CICT PART I SECTION 1

COMPUTER APPLICATIONS - PRACTICAL

MONDAY: 23 November 2020.   Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

Ensure that you are provided with a computer, a flash disk and printing materials.

Additional instructions:
1.   Save all your work in the flash disk provided and in a folder bearing your registration number.
2.   Work on each question should be saved in the subfolder contained in the folder created in number 1 above. The name of the subfolder should correspond to the question number.
3.   Your registration number MUST appear as a header on every printout containing your answers.
4.   You must indicate the number of the question answered on the header created in number 3 above.

Note: The information in numbers 1-4 above must be computer generated.

At the end of the examination duration, you should hand in to the invigilator(s):

(a)   The flash disk containing your work.
(b)   All printed work.
(c)   All unused printing paper(s).

QUESTION ONE
Create a word processor document named "Question One".

Use Question One document to key in solutions to questions (a) to (b) below:

(a)   Describe the term "contextual tabs as used in word processing applications.   (2 marks)

(b)   Differentiate between a hanging indent and a first line indent, as used in word processing.   (4 marks)

(c)   Using Question One document, key in the text below:

THE MATHEMATICAL EQUATION

To find a sum of binomial expression of the form $(a + b)^n$ can be difficult for instance.

$(a + b)^n = (a + b) \times (a + b) \times (a + b) \times (a + b)....$

So if $a = 1$ then this is as simple as an expansion of a sum shown below;

$$(1 + x)^n = 1 + \frac{nx}{1!} + \frac{n(n - 1)\ x^2}{2!} + ...$$

(5 marks)

(d)   (i)   Using Question One document, create and design the document below:

TUBERCULOSIS

A potentially serious infectious bacterial disease that mainly affects the lungs.
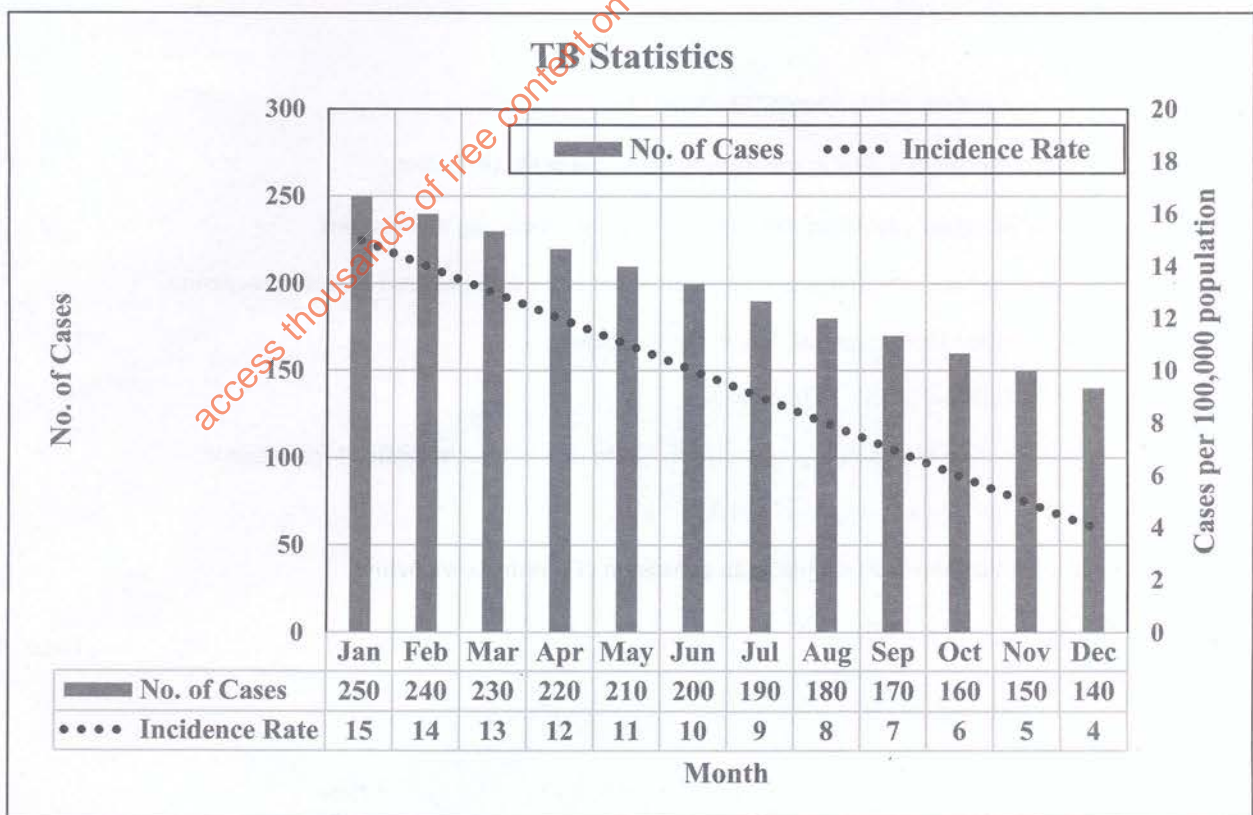
- Partly preventable by vaccine.
- Treatable by a medical professional.
- Spreads by airborne droplets.
- Requires a medical diagnosis.
- Lab tests or imaging always required.
- Medium-term: resolves within months.

The bacteria that cause tuberculosis (TB) are spread when an infected person coughs or sneezes. Most people infected with the bacteria that cause tuberculosis don't have symptoms. When symptoms do occur, they usually include a cough (sometimes blood-tinged), weight loss, night sweats and fever.

TB Treatment

If you have **TB infection**, you may need medicine to prevent getting **TB disease** later. This is called "preventive" treatment. Take the drugs exactly as you are told. If you stop taking the drugs too soon, you can become sick again. If you do not take the drugs correctly, the germs may become difficult to treat with those drugs. It takes at least six months and possibly as long as one year to kill all the TB germs.

TB Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No. of Cases	250	240	230	220	210	200	190	180	170	160	150	140
Incidence Rate	15	14	13	12	11	10	9	8	7	6	5	4

Month

(6 marks)

(ii) Insert the comment "World Health Organisation Data" at the end of the document. (1 mark)

(iii) Insert a footer showing page numbers. (1 mark)

(iv) Find and replace the word "infected" with "sick" word in the entire document. (1 mark)

Save Question One document and print a copy of Tuberculosis document.

(Total: 20 marks)

QUESTION TWO
Create a word processor document named "Question Two".

Use Question Two document to key in solutions to questions one (a) and (b) below:

(a) Explain the functions of the following tools used in desktop publishing software:

    (i) Blend. (2 marks)

    (ii) Eyedropper. (2 marks)

(b) Highlight the effect of the following characteristics of a graphics item in a desktop publishing graphic:

    (i) Colour depth. (1 mark)

    (ii) Resolution. (1 mark)

(c) Assume you are part of a music group that has been practicing and is ready to play some live performances in various clubs. The members have consulted you to design a letterhead for your group which they could use to write letters to club owners introducing themselves.

    Required:
    (i) Design a letterhead for your group with the following specifications:
- Name of your group
- Email address for the group
- Telephone number
- Website – place it against the right margin
- Two horizontal lines for effect
- Change top margin of 0.75"
- A logo of your choice at left hand corner.

    Save the publication as letterhead and print. (7 marks)

    (ii) Design a Digital Video Disc (DVD) album cover for your musical group in (c) above with the following details:
- Name of the album
- List of songs
- Images (background)
- Pictures of your choice
- Logo for your musical group

    Save the publication as "DVD cover" and print a copy. (7 marks)

Save and print Question Two document.

(Total: 20 marks)

QUESTION THREE
Create a word processor document named "Question Three".

Use Question Three document to key in solutions to questions three (a) to (c) below:

(a) Explain the term referential integrity as used in database management systems. (2 marks)

(b) Distinguish between the terms "order by" and "group by" as used in database management systems. (2 marks)

(c) Highlight the use of "#" and "!" in database management systems. (2 marks)

Save and print Question Three document.

(d) (i)   Using a database application program, create a database called "Dependencies". (1 mark)

(ii)   Using "Dependencies" database created in (d) (i) above, demonstrate the difference between functional dependency and transitive dependency. (2 marks)

(e) Kazi Furnitures has the following data in their database:

Furniture:

FCode	FName
F01	Stool
F02	Table
F03	Sofaset

Artisans:

ACode	AName
A011	James
A012	Amos
A016	Simon
A020	Ann

Products:

PCode	FCode	ACode	Cost	Status
P1	F01	A011	3500	Sold
P2	F02	A011	5400	Sold
P3	F03	A011	20000	Sold
P4	F03	A012	25000	Sold
P5	F01	A012	3200	Sold
P6	F02	A012	5200	Sold
P7	F03	A012	23000	Sold
P8	F03	A016	18000	Sold
P9	F01	A016	4000	Sold
P10	F03	A011	25000	Ready

Sales:

Datesold	Pcode	Selling-price
3/1/2020	P1	4000
3/1/2020	P2	6000
4/1/2020	P3	25000
4/1/2020	P4	26000
5/1/2020	P5	3500
8/1/2020	P6	5500
8/1/2020	P7	25000
9/1/2020	P8	20000
10/1/2020	P9	5000

(i)   Create above tables in the Dependencies database created in (d) (i) above. (2 marks)

(ii)   Create relationships between the tables created in (e) above. (2 marks)

(iii) Input data using appropriate forms. (4 marks)

(f) Create a report to show payments paid to each artisans for the month of January at the rate of 5% of the selling price. (2 marks)

(g) Calculate the profit made by the organisation in a report. (1 mark)

Save Dependencies database and print reports created in (f) and (g) above.

(Total: 20 marks)

QUESTION FOUR

Create a word processor document named "Question Four".

Use Question Four document to key in solutions to question (a) below:

(a)   Describe the following concepts in context of presentation application:

    (i)   Animation groupings.   (2 marks)

    (ii)   Bulleted list slide.   (2 marks)

    (iii)   Content slide.   (2 marks)

Save Question Four document and print.

(b)   Using a presentation program, create a presentation called "Question Four".

    (i)   Create a master slide containing the text below:

Information Systems: Creating Business Value

by. Dr. David   (1 mark)

    (ii)   Add a text box at the footer of master slide in (b) (i) above containing the text below:

Chapter 1:

Information Technology for the organisation   (1 mark)

    (iii)   Create a slide with the information below:

The components of IT

- Accept and store data and information.
- Perform mathematical calculations.
- Apply logic to make decisions.
- Retrieve/display and send information.   (2 marks)

    (iv)   Add another slide containing the details below:
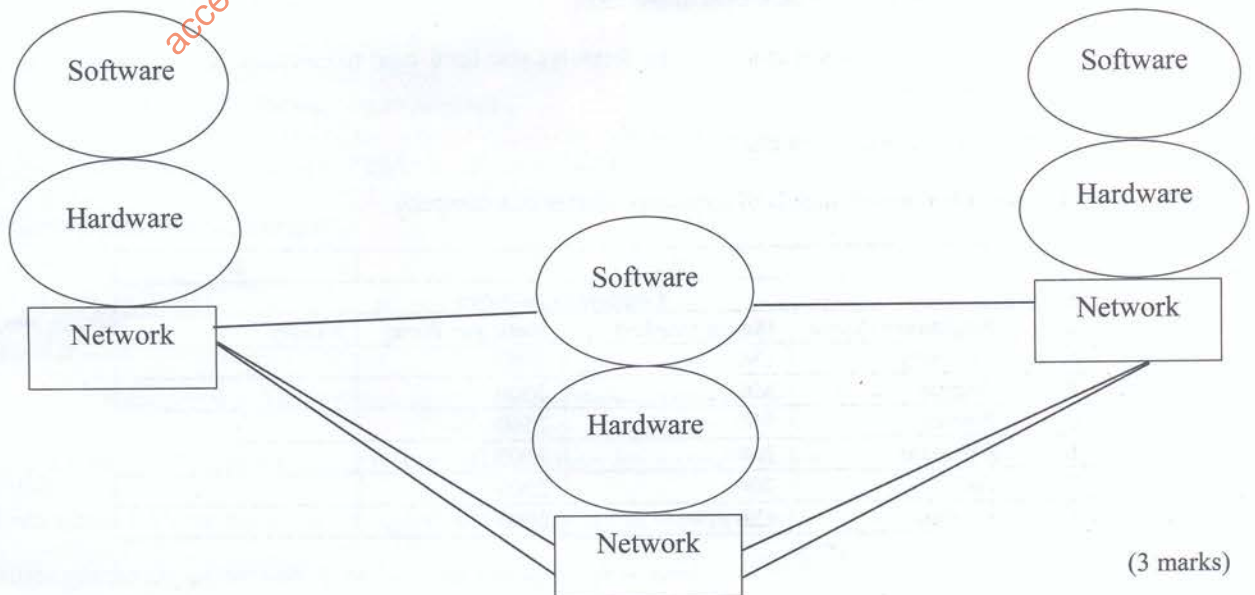
Information technology categories

Hardware: Tangible components
Software : Intangible components
Network technology: Increases the power of information technology by allowing the sharing of resources.
                                                                                 (2 marks)

    (v)   Insert a new slide and design it with the graphics as shown below:

Information technology platform

                                                                                 (3 marks)

(vi)   Add an image of your choice to the slide in (b) (v) above and place it on the far left top corner.   (2 marks)

(vii)   Add a wipe transition effect to all slides.   (2 marks)

(viii)   Set the slide show to loop continuously until "ESC".   (1 mark)

Save Question Four presentation and print all slides on one A4 sized paper.

(Total: 20 marks)

QUESTION FIVE
Create a word processor document named "Question Five".

Use the word processor document to key in solutions to question (a) and (b) below.

(a)   Explain the following error messages generated by a spreadsheet:

       (i)   ###   (2 marks)

       (ii)   #NAME?   (2 marks)

(b)   Suggest suitable type of charts for a sales person to present sales trends in a spreadsheet.   (2 marks)

Save Question Five document and print.

(c)   A motor vehicle dealer sells cars to customers on credit. The credit terms require the customer to make a deposit of 25%. The balance after the total deposit is paid in monthly installments over a period of 24 months without interest.

       The table below shows the customers' details and their credit values:

	A	B	C	D	E
1			Customers Details		
2	Name	Car value (Sh)	Deposit	Balance	Monthly installment
3	Andrew	350,000			
4	Joseph	400,000			
5	Michael	300,000			
6	Ann	250,000			
7	Violet	280,000			
8	Joyce	270,000			

Required:

(i)   Create a workbook named "Car credit sales" and enter the data as shown above.   (2 marks)

(ii)   Use an appropriate formula to calculate values for the deposit, balance and monthly installment for every customer.   (3 marks)

(iii)   Insert borders on all entries of the sheet.   (1 mark)

(iv)   Open a new sheet and show the formulas you have used to calculate the deposit, balance and monthly installment.

       Save the worksheet as "formulas".   (1 mark)

(d)   The table below shows details of engineers salaries in a company.

	A	B	C	D
1		Engineers Salaries		
2	Engineers Name	Hours worked	Rate per Hour	Salary
3	Lundwig	180	1000	
4	Josphat	300	2000	
5	Benson	500	2500	
6	Christine	200	1500	
7	Job	300	2500	
8	Hezbon	120	2000	

Required:

(i)   Create a worksheet named Engineers in the workbook you created in (c) above. Enter the data shown on the table above. (2 marks)

(ii)   Given that salary = hours worked multiplied by rate per hour, calculate the salary for every engineer. (2 marks)

(iii)   Add the following engineers to the worksheet:

Eng. Maranga   500 hours   3000 per hour
Eng. Josphine   600 hours   3500 per hour

(iv)   Calculate the total number of hours worked and the total amount of salary paid to all engineers. (2 marks)

(v)   Create a pie chart displaying the names of engineers and the hours worked. (1 mark)

Save "Car credit sales" workbook and print "Engineers" worksheet.

(Total: 20 marks)

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