



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2020

**INFORMATION TECHNOLOGY P1
MARKING GUIDELINE**

MARKS: 150

This marking guideline consists of 11 pages.

NAME OF LEARNER:				
TOTAL QUESTION 1	TOTAL QUESTION 2	TOTAL QUESTION 3	TOTAL QUESTION 4	TOTAL
/46	/42	/40	/22	/150

QUESTION 1		MAX MARKS	MARKS ACHIEVED
1.1	<p>Button [Q1.1 Get patient code]</p> <p>Get full name from edtfullname ✓ Get year from edtyob ✓ Get province from cmbprovince ✓</p> <p>If itemindex of combobox = 0 ✓ add 1 to counter for EC ✓ Else ✓ if itemindex = 1 ✓ add 1 to counter for WC ✓ Else ✓ Showmessage ✓ and exit ✓</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><i>Alternative no 1:</i> Case structure ✓ Itemindex = 0 ✓ add 1 to counter for EC ✓ Itemindex = 1 ✓ add 1 to counter for WC ✓ Else ✓ Showmessage ✓ and exit ✓</p> </div> <p>Compile code: Get first name initial ✓ Get surname initial ✓ using pos ✓ 1st character of first name ✓ 1st character of surname ✓ Characters 3 and 4 from year ✓ First 4 characters ✓ from province ✓ Random number ✓ in correct range ✓ (randomrange(1000,60001) using inttostr ✓</p> <p>Showmessage component to display code ✓ pnIEC caption = counter for EC ✓ pnIWC caption = counter for WC ✓ using inttostr for both ✓</p>	26	

1.2	Button [Q1.2 Encryption] get input from edinput ✓ and set to uppercase ✓ initialise new string to a star ✓ use a loop ✓ from 1 to length of the input string ✓ get the correct encrypted number (using any method) ✓✓✓ ✓ add the character number to the new string ✓ and add a star ✓ display compiled ✓ string in label lbldisplay ✓	13	
1.3	The rgpbackground onclick event: If radiogroup box itemindex = 0 ✓ then set imgbackground visible property ✓ = false ✓ If radiogroup box itemindex = 1 ✓ then set imgbackground picture to 'SAFlag.jpg' ✓ and ✓ set imgbackground visible property = true ✓	7	
Question 1 Total		46	

QUESTION 2		MAX MARKS	MARKS ACHIEVED
2.1	<p>Button [Q2.1 Display]</p> <p><u>Sorting two arrays</u> outer loop from 1 to 9 ✓ Inner loop from outer loop counter + 1 to 10 ✓ If arrqty[outer] < arrqty [inner] then ✓ set temp = arrqty [outer] ✓ set arrqty [outer] = arrqty [inner] ✓ set arrqty [inner] = temp ✓ do the same swap algorithm for arrdays ✓ using string temp variable ✓</p> <p><u>Display arrays</u> loop from 1 to 10 ✓ use richedit ✓ display contents of arrdays, ✓ arrqty ✓ using tab stop ✓ using intostr for arrqty ✓</p> <p><u>Calculate and display average</u> initialise total variable ✓ loop from 1 to 10 ✓ set total variable = total ✓ + arrqty using loop index ✓</p> <p>calculate average = total/10 ✓ display average in richedit ✓ with a message rounded to a whole number ✓</p>	21	
2.2	<p>Button [Q2.3 Multiples]</p> <p>If file does not exist then ✓ Show message ✓ exit ✓ Assignfile ✓ and reset text file ✓ Set counter = 0 Loop to end of text file ✓ Add 1 to counter (initialised) ✓ Read line ✓ Add to an array using counter ✓</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><i>Alternative solution for loop from 1 to 5 ✓ Read line ✓ into an array ✓ using for loop counter ✓</i></p> </div> <p><i>(subtract 1 mark if the same text file variable is used to write to text file in next operation and the text file was not closed after reading)</i></p> <p>Loop from 1 to counter (or 5) ✓ append number ✓ from constant array ✓ using loop index to end of array using loop index ✓ and store into same array ✓</p> <p>Assignfile with correct file name ✓ and Rewrite statement ✓ Loop from 1 to counter or 5 ✓ Write content of array using loop index ✓ to text file ✓ Closefile statement after loop ✓</p> <p>Display a message that the file was written ✓</p>	21	
Question 2 Total		42	

QUESTION 3		MAX MARKS	MARKS ACHIEVED
3.1	BUTTON: [Q3.1 Display Pages] Go to first record ✓ Loop to end of the table ✓ If Pages ✓ > 100 ✓ Then display Title ✓ in richedit ✓ Go to next record before end of loop ✓	7	
3.2	BUTTON: [Q3.2 Change to English] Go to first record ✓ Loop to end of the table ✓ If Language = 'eng' ✓ Then Edit ✓ Set Language = 'English' ✓ Post ✓ Go to next record before end of loop ✓	7	
3.3	BUTTON: [Q3.3 Delete PMC articles] Go to first record ✓ Loop to end of the table ✓ if Source = 'PMC' then ✓ Delete ✓ else ✓ Go to next record before end of loop ✓	6	
3.4	BUTTON: [Q3.4 Percentage of Chinese articles] Set counter to 0 ✓ and total to 0 ✓ Go to first record ✓ Loop to end of the table ✓ If Language = 'Chinese' ✓ Then Add 1 to counter ✓ Add 1 to total variable ✓ Go to next record before end of loop ✓ Display in richedit ✓ Total of all articles converted to string ✓ Percentage calculated correctly ✓ and converted to string ✓ with no decimal places ✓	13	
3.5	BUTTON: [Q3.5 Insert Article] tblresearch.Insert; ✓ tblresearch['Title'] := 'Vaccine trials'; ✓ tblresearch['Author'] := 'Watson M'; ✓ tblresearch['Publisher'] := 'Cureus'; ✓ tblresearch['Pages'] := 43; ✓ tblresearch['Language'] := 'English'; ✓ tblresearch.Post; ✓	7	
Question 3 Total		40	

QUESTION 4	MAX MARKS	MARKS ACHIEVED
<p>Button [Q4 Request for test]</p> <p>Get full name ✓ and age ✓ from input components Get system date ✓</p> <p>If age >= 60 ✓ then string = 'your test date is on' ✓ joined to system date converted to string ✓</p> <p>Else ✓ string = 'your test date is on' ✓ joined to system date ✓ + 1 day ✓ converted to string ✓</p> <p>if chksymptoms.Checked ✓ and ✓ (chktravel.Checked ✓ or ✓ chkcontact.Checked ✓) then lbldisplay.Caption ✓ = name ✓ + #13 ✓ + compiled string ✓ else ✓ lbldisplay.Caption = 'Phone your doctor if you are worried'; ✓</p>	22	
Question 4 Total	22	

SAMPLE SOLUTIONS**QUESTION 1**

```
procedure TQuestion1.btnQ1_1Click(Sender: TObject);
var
  sfull, sfirst, ssur, scode : string;
  sdate, sprov : string;
begin
  // enter your code here
  case cmbprovince.itemindex of
    0 : inc(inumec);
    1 : inc(inumwc)
  else
    begin
      showmessage('Please choose a province');
      exit;
    end;
  end;
  sfull := edtfullname.Text;
  sfirst := sfull[1];
  delete(sfull,1,pos(' ',sfull));
  ssur := sfull[1];
  sdate := edtyob.text;
  sprov := cmbprovince.Text;
  scode := sfirst + ssur + copy(sdate,3,2) + copy(sprov,1,4) +
  inttostr(randomrange(1000,60001));

  showmessage('Your patient code is ' + scode);
  pnlec.Caption := inttostr(inumec);
  pnlwc.Caption := inttostr(inumwc);
end;

procedure TQuestion1.btnQ1_2Click(Sender: TObject);
var k, ipos : integer;
    snew, SSENT : string;
const
  salpha = ' ABCDEFGHIJKLMNOPQRSTUVWXYZ';
begin
  // enter your code here
  ssent := uppercase(edtinput.Text);
  snew := '*';
  for k := 1 to length(ssent) do
    begin
      ipos := pos(ssent[k],salpha);
      snew := snew + inttostr(ipos) + '*';
    end;
  lbldisplay.Caption := snew;
end;
```

```

procedure TQuestion1.rgbpictureClick(Sender: TObject);
begin
// enter your code here
case rgbpicture.itemindex of
0 : imgdisplay.Visible := false;
1 : begin
    imgdisplay.Visible := true;
    imgdisplay.Picture.LoadFromFile('SAFlag.jpg');
end;

end;
end;

```

QUESTION 2

```

procedure TfrmQuestion2.btnQ2_1Click(Sender: TObject);
var k, l, itemp, inum, icount, itotal : integer;
stemp, snum : string;
rpercent : real;
bfound : boolean;
begin
// provided code do not delete////////
redout.Paragraph.TabCount := 1;
redout.Paragraph.tab[0] := 40;
redout.Lines.Add('Date' + #9 + 'Cases');
for k := 1 to 9 do
    for l := k + 1 to 10 do
        begin
            if arrqty[k] < arrqty[l] then
                begin
                    itemp := arrqty[k];
                    arrqty[k] := arrqty[l];
                    arrqty[l] := itemp;

                    stemp := arrdays[k];
                    arrdays[k] := arrdays[l];
                    arrdays[l] := stemp;
                end;
        end;
    itotal := 0;
    for k := 1 to 10 do
        itotal := itotal + arrqty[k];

    for k := 1 to 10 do
        redout.Lines.Add(arrdays[k] + #9 + inttostr(arrqty[k]));

    redout.Lines.Add("");
    redout.Lines.Add('Average number of infections = ' + floattostrf(itotal/10,ffixed,8,0));

end;

```



```
procedure TfrmQuestion2.btnQ2_2Click(Sender: TObject);
// provided code do not delete////////
const
arradd : array [1..5] of integer = (8,6,4,2,0);
//////////
var myfile, tfile : textfile;
sline : string;
k : integer;
arrnumbers : array[1..6] of string;
icount : integer;
begin
if not fileexists('numbers.txt') then
begin
  showmessage('file not found');
  exit;
end;
assignfile(myfile,'numbers.txt');
reset(myfile);
icount := 0;
while not eof(myfile) do
  begin
  inc(icount);
  readln(myfile,sline);
  arrnumbers[icount]:= sline;
  end;
//closefile(myfile);

for k := 1 to icount do
  begin
  arrnumbers[k] := arrnumbers[k]
    + inttostr(arradd[k]);
  end;

assignfile(tfile,'Multiples of 18.txt');
rewrite(tfile);
for k := 1 to 5 do
  writeln(tfile, arrnumbers[k]);

closefile(tfile);
end;
```

QUESTION 3

```
procedure TfrmQuestion3.btnQ3_1Click(Sender: TObject);
begin
reddisplay.Clear;
tblresearch.First;
while not tblresearch.eof do
  begin
    if tblresearch['Pages'] > 100 then
      reddisplay.Lines.Add(tblresearch['Title']);
    tblresearch.Next;
  end;
end;
```

```
procedure TfrmQuestion3.btnQ3_2Click(Sender: TObject);
begin
tblresearch.First;
while not tblresearch.eof do
  begin
    if tblresearch['Language'] = 'eng' then
      begin
        tblresearch.Edit;
        tblresearch['Language'] := 'English';
        tblresearch.Post;
      end;
    tblresearch.Next;
  end;
end;
```

```
procedure TfrmQuestion3.btnQ3_3Click(Sender: TObject);
begin
tblresearch.First;
while not tblresearch.eof do
  begin
    if tblresearch['Source'] = 'PMC' then
      tblresearch.Delete
    else
      tblresearch.Next;
  end;
end;
```

```
procedure TfrmQuestion3.btnQ3_4Click(Sender: TObject);
var inum , itotal : integer;
begin
  inum := 0;
  itotal := 0;
reddisplay.Clear;
tblresearch.First;
```

```
while not tblresearch.eof do
  begin
```

```

    if tblresearch['Language'] = 'Chinese' then
        inc(inum);
    inc(itotal);
    tblresearch.next;
end;
reddisplay.Lines.Add('Total number of articles = ' + inttostr(itotal));
reddisplay.Lines.Add('Percentage of Chinese articles = ' + floattosttrf(inum/itotal
*100,ffixed,8,0) + ' percent');
end;

```

```

procedure TfrmQuestion3.btnQ3_5Click(Sender: TObject);
begin
    tblresearch.insert;
    tblresearch['Title'] := 'Vaccine trials';
    tblresearch['Author'] := 'Watson M';
    tblresearch['Publisher'] := 'Cureus';
    tblresearch['Pages'] := '43';
    tblresearch['Language'] := 'English';
    tblresearch.Post;
end;

```

QUESTION 4

```

procedure TfrmQuestion4.btnQ4Click(Sender: TObject);
var sname : string;
    iage : integer;
    stestdate : string;
begin
    // enter your code here//
    sname := edtname.Text;
    iage := sedage.Value;

    if iage >= 60 then
        stestdate := 'Your test is on ' + datetostr(date)
    else
        stestdate := 'Your test is on ' + datetostr(date + 1);

    if cbxsymptoms.Checked and (cbxtravel.Checked or cbxcontact.Checked) then
        lbldisplay.Caption := sname + #13 + stestdate
    else
        lbldisplay.Caption := 'Phone your doctor if you are worried';

    Showmessage('File has been written');
end;

```
