcase last letter using Length function not hardcoding and add to code✓✓✓  Generate a random number in range 1..10 and add to code✓✓  Lowercase the first 3 letters of the month name and add to code✓✓✓  Add the age to the code✓✓  Check if the length of the name is even or odd✓✓✓  if even add \*\*\*✓  else✓  if odd add $$$✓  Display code on panel✓ | 23 |  |
| **Question 3**  Initialise counters✓✓✓  Count number of checkboxes checked. 10✓  if more than 5 checkboxes checked✓✓  then show error message✓✓  else✓  add heading to richedit✓  add a blank line✓  Get the number of packs required✓  loop for the number of packs ✓✓  ask for the name of the child✓✓  ask for the gender of the child✓✓  if the gender is M increment boys✓✓  else increment girls✓✓  Output name and gender with a tab between ✓✓  Output the number of boys✓  Output the number of girls✓  check which gender is greater✓✓  Output the correct statement for the larger gender✓✓✓ | **40** |  |
| **Question 4**  Declare appropriate variables/components ✓✓✓  Add heading to memo and blank line beneath✓✓  Get number of children✓  Get number of sweets✓  Get cost✓  if number of sweets less than children✓✓  show error message✓✓  else✓✓  work out whole number of sweets per child ✓✓  work out whole number of leftover sweets✓✓  work out cost per child – cost / numsweets \* child✓✓  Add heading to memo✓  Output sweets per child, leftover sweets and cost per child formatted✓✓✓✓ | **25** |  |
| **Total** | **125** |  |
| **Total /125\*150** | **150** |  |