basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**SENIOR CERTIFICATE
NATIONAL SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P1

NOVEMBER 2020

MARKS: 180

TIME: 3 hours

**This question paper consists of 18 pages, an HTML tag sheet,
an input mask character sheet and a separate information sheet.**

INSTRUCTIONS AND INFORMATION

1.   Owing to the nature of this practical examination, it is important to note that, even if you complete the examination early, you will NOT be permitted to leave the examination room until all the administrative functions associated with the examination have been finalised. During the examination, the normal rules regarding leaving the examination room apply.

2.   If you are working on the network, or the data files have been preloaded, you must follow the instructions provided by the invigilator/educator. Alternatively, the invigilator will give you a CD/DVD/flash drive containing all the files needed for the examination. If a CD/DVD/flash drive has been issued to you, you must write your examination number and centre number on the CD/DVD/flash drive.

3.   At the end of the examination, you must hand in the CD/DVD/flash drive given to you by the invigilator with ALL your answer files saved onto the CD/DVD/flash drive, OR you should make sure that ALL the answer files are saved on the network/computer as explained to you by the invigilator/educator.

4.   Make absolutely sure that all files can be read. Do NOT save unnecessary files/folders and **do NOT hand in duplicate answer files/folders. Do NOT delete any original files that you did not work on**.

5.   The information sheet that has been provided with the question paper **MUST BE COMPLETED AFTER THE THREE-HOUR EXAMINATION SESSION**. Hand it to the invigilator at the end of the examination.

6.   A copy of the master files will be available from the invigilator. Should there be any problems with a file, you may request another copy from the invigilator.

7.   This question paper consists of SEVEN questions. Answer ALL the questions.

8.   Read through each question before answering or solving the problem. Do NOT do more than is required by the question.

9.   Read the question carefully as accuracy will be taken into account.

10.   Ensure that you save each document using the file name given in the question paper. Save your work at regular intervals as a precaution against possible power failures.

11.   You may NOT use any resource material.

12.   Ensure that the regional settings are set to South Africa and that date and time settings, number settings and currency settings are correctly set.

13. In all questions involving word processing, you should set the language to English (South Africa). The paper size is assumed to be A4 Portrait, unless instructed otherwise. Use centimetres as the unit of measurement.

14. Formulae and/or functions must be used for ALL calculations in questions involving spreadsheets. Use absolute cell references only where necessary to ensure that formulae are correct when you copy them to other cells in a spreadsheet.

   NOTE: All formulae and/or functions should be inserted in such a manner that the correct results will still be obtained even if changes are made to the existing data.

15. You may NOT use a word processing program such as Word to answer the HTML question.

16. The examination folder/CD/DVD/flash drive that you receive with this question paper contains the files listed below. Ensure that you have all the files before you begin with this examination.

• 1Pyramids	Word processing file
• 1Structure	Word processing file
• 2Building	Word processing file
• 3Tourists	Spreadsheet
• 4Visitors	Spreadsheet
• 5Andrews	Image
• 5Egypt	Database
• 6_1NatGeo	HTML file
• 6_2Facts	HTML file
• 6Group	Image
• 7Invitation	Word processing file
• 7Mail	Database
• 7Years	Spreadsheet

SCENARIO

The pyramids at Giza, Egypt, is one of the Seven Wonders of the Ancient World.

You are required to assist with documents about the pyramids.

QUESTION 1: WORD PROCESSING

Open the **1Pyramids** word processing document that contains information about the pyramids and insert your examination number in the header or the footer.

1.1   Change the picture found at the top of the first page as follows:

- Set the width of the picture to 21 cm.
- Move the picture to the top edge of the page so that it extends over the top, left and right margins of the page, as shown below.
- Remove all the empty paragraphs below the picture.

(3)

1.2   Edit the heading 'Amazing Facts about the Great Pyramids of Giza' below the picture as follows:

- Remove the strikethrough.
- Expand the character spacing by 1.5 pt.
- Centre the heading.   (4)

1.3   Use the author and the date given in the text below the heading 'Amazing Facts about the Great Pyramids of Giza' to add a website source in the APA style to the document.   (4)

1.4   Use a word processing feature to replace all the nonbreaking spaces in the document with normal spaces.

Ensure that only ONE normal space appears in the place of a nonbreaking space.   (2)

1.5   Change the indentation settings on the ruler of the paragraph that starts with 'One of …' as follows:

- Set the first line indent to 2 cm.
- Set the right indent to 14 cm.   (3)

1.6   Change the line and paragraph spacing of the second paragraph that starts with 'The grand …' as follows:

- Set the paragraph spacing after to 8 pt.
- Set the line spacing to multiple at 1.4.   (3)

1.7   Use a <u>paragraph setting</u> to ensure that the heading 'Insert here' will always appear as the first line of a new page.   (1)

1.8   Find the heading 'Insert here'.

Insert the **1Structure** word processing document found in your examination folder <u>below</u> the heading so that it appears as an icon.   (3)

1.9   Find the picture below the heading 'Dimensions' and do the following:

- Format the picture so that the text below the picture does not display.
- Change the caption 'Dimensions of the Great Pyramid' so that the caption label displays as 'Structure'.
- Set the caption label numbering to the a,b,c, … numbering format.   (3)

1.10   Insert a text watermark as follows:

- Use the text 'Ancient'.
- Display the watermark only on the first page.   (3)

Save and close the **1Pyramids** document.   **[29]**

QUESTION 2: WORD PROCESSING

Open the **2Building** word processing document, which contains information about the mysteries of the pyramids, and insert your examination number in the header or the footer.

2.1   Edit the cover page as follows:

- Carry out the instruction in the Author form control.
- Remove the Abstract form control.   (2)

2.2   Remove page borders from the document.   (1)

2.3   Use Styles and insert a table of contents on the second page as follows:

- Change ALL headings formatted with the 'Heading 2' style to the 'Heading 1' style.
- Insert a two-level table of contents by setting the 'Title' style as level 1 and the 'Heading 1' style as level 2.   (3)

2.4   Insert automatic page numbering of your choice in the <u>Page Margins</u> position on the left side of the page.

The page number after the Table of Contents page must start as 'Page 1'.   (3)

2.5   Find the table below the heading 'The overall precision of the Great Pyramid is breathtaking' and convert the table to text to display as follows:

Take note of the following:

- The tab setting is set at 4 cm.
- The indent settings
- The alignment
- The paragraph border

Topic	Facts
Base length	750 feet long at each base
Four corners	Situated along the four cardinal points: north, south, east and west
Circumference	The ratio of its circumference to its original height is equal to the value of pi: 3.14. This is something that's not supposed to have been known for more than another millennium. Their mathematical and astronomical knowledge, and the acquisition of it remains a complete mystery to modern-day scholars.
Geography	They were also amazing geographers, perhaps one of the greatest mysteries is the fact that the Great Pyramid is positioned exactly at the latitude and longitude lines that contain more land and less sea than any other place on Earth. It's right in the 'geographical' centre of the Earth. This fact alone (out of many) suggest that the builders also knew a great deal about the geography of our planet. It's hard to imagine they could complete all of this without some sort of aerial view. The manner that this knowledge was obtained remains a mystery.
Position on earth	There is a meridian running through the pyramids that divides the continents and oceans into two equal halves.
Ratio	The Great Pyramid's base is at 1:43,200 which is a mathematical representation of the Northern Hemisphere.

(5)

2.6   Find the citation to the source 'Hancock' and edit the citation to display only the author's name and the page number as 433. The source must NOT be changed.   (2)

2.7   Find the picture of the pyramids at the top of the last page and format the picture to display as shown below.

NOTE: The text surrounding the outline of the pyramids may display differently.

"It's the precise configuration for 10,450 BC that we see on the Giza plateau – as though a master-architect came here in that period and decided to lay out a huge map on the ground using a mixture of natural and artificial features. He used the course of the Nile Valley to depict the Milky Way, as it looked then. He built the three pyramids to represent the three stars, exactly as they looked then. And he put the three pyramids in exactly the same relationship to the Nile Valley as the three stars then had to the Milky Way. It was a very clever, very ambitious, very exact way to mark a period – to freeze a particular date into architecture if you like." – Robert Bauval (Reference)
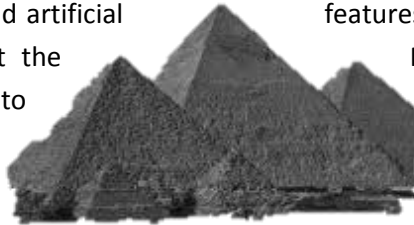
(3)

2.8   Insert a cross reference on the text 'Reference' to the bookmark 'ForEver'.

Display only the page number. (2)

Save and close the **2Building** document. **[21]**

QUESTION 3: SPREADSHEET

NOTE:

- Use formulae and/or functions for ALL calculations in the spreadsheet.
- Use absolute cell references ONLY where necessary to ensure that formulae are correct when you copy them to other cells in the same column (copy down).
- Insert formulae and/or functions in such a manner that the correct results will still be obtained even if changes are made to the existing data.
- Should you need to use building blocks, use the allocated space in the spreadsheet.

Open the **3Tourists** spreadsheet which contains data about the number of tourists to Egypt.

Work in the **Data** worksheet.

3.1   Format **row 1** as follows:

- Merge and centre **cells A1:I1**.
- Increase the font size of the text to 13.   (2)

3.2   Insert an appropriate date function in **cell C3** to extract the month from the date in **cell A3**. Ensure that the number of the month displays correctly.   (2)

3.3   Enter a function in **cell C4** to determine the average number of tourists who visited Egypt (**column H**) per month.

Format the answer to NO decimal places.   (3)

3.4   The peak tourist season in Egypt is from October to May and the off-peak season is from June to September.

Use the SUMIF function in **cell C5** to determine the total number of tourists who visited Egypt during the peak season (**column B**) in 2019 (**column G**).   (3)

3.5   The totals in **column H** should calculate the total number of tourists per month from 2015 to 2019; however, this does not happen as expected for all the months.

Insert a formula in **cell I8** to display the text 'Correct' if the total in **column H** corresponds with the total number of tourists from 2015 to 2019, or else the text 'Error' must display.

Copy the formula down to the other cells.   (7)

3.6   Use a spreadsheet feature to apply a fill colour of your choice to the **cell range C8:G19** when the number of tourists is lower than the average for the five years (2015 to 2019).   (3)

Work in the **Chart_Grafiek** worksheet.

3.7   Edit the chart to appear as follows:
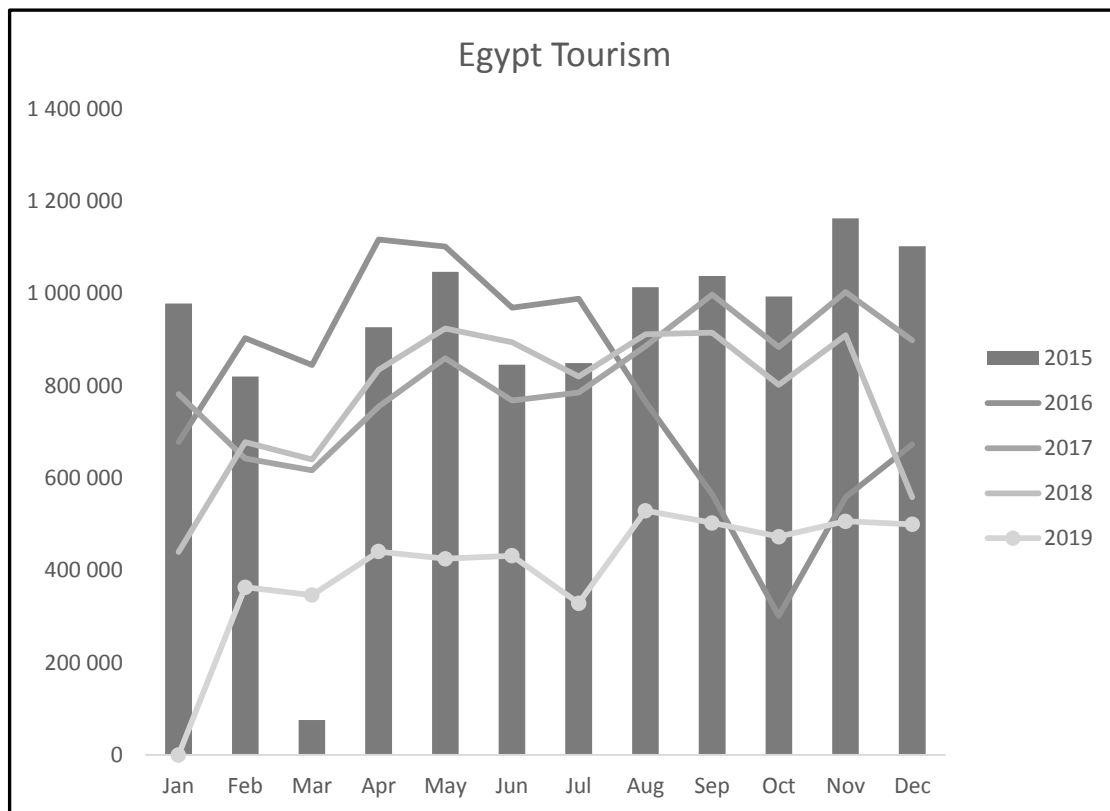
(7)

Save and close the **3Tourists** spreadsheet.   **[27]**

QUESTION 4: SPREADSHEET

NOTE:

- Use formulae and/or functions for ALL calculations in the spreadsheet.
- Use absolute cell references ONLY where necessary to ensure that formulae are correct when you copy them to other cells in the same column (copy down).
- Insert formulae and/or functions in such a manner that the correct results will still be obtained even if changes are made to the existing data.
- Should you need to use building blocks, use the allocated space in the spreadsheet.

Open the **4Visitors** spreadsheet which contains data about visitors to the pyramids.

Work in the **Pyr_Pir** worksheet.

4.1   Format the worksheet as follows:

- Change the page orientation to landscape.
- Ensure that **row 2** will be repeated at the top of each page when you print the worksheet.   (2)

4.2   Use a combination of text functions in **cell D3** to extract ONLY the text after the '@' sign from the e-mail address in **column C**.

Example: If the e-mail address is zulul@in.com, then ONLY in.com must display.   (5)

4.3   Use an appropriate lookup function in **cell F4** to determine the location of the pyramid in **row 4** by using the code in **column E** and the lookup table in the **Code_Kode** worksheet.

Ensure that this function will return the correct results if copied to the other cells in **column F**.

NOTE: Do NOT copy the function to the other cells.   (5)

4.4   Use a formula in **cell H5** to determine the age of 'Gabriel Wilmar' in completed years by using the date of birth in **column G** and the current date.   (6)

4.5   Insert a nested IF function (formula) in **cell I14** to display 'Yes' if a visitor is under the age of 60 (**column H**) AND visited Giza (**column F**), or else 'No' must display.   (5)

Save and close the **4Visitors** spreadsheet.   **[23]**

QUESTION 5: DATABASE

A database was created to store data about tourists and the pyramids they choose to visit.

Open the **5Egypt** database.

5.1   Change the **tbl5_1** table as follows:

5.1.1   Change the Indexed field property of the *TSurname* field to allow for duplicate values. (1)

5.1.2   Display the date in the *TBirthDate* field in the Short Date format. (1)

5.1.3   Change the *TAge* field properties to display the age without decimals. (1)

5.1.4   Set the field properties of the *EContact* field so that the user can only enter text that contains an '@' sign. (3)

5.1.5   Set the *TType* field to an appropriate field size. (1)

5.1.6   Create an input mask for the user to enter data in the following format:

- Lowercase letters
- The first character is a full stop (.), followed by
- TWO compulsory letters, followed by
- ONE optional letter

NOTE: The full stop must display when a record is selected. (4)

5.1.7   Centre the content of the *PyramidCode* field. (1)

5.1.8   Create a combo box for the *PyramidSite* field by using the **tblSites** table. (2)

5.1.9   Switch to Datasheet View.

Insert the **5Andrews** picture found in your examination folder in the *TPhoto* field for the traveller 'Andrews Peter'. (2)

Save and close the **tbl5_1** table.

5.2   Open the form called **frm5_2** in Design View and do the following:

- Change the order of the fields to *TSurname*, *TName*, *EContact, TPhoto.*
- Replace the heading in the form header with your examination number.
- Insert the *Date* field in the form header.
- Shade the *EContact* field to any light colour of your choice.

Save and close the **frm5_2** form.   (4)

5.3   Open the **qry5_3** query in Design View.

Modify the query so that it displays the total number of pyramids at the Giza site.

Save and close the **qry5_3** query.   (3)

5.4   Open the **qry5_4** query in Design View and do the following:

- Sort the query first according to the *Surname* field and then according to the *Name* field.
- Display the records of those visitors who were born before 1960 and whose domain type is 'org' or 'edu'.
- Tourists receive a 15% discount on the visitors' cost (*VisitorsCost*).
  Insert a calculated field called *Payable* to determine the amount payable after the discount has been deducted.

Save and close the **qry5_4** query.   (9)

5.5   Create a report named **rpt5_5**, based on the **tblVisitors** table, to display the records as follows:

rpt5_5			
Pyramid	**Name**	**Surname**	**VisitorsCost**
Bent Pyramid			
	Fulton	Morale	R 14 955.00
	Athena	Patel	R 14 835.00
		Maximum Amount:	R 14 955.00
Buried Pyramid			
	Jan-Harm	Steenkamp	R 14 759.00
	Ernst	Jordaan	R 13 980.00
	James	Murray	R 10 986.00
	Troy	Gentry	R 14 210.00
	Harriet	Delane	R 13 221.00
	Nozipho	Cele	R 13 030.00
	Andries	Bester	R 10 075.00
		Maximum Amount:	R 14 759.00
Headless Pyramid			
	Hendrik	Fourie	R 14 670.00
	Kaitlin	Cusana	R 14 314.00
	Sylvia	Hebert	R 14 164.00
	Sammy	Nel	R 13 016.00
	Alexis	Stone	R 12 225.00
		Maximum Amount:	R 14 670.00

Take note of the following:

- The fields that display
- Grouping
- A calculation
- The format of the *VisitorsCost* field

Save and close the **rpt5_5** report.   (8)

Save and close the **5Egypt** database.   **[40]**

QUESTION 6: WEB DESIGN (HTML)

NOTE:

- An HTML tag sheet has been attached for reference.
- All files needed to complete this question are found in the examination folder.

ONE mark will be allocated for the correct use of tags, triangular brackets and correct nesting for both the web pages.   (1)

6.1   Open the incomplete **6_1NatGeo** web page in a web browser and also in a text/HTML editor (NOT a word processing program such as Word).

      NOTE: Question numbers appear as comments in the coding to guide you where to insert the answer(s). DO NOT delete these comments.

[Adapted from https://www.nationalgeographic.com/archaeology-and-history/
archaeology/giza-pyramids.html]

NOTE: Use the example on the previous page as a guide for answering this question.

6.1.1   Insert HTML tags to centre the text that starts with 'PYRAMIDS …' and ends with '… other features'.   (2)

6.1.2   Locate the heading 'PYRAMIDS' and format it as follows:

- Apply the 'Heading 1' style to this heading.
- Set the font of this heading to 'Papyrus'.   (3)

6.1.3   Insert the image **6Group.jpg** below the first paragraph that ends with the text '… complex mortuary temple'.   (2)

6.1.4   An attempt was made to create a link on the heading 'The Future of the Pyramids' to the website 'www.crystal.com'.

Modify the link so that the website 'www.crystal.com' will open in the web browser.

NOTE: Do NOT click on the link.   (2)

Save and close the **6_1NatGeo** web page.

6.2   Open the incomplete **6_2Facts** web page in a web browser and also in a text/HTML editor (NOT a word processing program such as Word).

HINT: Use tags given in the attached HTML tag sheet.

Complete the web page to appear as follows:

Top 3 Egyptian Pyramid Facts

No.	Question	Answer
1.	Which pyramids are the most well known?	Ancient Egyptian pyramids
2.	How many pyramids have been discovered in Egypt?	130+

- Most Ancient Egyptian pyramids were built as tombs for pharaohs and their families.
- Saqqara is a huge ancient burial ground built near the Egyptian city of Memphis.
- For over 3 800 years, the Great Pyramid of Giza was the tallest man-made structure in the world.

Save and close the **6_2Facts** web page.   (10)

[20]

QUESTION 7: GENERAL

References to pyramids are found in many other places.

7.1   Open the **7Years** spreadsheet.

7.1.1   Copy the data from **cells A1:B6** in the **Chart** worksheet to **cells A2:F3** in the **Data** worksheet.

The copied data in the **Data** worksheet must appear as follows:

Tourists in Egypt from 2015 to 2019					
Year	2015	2016	2017	2018	2019
Number of tourists per year	11532	9464	9878	9328	4847

(2)

7.1.2   Work in the **Chart** worksheet. Modify the chart to display as follows:
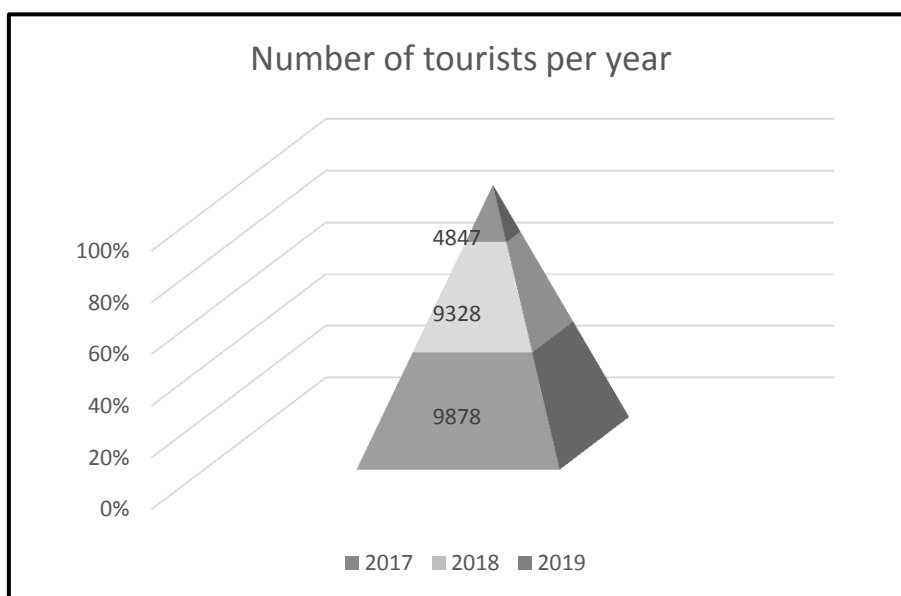
(3)

7.1.3   Save the pyramid chart as a **7Chart.jpg** image file in your examination folder.

(2)

Work in the **Visitors** worksheet.

7.1.4   A named range has already been created for the amounts in **column F**.

Insert a function in **cell J3** that uses the **named range** to determine how many of the amounts in the named range are greater than R14 000.

(3)

7.1.5 A validation rule has been set on **cells E2:E194** to obtain data from the list in **cells M4:M9**. However, there are errors and omissions in the validation list (**cells M4:M9**), which cause data in **column E** to be invalid.

Correct the Validation List AND update the Validation Rule so that the data in **column E** becomes valid.

HINT: To identify the invalid data in **column E**, use the Circle Invalid Data option from the Data Validation icon in the Data Tools group. (3)

Save and close the **7Years** spreadsheet.

7.2 Open the **7Invitation** word processing document.

Complete a mail merge as follows:

7.2.1
- Use the **7Mail** database as a data source for the **7Invitation** mail merge document.
- Edit the data source recipient list to include ONLY the data of those visitors who have an edu domain type AND who are born after 1960.
- Replace the text <<Name>> with the merged field *Name*.
- Add a field in the footer of the document to show the date and time when the document is opened. (6)

Save the **7Invitation** document.

7.2.2 Complete the mail merge and save the merged document as **7InvitationMerge**. (1)

[20]

TOTAL: **180**

HTML TAG SHEET

Basic Tags	
Tag	**Description**
`<body></body>`	Defines the body of the web page
`<body bgcolor="pink">`	Sets the background colour of the web page
`<body text="black">`	Sets the colour of the body text
`<head></head>`	Contains information about the web page
`<html></html>`	Creates an HTML document – starts and ends a web page
`<title></title>`	Defines a title for the web page
` `	Inserts a line break
`<!-- -->`	Comment

Text Tags	
Tag	**Description**
`<h1></h1>`	Creates the largest heading
`<h6></h6>`	Creates the smallest heading
`<b></b>`	Creates bold text
`<i></i>`	Creates italic text
`<font size="3"></font>`	Sets size of font, from "1" to "7"
`<font color="green"> </font>`	Sets font colour
`<font face="Times New Roman"></font>`	Sets font type

Links Tags	
Tag	**Description**
`<a href="URL"></a>`	Creates a hyperlink
`<a href="URL"><img src="name"></a>`	Creates an image link
`<a name="NAME"></a>`	Creates a target location in the document
`<a href="#NAME"></a>`	Links to a target location created somewhere else in the document

Formatting Tags	
Tag	**Description**
`<p></p>`	Creates a new paragraph
`<p align="left">`	Aligns a paragraph to the "left" (default), can also be "right" or "center"
`<ol></ol>`	Creates a numbered list
`<ol type="A","a", "I","i","1"></ol>`	Defines the type of numbering used
`<ul></ul>`	Creates a bulleted list
`<ul type="disc", "square","circle"> </ul>`	Defines the type of bullets used

Formatting Tags continued	
Tag	**Description**
`<li></li>`	Inserted before each list item, and adds a number or symbol depending on the type of list selected
`<img src="name">`	Adds an image
`<img src="name" align="left">`	Aligns an image: can be "left", "right"; "bottom", "top", "middle"
`<align="center"> <img src="name">`	Aligns an image to the "center"
`<img src="name" border="1">`	Sets the size of the border around an image
`<img src="name" width="200" height ="200">`	Sets the height and width of an image
`<img src="name" alt="alternative text">`	Displays alternative text when the mouse hovers over the image or when the image is not found
`<hr/>`	Inserts a horizontal line
`<hr size="3"/>`	Sets size (height) of a line
`<hr width="80%"/>`	Sets the width of a line, in percentage or absolute value
`<hr color= "ff0000"/>`	Sets the colour of the line

Table Tags	
Tag	**Description**
`<table></table>`	Creates a table
`<tr></tr>`	Creates a row in a table
`<td></td>`	Creates a cell in a table
`<th></th>`	Creates a table header (a cell with bold, centred text)
`<table width="50">`	Sets the width of the table
`<table border="1">`	Sets the width of the border around the table cells
`<table cellspacing="1">`	Sets the space between the table cells
`<table cellpadding="1">`	Sets the space between a cell border and its contents
`<tr align="left">`	Sets the alignment for cell(s) ("left", can also be "center" or "right")
`<tr valign="top">`	Sets the vertical alignment for cell(s) ("top", can also be "middle" or "bottom")
`<td colspan="2">`	Sets the number of columns a cell should span
`<td rowspan="4">`	Sets the number of rows a cell should span

INPUT MASK CHARACTER SHEET

CHARACTER	DESCRIPTION
0	Digit (0 to 9, entry required, plus [+] and minus [–] signs not allowed)
9	Digit or space (entry not required, plus [+] and minus [–] signs not allowed)
#	Digit or space (entry not required; spaces are displayed as blanks while in Edit mode, but blanks are removed when data is saved; plus [+] and minus [–] signs allowed)
L	Letter (A to Z, entry required)
?	Letter (A to Z, entry optional)
A	Letter or digit (entry required)
a	Letter or digit (entry optional)
&	Any character or a space (entry required)
C	Any character or a space (entry optional)
. , : ; - /	Decimal placeholder and thousand, date and time separators (The actual character used depends on the settings in the **Regional Settings Properties** dialog box in the Windows Control Panel.)
<	Causes all characters to be converted to lowercase
>	Causes all characters to be converted to uppercase
!	Causes the input mask to display from right to left, rather than from left to right. Characters typed into the mask always fill it from left to right. You can include the exclamation point anywhere in the input mask.
\	Causes the character that follows to be displayed as the literal character (e.g. \A is displayed as just A).

	Examination sticker		**180**

COMPUTER APPLICATIONS TECHNOLOGY P1 – NOVEMBER 2020

INFORMATION SHEET *(to be completed by the candidate AFTER the 3-hour session)*

CENTRE NUMBER _____

EXAMINATION NUMBER _____

WORK STATION NUMBER _____

SUITE USED (Mark appropriate box with a cross (**X**))	Microsoft Office 2013	Microsoft Office 2016	Microsoft Office 2019	Office 365
WEB BROWSER USED (Mark appropriate box with a cross (**X**))	Mozilla Firefox	Google Chrome	Internet Explorer	Other (Specify)

FOLDER NAME_____

File names have been entered for each answer. Tick if saved and/or attempted.

Question number	File name	Saved (✓)	Attempted (✓)	Maximum Mark	Marker	SM	CM	IM/EM
1	*1Pyramids*			**29**				
2	*2Building*			**21**				
3	*3Tourists*			**27**				
4	*4Visitors*			**23**				
5	*5Egypt*			**40**				
6	*6_1NatGeo*			**20**				
	6_2Facts							
7	*7Years*			**20**				
	7Chart							
	7Invitation							
	7InvitationMerge							
TOTAL				**180**				

Comment *(for office/marker use only)*

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_____