



As per latest guidelines of NEP & NCF



7



Terabyte

(A Series of Computer Books)

ANSWER KEY





1 NUMBER SYSTEMS

Section - A :—

(A) Multiple choice questions:

1. (d) 2. (d) 3. (a) 4. (a) 5. (a)

(B) Fill in the blanks:

1. Decimal 2. Binary 3. Radix 4. Binary 5. Octal

(C) State whether following statements are T or F:

1. (F) 2. (F) 3. (T) 4. (T) 5. (F)

(D) Application based questions:

1. He can use binary arithmetic for calculating the numbers. Binary addition will help him to solve it.
2. Yes, it can work as decimal number can be converted to its equivalent binary number.

(E) Answer the following:

1. Calculation :

$$\begin{aligned}(10111)_2 &= (1 \times 2^4 + 0 \times 2^3 + 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0)_{10} \\ &= (16 + 4 + 2 + 1)_{10} \\ &= (23)_{10}\end{aligned}$$

So, the decimal equivalent of the binary number $(10111)_2$ is $(23)_{10}$

∴ The number at the place will be 23.

2. Calculation :

2	257	
	128	1
	64	0
	32	0
	16	0
	8	0
	4	0
	2	0
	1	0
	0	1

↑
Remainder

Thus ; $(257)_{10} = (100000001)_2$

3. $(375)_{10}$ in octal is equal to :

$$375/8 = 46 \text{ with } 7 \text{ remainder.}$$

$$46/8 = 5 \text{ with } 6 \text{ remainder.}$$

$$5/8 = 0 \text{ with } 5 \text{ remainder.}$$

Then, we put the remainders together in reverse order, we get the answer 567.

$$(375)_{10} = (567)_8$$

4. Convert $(234)_8$ into decimal :

$$(234)_8 = 2 \times 8^2 + 3 \times 8^1 + 4 \times 8^0$$

$$= (156)_{10}$$

Now, convert $(156)_{10}$ to binary

2	156	
78	0	
39	0	
19	1	Remainder
9	1	
4	1	
2	0	
1	0	
0	1	

$$\therefore (156)_{10} = 10011100$$

$$\therefore (234)_8 = (10011100)_{10} \quad \text{Ans.}$$

5. 10111 and 10101

$$\begin{array}{r}
 111 \quad \longleftarrow \text{Carry} \\
 10111 \\
 + 10101 \\
 \hline
 101100 \\
 \hline
 \end{array}$$

6. Multiply 1011 and 1001

$$\begin{array}{r}
 1011 \\
 \times 1001 \\
 \hline
 1011 \\
 0000 \times \\
 0000 \times \times \\
 1011 \times \times \times \\
 \hline
 1100011 \\
 \hline
 \end{array}$$

7.
$$\begin{array}{r} 101 \leftarrow \text{Quotient} \\ 10 \overline{) 1010} \leftarrow \text{Dividend} \\ \underline{10} \\ 010 \\ \underline{10} \\ 0 \leftarrow \text{Remainder} \end{array}$$

8. Subtract 1001 from 1111

$\begin{array}{r} 1111 \\ - 1001 \\ \hline 0110 \end{array}$	Step 1 = 1 - 1 = 0
	Step 2 = 1 - 0 = 1
	Step 3 = 1 - 0 = 1
	Step 4 = 1 - 1 = 0



Answer Key

Class - 7

2 FORMATTING DATA IN EXCEL

Section - A :—

(A) Multiple choice questions:

1. (d) 2. (a) 3. (b) 4. (d) 5. (b)

(B) Fill in the blanks:

1. Formatting 2. Home 3. Formatting 4. Excel 5. Fill

(C) State whether following statements are T or F:

1. (F) 2. (F) 3. (T) 4. (F) 5. (T)

(D) Application based questions:

1. Alignment feature of can help him in doing so.
2. Autofit is the facilities provided by Excel to do so.

(E) Answer the following:

1. Data formatting in excel is a process of making data bold or underline or Italic or changing font, Size and color etc. to increase readability and beauty of the spread sheet.
2. Steps to fill color :
 - i) Select the cell range which are to be filled with color or pattern.
 - ii) Click on Home tab.
 - iii) Click on the drop-down arrow of font group.
 - iv) Click on fill tab in format cell dialog box.
 - v) To see more colors option click on More colors button.

- vi) To select background color of cell, click on desired color in background colors selections.
 - vii) To apply pattern style to the selected cells, click on down arrow in pattern style box and select a pattern from display list.
 - viii) Click on OK button to finalize the selection made.
3. Font formatting in excel provides facility to font to make text bold or Italic or underlined, change font size or for colors or background color etc..
 4. Alignment of data means to set the position to which data is placed in a cell. By default number are right aligned whereas text is left aligned.
 5. Steps to apply alignment using format cell :
 - i) Select the cell range whose data is to be aligned. Click on Home tab.
 - ii) Click on Home tab.
 - iii) Click on the drop - down arrow of alignment group.
 - iv) Specify the horizontal alignment and under Text alignment area. Horizontal and Vertical alignment vertical boxes respectively.
 - v) Specify the degree at which you want to display the text in Degrees box under orientation area.
 - vi) Select shrink to fit check.
 - vii) Select wrap text check box to wrap the text.
 - viii) Select Merge cells check box to merge two or more cells.
 - ix) Click on OK to finalize the selections made.



3

Answer Key

MORE ABOUT EXCEL

Class - 7

Section - A :—

(A) Multiple choice questions:

1. (c) 2. (c) 3. (b) 4. (a) 5. (a)

(B) Fill in the blanks:

1. Database 2. Sorting 3. Filtering Data 4. Data Validation 5. Data Tods group.

(C) State whether following statements are T or F:

1. (T) 2. (F) 3. (T) 4. (F) 5. (F)

(D) Application based questions:

1. Filtering Data feature of Excel can help the office, as It displays only those record that match the specified condition. To apply filtering, select filter button in Data tab.
2. Sorting is the feature of excel that can help him to arrange the given data in ascending or descending order of specified field.

(E) Answer the following:

1. Steps to sort a range of data are :
 - i) Open the worksheet and select the range that is to be sorted.
 - ii) Click on data tab.
 - iii) Click on sort button in sort & filter group.
 - iv) Click on drop - down arrow of sort by box. List of fields available in the selected range is displayed.
 - v) Select the field from the list.
 - vi) Default sort setting is from smallest to largest click an arrowhead of order box and select largest to smallest option.
 - vii) Click on OK button to finalize selections made.
2. Steps to display froms :
 - i) Click on file tab. A drop down menu is displayed.
 - ii) Click on options button in the drop down menu. Excel options dialog box is displayed.
 - iii) Click on customize Ribbon options in the left part of the dialog box.
 - iv) Click on drop - down arrow of choose commands from box in the dialog box.
 - v) Click on commands Not in the Ribbon options.
 - vi) Click on from option in the separator section.
 - vii) Click on New Tab button available near bottom in the third pane on right.
 - viii) Click on Add button and finally click on OK button to confirm the selection made.
3. Steps for filtering the data :
 - i) Select the range where filter is to be applied.
 - ii) Click on Data tab.
 - iii) Click filter button in sort & filter group.
 - iv) Click on the drop - down arrow of selected field/column. A drop - down list showing different values of selected field in different reword is displayed. Repeated value record is displayed just once.
 - v) Select the number form the list that you want to display.
 - vi) Click on OK button.

4. Data Validation feature of Excel makes sure to accept only that data which satisfies specified conditions. It can be applied to entire database or on the selected range.
5. Steps to delete reword :
 - i) Click on a cell.
 - ii) Click on New tab.
 - iii) Click on Form button available in New group the sheet 1 dialog box is displayed. It displays record of selected cell.
 - iv) Move to record to be deleted by clicking on find Next or find previous button.
 - v) Click on Delete button to delete the record. A dialog box appears displaying message.
 - vi) Click on OK to confirm the deletion.



4 FORMULAS AND FUNCTIONS

Section - A :—

(A) Multiple choice questions:

1. (d) 2. (b) 3. (c) 4. (a) 5. (b)

(B) Fill in the blanks:

1. Excel Formulas 2. Operator 3. Argument 4. Sum 5. Absolute Referencing.

(C) State whether following statements are T or F:

1. (T) 2. (T) 3. (T) 4. (T)

(D) Application based questions:

1. Cell referencing where cell references are relative is known as relative referencing. Cells A1 and A2 are two and one positions above the cell A3 so this is considered as Sum of values in cell A3 that are 2 and 1 Positions above the cell A 3. So when we copy this referece points. ON copying this formulas it appear as: B 1+ B 2 in cell B 3.
2. SQRT function Excel will help to do so.

(E) Answer the following:

1. ✳ Formulas are used to perform all types of calculations. It must start with an = sign may include any or more of the Cell References, operators, Constant & function.
 - ✳ Functions are pre - defined formulas such as; Sum; SQRT. These readymade formula in excel. Functioin has two parts ; Argument & structure.
2. Three types of cell references are :

- i) Relative Referencing
- ii) Absolute Referencing
- iii) Mixed Referencing.

3. Relative Referencing means that cell address mentioned in formula cell specifies the relative positions of cell address to the formula cell.
4. Absolute Referencing is a technique of mention of absolute cell address instead of relative addresses in formula.
5. Mixed Referencing is combination of Relative Referencing and Absolute Referencing. We put a \$ sign either before the column name or before row number of a cell address.



5

FLOWCHARTS

Section - A :—

(A) Multiple choice questions:

1. (d) 2. (a) 3. (c)

(B) Fill in the blanks:

1. Flowchart 2. Parallelogram 3. Diamond

(C) State whether following statements are T or F:

1. (F) 2. (F) 3. (T)

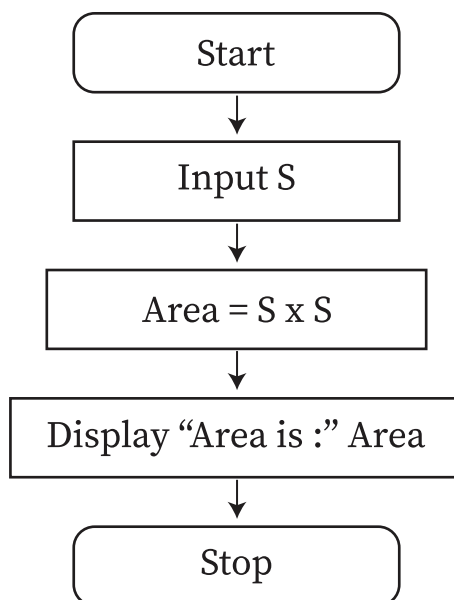
(D) Application based questions:

1. Decision Symbol she should use to draw flowchart for this part.
2. Connector flowchart symbol can help to connect remote located parts of flowchart.

(E) Answer the following:

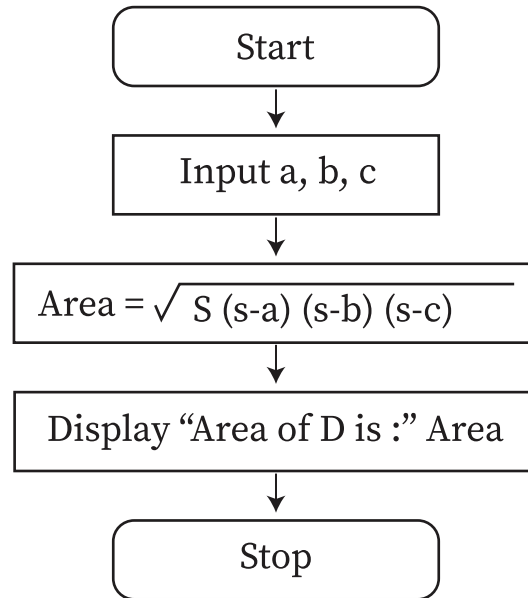
1. We know area of square = S^2

Let sides be 'S' of square



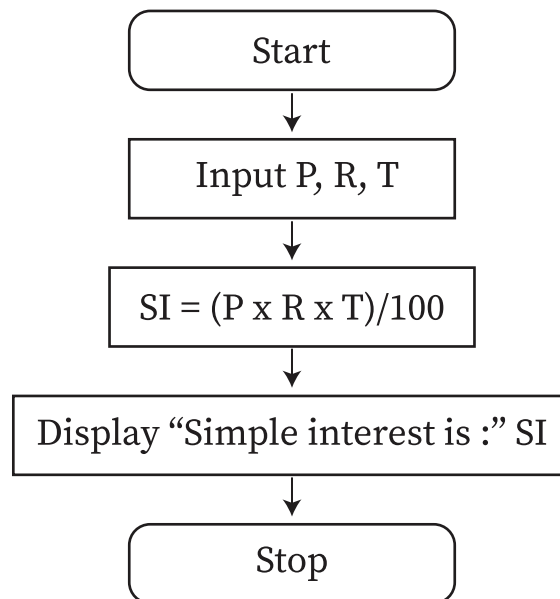
2. Area of triangle = $\sqrt{S (s-a) (s-b) (s-c)}$

Let sides be a, b, c of the triangle

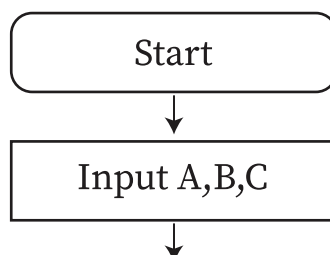


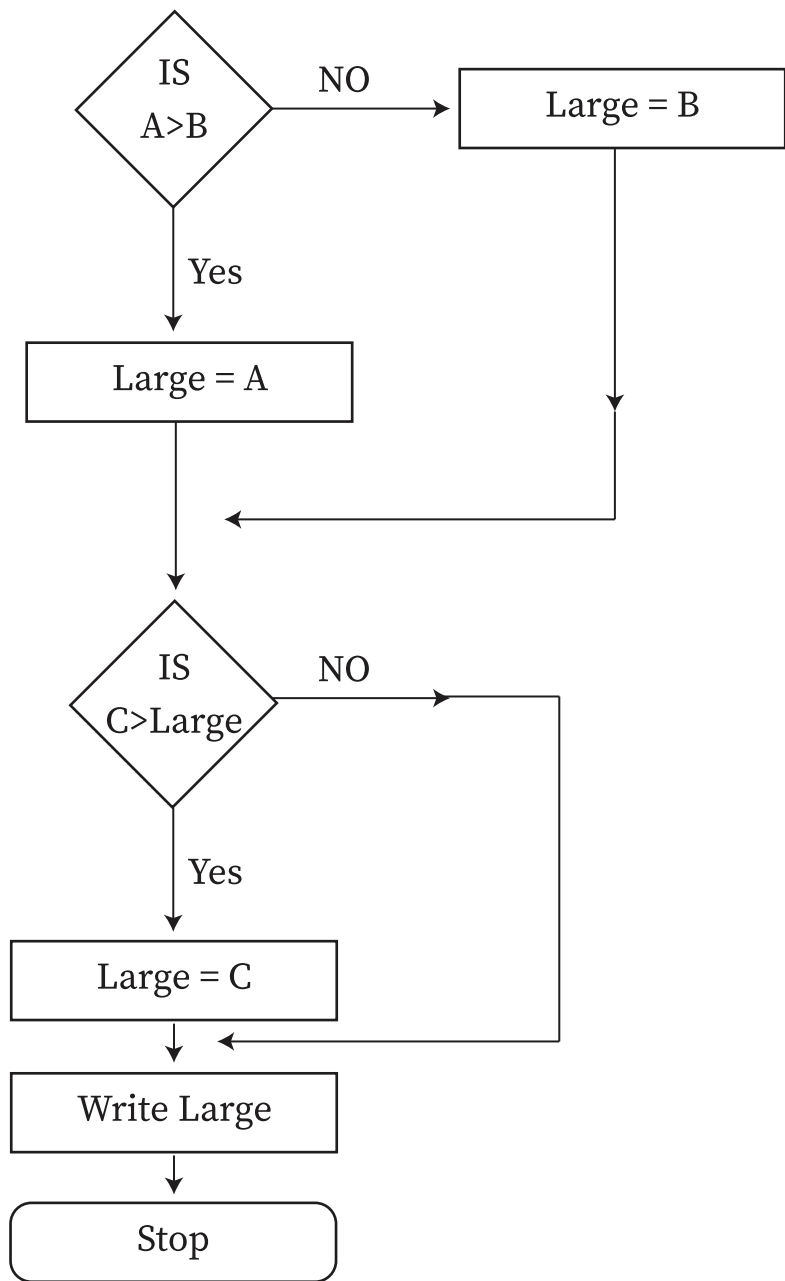
3. Let SI denote simple interest. We know $SI = \frac{(P \times R \times T)}{100}$

Where (P) is principal, (R) is Rate & (T) is time.

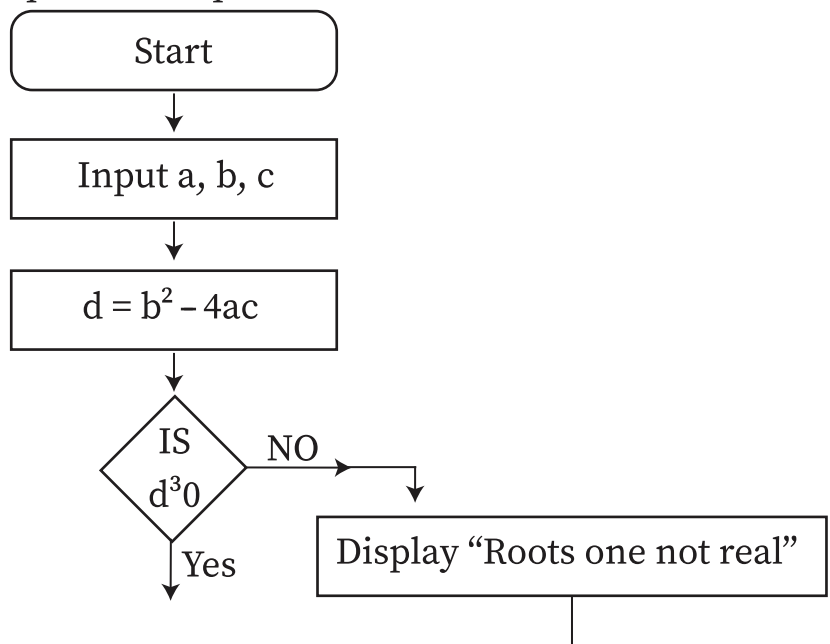


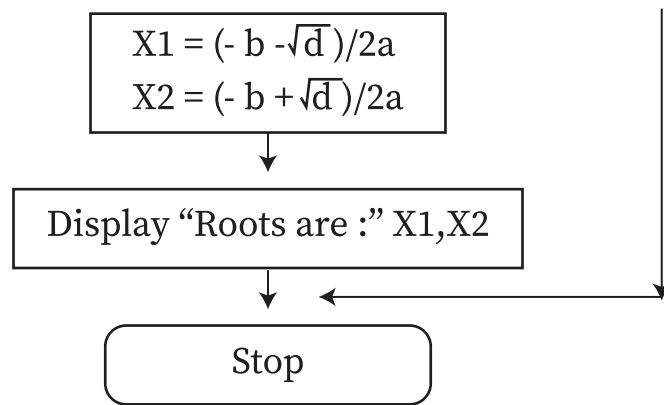
4. Let three numbers be A, B, C we will compare A and B. Larger of these is compared with the third number i.e C largest of large and C is the required largest number.





5. We know real roots of a quadratic equation are possible when $d = b^2 - 4ac > 0$.
 Let X_1, X_2 denotes roots of the quadratic equation.





6 CONDITIONAL STATEMENT IN PYTHON

Section - A :—

(A) Fill in the blanks:

1. Conditional
2. Ifstatement, if...else statement, if...elif...else statement.
3. If
4. If...ELIF...ELSE

(B) State whether following statements are T or F:

1. (T) 2. (F) 3. (F) 4. (T)

(C) Application based questions:

1. If statement is a decision - making statement. It excutes a set of statements only when the condition is true. General form of if statement is :

If condition :

Statements set

In if statement set is excuted only when conditon is true.

2. If...else statement is used to excute one set of statements out of possible two set of statements depending upon the results of the condition.

General from of if...esle statement is:

If condittion on :

Statement Set -1

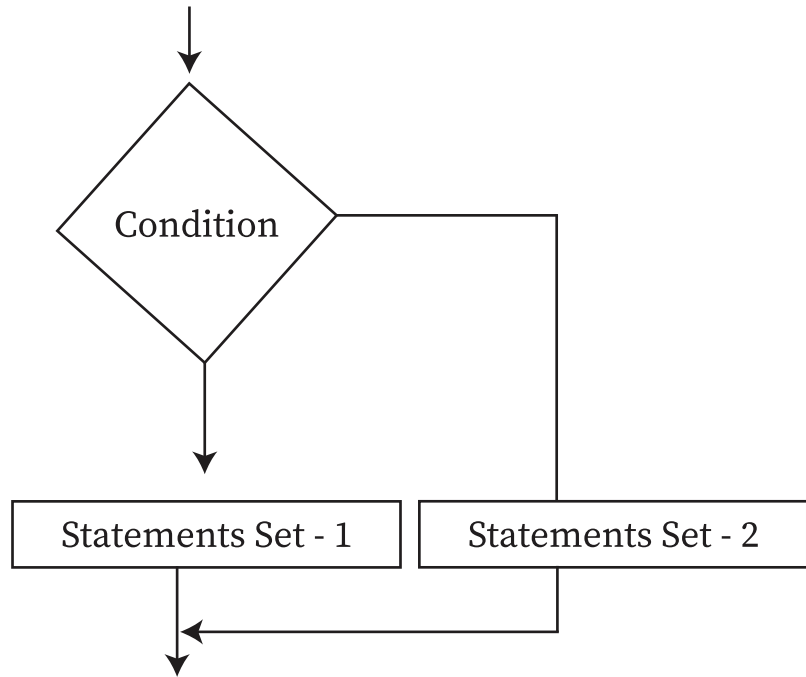
else :

Statements Set - 2

Statements Set - 1 is executed when condition is true otherwise.

Statements set - 2 is executed.

3. Flow chart of general form of if...else statements.



4. If...elif...else Statement is used to execute one set of statements out of possible multiple set of statements depending upon the results of multiple conditions.

5. Program to display smallest of two numbers.

```
# include < stdio.h >
int main ( )
{
int a, b, small ;
Print f ( "enter any two number :");
Scan f ( " % d%d", & a , & b);
If ( a < b)
Small = a;
else
small = b;
Print f ( "\n smallest of the two number is : % d", small);
getch ( );
return 0;
}
```

6. Program to find smallest of three numbers :

```
# Program to find smallest of three numbers
```

```

a = int (input ( "enter first number :"))
b = int (input ( "enter second number :"))
c = int (input ( "enter third number :"))
if (a <= b & a <= c)
small = a
else :
    small = b
If ( C <= a && c <= b)
Print ( " smallest among three number is : ", a)
else :
    Print ( " Largest among given three number is : " small )

```

7. # Program to check that given number is odd or not.

```

n = int (input ( "enter a number :"))
if ( n % 2 ) == 0 :
Print ( "number is even")
else :
Print ( "number is odd")

```

8. # to check whether it s century year or not if (y % 100 == 0) and (y % 400 == 0):

```

Print ( "given year is a leap year ")
Elif ( y % 4 == 0 ) and ( y % 100 != 0 ):
Print ( "Given year is a leap year ")
else :
Print ( " Given year is a not leap year ")

```



Answer Key

Class - 7

7 ADOBE PHOTOSHOP 2021

Section - A :—

(A) Multiple choice questions:

1. (a)
2. (c)
3. (b)
4. (a)
5. (b)

(B) Fill in the blanks:

1. Window - Based Image Editing
2. Tools panel
3. Crop tool

4. Spot Healing Tool
5. Paint Bucket Tool
6. .Psd

(C) State whether following statements are T or F:

1. (T) 2. (F) 3. (T) 4. (F) 5. (T) 6. (F)

(D) Application based questions:

1. Lasso tool is used to select a part of an image in freehand form i.e in irregular shapes.
2. He should use Move tool to cut a part of the image and move it to some other part of the image.

(E) Answer the following:

1. Adobe Photoshop is an image editing software developed by Adobe system. By help of Adobe photoshop we can edit the photograph easily. It is widely used by artists and photo editors to add special effects in the images and photographs.
2. Magic Wand Tool is used to select the adjacent areas of some color in the image just by single - click. In magic wand tool for exact selection, we need to first set some options.
3. Palettes it is available on the right side of the photoshop window. It contains various palettes to help in monitoring and modifying the properties of an image.
4. Blur tool is used to blur the sharp edges of an images.
5. Gradient Tool is used to apply a gradient fill to selected part or entire image.
6. Steps to select rectangular part in image :
 - i) Click and hold the left mouse button on the Marque Tool.
 - ii) Select the required tool from the displayed list and drag arround the area you want to select.
 - iii) A dotted border (in the selected marque tool shape) Surrounds the selected area.
 - iv) Drag mouse to expand or reduce selected area.
 - v) Press deleted key. Selected area is deleted.
7. Steps to move part of an image :
 - i) Select the part to be moved.
 - ii) Click on the move tool (or press ctrl + v). Pointer changes to sign.
 - iii) Move mouse printer to the selected area and drag it to the new location.



8

**MORE ABOUT
PHOTOSHOP**

Section - A :—

(A) Multiple choice questions:

1. (b)
2. (b)
3. (a)

(B) Fill in the blanks:

1. Brush
2. Paint Bucket
3. Gradient
4. Color replacement
5. Healing Brush
6. .Psd

(C) State whether following statements are T or F:

1. (F)
2. (F)
3. (T)
4. (T)
5. (T)

(D) Application based questions:

1. Healing Brush tool is used to correct the imperfection (like blemishes etc) from the images. This tool can help him.
2. Pattern Stamp tool can help her to fill a part of this image with a specified pattern.

(E) Answer the following:

1. Brush tool is used to apply smooth and soft brush strokes of the selected colors on the image.
2. Paint Bucket tool is used to fill color in a selected or entire area of image.
3. Color replacement tool is used to replace the existing color of the image with another specified colors.
4. Gradient Tool is used to fill the selected area of the image with blended multiple colors.
5. Clone Stamp Tool is used to duplicate parts of an image over another by sampling the image part to be cloned..

6. Clone Stamp Tool

- i) It is used to duplicate part of an image over another by sampling the image part to be cloned.

Pattern Stamp Tool

It is used to fill area with a specified pattern.

ii) In clone Stamp we can not make our own pattern and fill it in our own image.

In this tool we can make our own pattern and fill it in our own image.



Answer Key

Class - 7

9

Net SURFING

Section - A :—

(A) Multiple choice questions:

1. (b) 2. (c) 3. (c) 4. (a)

(B) Fill in the blanks:

1. Internet Portocol
2. Letter
3. Uniform Resource Locator
4. Surfing Internet
5. URL and Search engine
6. URL

(C) State whether following statements are T or F:

1. (T) 2. (T) 3. (F) 4. (T)

(D) Application based questions:

1. Domain Name system is the addressing system that can be remembered easily. It is differ form IP address as it is easy to remember and involves common word such as name of user, name if ISP instead of number.
2. She can use some tips to make her search more efficient and filtered one by :
 - i) By using web words.
 - ii) Be specific.

(E) Answer the following:

1. Searching Information on Internet is known as net surfing or surfing internet.
2. URL stands for Uniform Resource Locator. Each web page or web site on Internet is given a unique address, this unique address is known as it's URL. We need URL to open a web page we need to enter it's URL in address box of a web browser.
3. Two types of Addressing System are :

i) Number System Addressing :-

This address is divided into four parts, separated from each other with the help of dot symbol. This addressing system is directly understood by computer and also called Addressing system or dot addressing system.

ii) Domain Name System :-

DNS is easy to remember for user and involves common words (such as name of user, name of ISP instead of numbers), It is also known as letter addressing system or human understandable system.

- 4. IP or Internet protocol addressing system also known as number system addressing which is divided into four parts. It is separated from each other with dot symbol. It is directly understood by computer but it is quite difficult to remember.
- 5. DNS Stands for Domain Name System. It is easy to remember for user and involves common words (Such as name of user, name of ISP instead of number). It is also known as letter addressing system or human understandable system. DNS are generally classified on the basis of two factors : Geographical and Non - Geographical domains.

6.	IP		DNS
i)	It is easily understood by computer but not by human.		It is understood by human.
ii)	It is quite difficult to remember.		It is easy to remember.
iii)	It is divided into four parts.		It contains common words.



10

Answer Key DIGITAL MARKETING

Class - 7

Section - A :—

(A) Multiple choice questions:

- 1. (d) 2. (c) 3. (a)

(B) Fill in the blanks:

- 1. Digital
- 2. (SEO) Search Engine Optimization
- 3. SEO and social media marketing
- 4. Traditional Marketing

(C) State whether following statements are T or F:

1. (T)
2. (F)
3. (T)
4. (F)

(D) Application based questions:

1. Digital Marketing is the best mode she should follow for advertising.
2. Social Media Marketing is the digital marketing channels he should use.
3. (SEO) Search Engine Optimization will help her to do so.
4. Yes, it is possible by Digital Marketing, shomik can communicate directly with the target audience through various websites, social media.

(E) Answer the following:

1. Digital Marketing is an online marketing approach to connect with the target audience all over the world through various digital channels and platforms such as search engines, Social Media and E-mail.
2. SEO Stands for Search Engine Optimization. It is the process of increasing the visitors traffic to your website in free (i.e. unpaid) web search results. It does not include paid search.
3. CPC Stands for Cost Per Click refers to the cost of each click in a paid search campaign.
4. Digital Marketing channels are the digital mediums through which we can advertise our product to the targeted or potential customers all over the world.

*** Commonly used digital marketing channels are :**

- i) Website :- It is most fundamental marketing channel organizations use websites to advertise their products.
 - ii) E-mail Marketing : It is the process of sending e-mail to target audience. These alerts include product, services, loyalty bonus for existing customers offers for new customers to attract customers.
 - iii) Content Marketing : Contents are created to inform, entertain and inspire the buyers.
5. Advantages of Digital Marketing :
- i) Multiple Strategies : Digital marketing provides different strategies as per need of a business. B2B business may have a totally different strategy than a B2C.
 - ii) Cost Efficient : Exact prices in digital marketing depends upon the advertisement platform, timing efficient than traditional marketing methods such as newspaper etc..

- iii) Interactivity : Digital marketing helps you to communicate directly with the target audience through website comments, messages, reviews and social media posts. This provides feedback to make better strategies.



11 ARTIFICIAL INTELLIGENCE

Section - A :—

(A) Multiple choice questions:

1. (d) 2. (b) 3. (c) 4. (b) 5. (b)

(B) Fill in the blanks:

1. AI
2. Weak AI, Strong AI, Super AI
3. Symbios, numbers
4. Reasoning
5. LISP and PROLOG

(C) State whether following statements are T or F:

1. (T) 2. (F) 3. (T) 4. (F) 5. (T)

(D) Application based questions:

1. AI can help him to work with computer.
2. Robotics field of AI can help, as it enhances the ability to move and execute specially where human movement is risky.
3. Machine Learning field of AI can help him, as it is concerned with development of algorithms and techniques that allow computers to learn.

(E) Answer the following:

1. Artificial Intelligence (AI) is a branch of science that helps machines to find solutions of complex problems at their own in human-like fashion. It was invented by John MC Carthy in 1950.

*** Types of AI :**

- i) Weak AI : It focuses on one task and cannot perform beyond its limitation.
- ii) Strong AI : It focuses on understanding and learning any intellectual task that a human being can.
- iii) Super AI : It focuses on surpassing human intelligence to perform a task better than human.

- | 2. Strong AI | Super AI |
|---|--|
| i) It focuses on understanding and learning any intellectual task that a human being can. | It focuses on Surpassing human intelligence to perform a task better than human. |
| ii) Strong AI Self-learns and reasons with it's operating environment. | Super AI self-learns and evolues with consciousness of it's own. |
3. Three characteristics of AI are :
- i) Symbolic processing : In AI application, computer process symbol rather than numbers or letter.
 - ii) Ability to Learn : Unlike tradational programs, AI programs have an ability to learn.
 - iii) Fast Decision Making : AI has ability to help in fast decision making. Most of innovative organizations rely on AI Algorithms for their fast decision making process.
4. Major Advantages of AI are :
- i) High - Speed : AI System make decision making fast due to which AI system can perform better.
 - ii) Useful as Public Utility : AI is quite useful for public utilities such as self-driving car, Natural language processing.
 - iii) High Reliability : AI machines are highly reliable and can perform the same option multiple times with high accuracy.
 - iv) Less Errors : AI system takes decisions on the basis of information and pre - experience and thus have less errors and high accuracy.
 - v) Digital Assistant : AI is quite useful in providing digital assistant to the users.
5. Major Disadvantages of AI :
- i) High cost : Due to complex and large volume of data processing, AI system requires costly hardware and software.
 - ii) Machine Dependency : Due to more and more dependency on AI, people are losing their mental capabilities.
 - iii) No Emotions : AI machines have no feeling or emotion so, if the proper care is not taken it can be quite harmful.
 - iv) No Original Creativity : AI is not creative. It simply follow the tradational human thinking pattern.

v) Limited Area : till today an AI machine can work only to limited area and not out of that area.

Three Application area of AI are :

- i) Automation : Means more computer use and less human an interference starting form raw material handling to planning of items production.
 - ii) Game Learning : Game playing is one of the leading areas where AI has been applied with great success.
 - iii) Speech Recognition : Another area of AI is this to provide the way by which speech is broken-down into the individual parts.
7. Robotics is a field of AI that enhances the ability to move and execute specially where human movement is risky for eg. in nuclear plant or mines.

Sample Paper - 1

(A) Choose the right answer :

1. (c) 2. (c) 3. (b) 4. (b)

(B) Fill in the blanks:

- 1. 8 , 16
- 2. Alignment
- 3. Data Validation
- 4. Cell Reference

(C) State whether following statements are T or F:

1. (F) 2. (F) 3. (T) 4. (F)

(D) Answer the following:

1. $(23)_{10} = (?)_2$

2	23	
11	1	
5	1	
2	1	
1	0	
0	1	

↑
Remainder

Trus, $(23)_{10} = (10111)_2$

2. $(1011011)_2 = (?)_{10}$

Decimal equivalent of "1" = $1 \times 2^0 = 1$

Decimal equivalent of "1" = $1 \times 2^1 = 2$

Decimal equivalent of "0" = $0 \times 2^2 = 0$

Decimal equivalent of "1" = $1 \times 2^3 = 8$

Decimal equivalent of "1" = $1 \times 2^4 = 16$

Decimal equivalent of "0" = $0 \times 2^5 = 0$

Decimal equivalent of "1" = $1 \times 2^6 = 64$

Decimal equivalent of "1011011" = $64 + 0 + 16 + 8 + 0 + 2 + 1$
= 91 Ans.

iii) $(357)_8 = (?)_{10}$

Step 1 : Start from one's place in 357 :

Multiple ones places with 8^0 , tens place with 8^1 , hundreds place with 8^2 and so on from right to left.

Step 2 : Add all the product we got from Step 1 to get the decimal equivalent of 357.

Decimal equivalent of "7" = $7 \times 8^0 = 7$

Decimal equivalent of "5" = $5 \times 8^1 = 40$

Decimal equivalent of "3" = $3 \times 8^2 = 192$

Decimal equivalent of "357" = $192 + 40 + 7$
= 239 Ans.

2. i) $(A53)_{16} = (?)_{10}$

Decimal equivalent of "3" = $3 \times 16^0 = 3$

Decimal equivalent of "5" = $5 \times 16^1 = 80$

Decimal equivalent of "A" = $(A)_{10} \times 16^2 = 2560$

Decimal equivalent of $A53 = 2560 + 80 + 3$
= 2643 Ans.

ii) $(573)_{10} = (?)_{16}$

Step 1 : Divide 573 by 16 keeping notice of the quotient and the remainder.

Step 2 : Continue dividing the quotient by 16 until you get a quotient of zero.

Step 3 : Then just write out the remainders in the reverse order to get hexadecimal equivalent of decimal number 573.

$573/16 = 35$ with remainder 13 (D)

$35/16 = 2$ with remainder 3

$2/16 = 0$ with remainder 2

$(573)_{10} = (23)_{16}$

iii) $(324)_{10} = (?)_8$

Step 1 : Divide 324 by 8 keeping notice the quotient & remainder.

Step 2 : Continue dividing the quotient by 8 until you get a quotient of zero.

Step 3 : Then write out the remainders in the reverse order to get octal equivalent of decimal numbers 324.

$324/8 = 40$ with remainder 4

$40/8 = 5$ with remainder 0

$5/8 = 0$ with remainder 5

$(324)_{10} = (504)_8$ Ans

3. Form is a dialog box that provides an easy way to enter or display a record to complete row, It also provides buttons to add a new record, delete on existing record, go to next or previous record, etc.. It display one record at a time.

✱ Steps to display forms :

i) Click on file tab. A drop down menu is displayed.

ii) Click on options button in the drop down menu. Excel options dialog box is displayed.

iii) Click on customize Ribbon option in the left part of the dialog box. A window is display on right in the dialog box.

iv) Click on drop-down arrow of choose commonads form box in the dialog box.

v) Click on commands Not in the Ribbon options.

vi) Click on form option in separator section.

vii) Click on New Tab button available near bottom in third pome on right.

viii) Click on Add button and finally click on OK button to confirm the selections made.

4. Steps to align data in a range of cells.

i) Select the cell range whose data is to be aligned.

ii) Click on Home tab.

iii) Click on the drop-down arrow of alignment group format cell dialog box is displayed.

iv) Specify the horizontal alignment and under text alignment area, horizontal and vertical alignment boxes respectively.

- v) Specify the degree at which you want to display the text in degrees box under orientation area.
 - vi) Select wrap text check box to wrap text check box to wrap the text.
 - vii) Select shrink to fit check box to shrink the text.
 - viii) Select merge cells check box to merge two or more cells.
 - ix) Click on OK to finalize the selections made.
5. Steps to arrange given data in ascending order of a field.
- i) Open the worksheet and select the range that is to be sorted.
 - ii) Click on Data tab.
 - iii) Click on sort button in sort & filter group.
 - iv) Click on drop-down arrow of sort by box. List of fields available in the selected range is displayed.
 - v) Select a field form the list.
 - vi) Default sort setting is from smallest to largest.
 - vii) Click on OK button to finalize selections made.
6. Data validation is the facility of Excel to accept only that data which satisfies specified conditions. Data validation can be applied to entire database or on the selected range.

7. Absolute Referencing

- i) It is a technique of mentioning absolute cell address instead of relative addresses in a formula.
- ii) It remain constant no matter where they are copied.

Relative Referencing

It means that cell address mentioned in formula cell specifies the relative positions of cell address to the formula cell.
It changes when a formula is copied to another cell.

8.

FUNCTIONS

- i) = Sum (range)
- ii) = SQRT (number)
- iii) = ODD (number)
- iv) = AVEdRAGE (range)

PURPOSE

Returns the sum of a range.
Returns square root of a number.
Returns number rounded up to the nearest odd integer.
Returns the average of a range.

Sample Paper - 2

(A) Choose the right answer :

1. (b)
2. (b)
3. (d)
4. (a)

(B) Fill in the blanks:

1. if , if...else , if...elif...else
2. Process
3. Blur
4. Pen

(C) State whether following statements are T or F:

1. (F)
2. (T)
3. (F)
4. (T)

(D) Answer the following:

1. IF... ELSE Statement is a decision-making Statement and is used to execute one set of statements out of possible two set of statements depending upon the result of the condition.

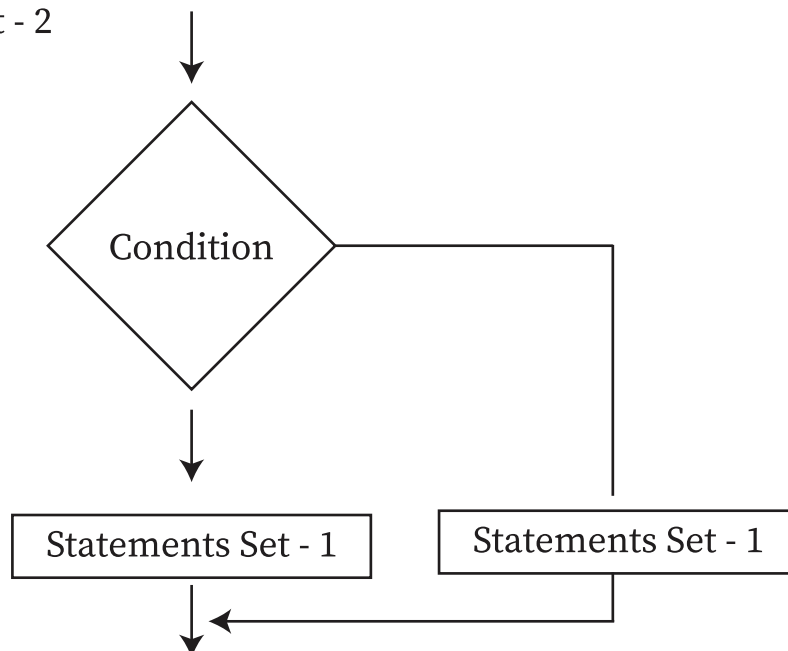
Syntax is :

If condition :

Statements set - 1

else :

Statement Set - 2



2. # Program to find largest of there numbers.

```
a = in + (input ( "Enter first number : " ))
```

```
b = in + (input ( "Enter Second number : " ))
```

```
c = in + (input ( "Enter third number : " ))
```

If (a >= b) :

large = a

else :

large = b

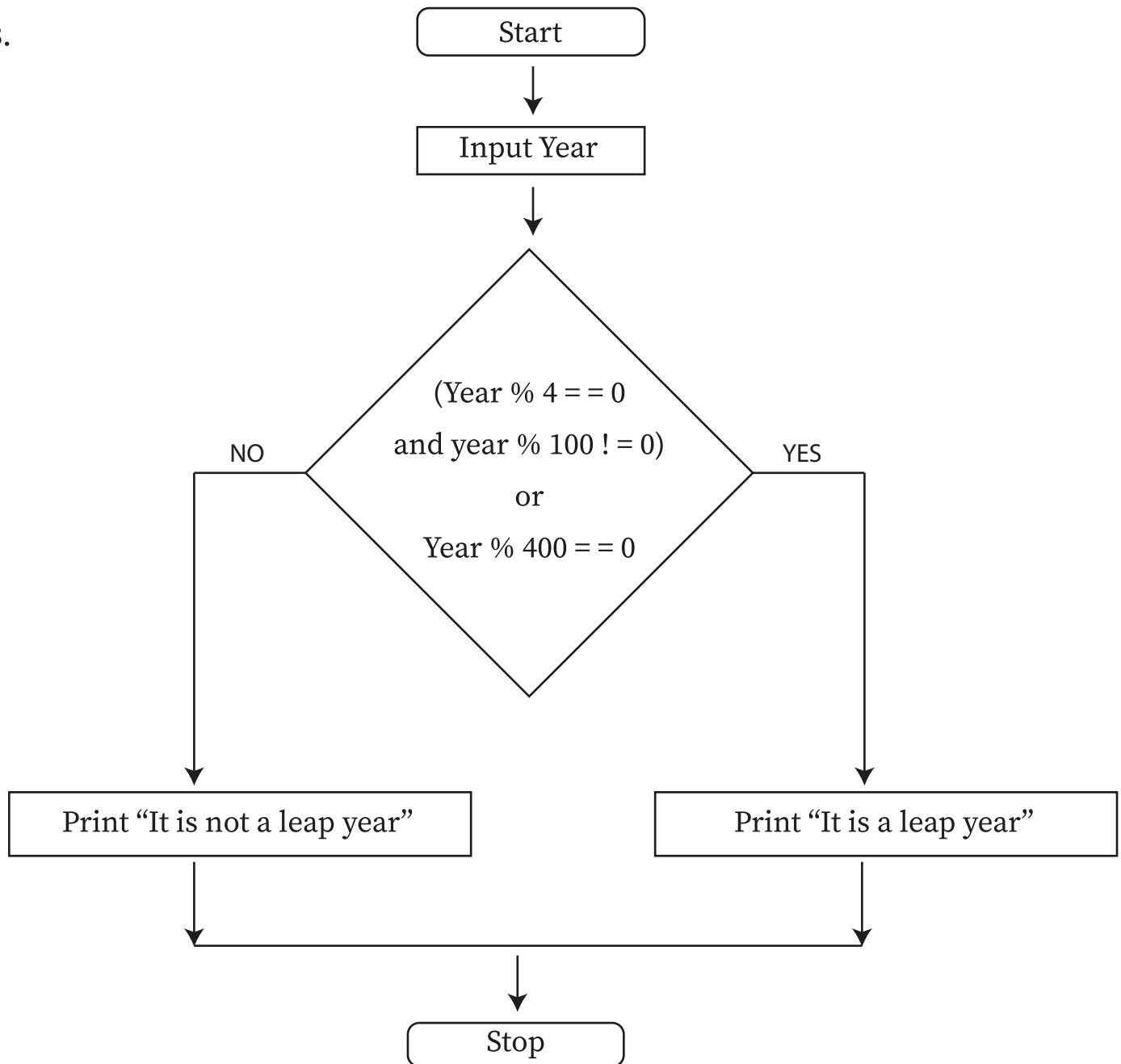
if (c >= large) :

Print (" Largest among given three number is : ", c)

else :

Print (" Largest among given three number is : ", large)

3.



4. # Program to check that given number is odd or even.

n = int (input ("Enter a number "))

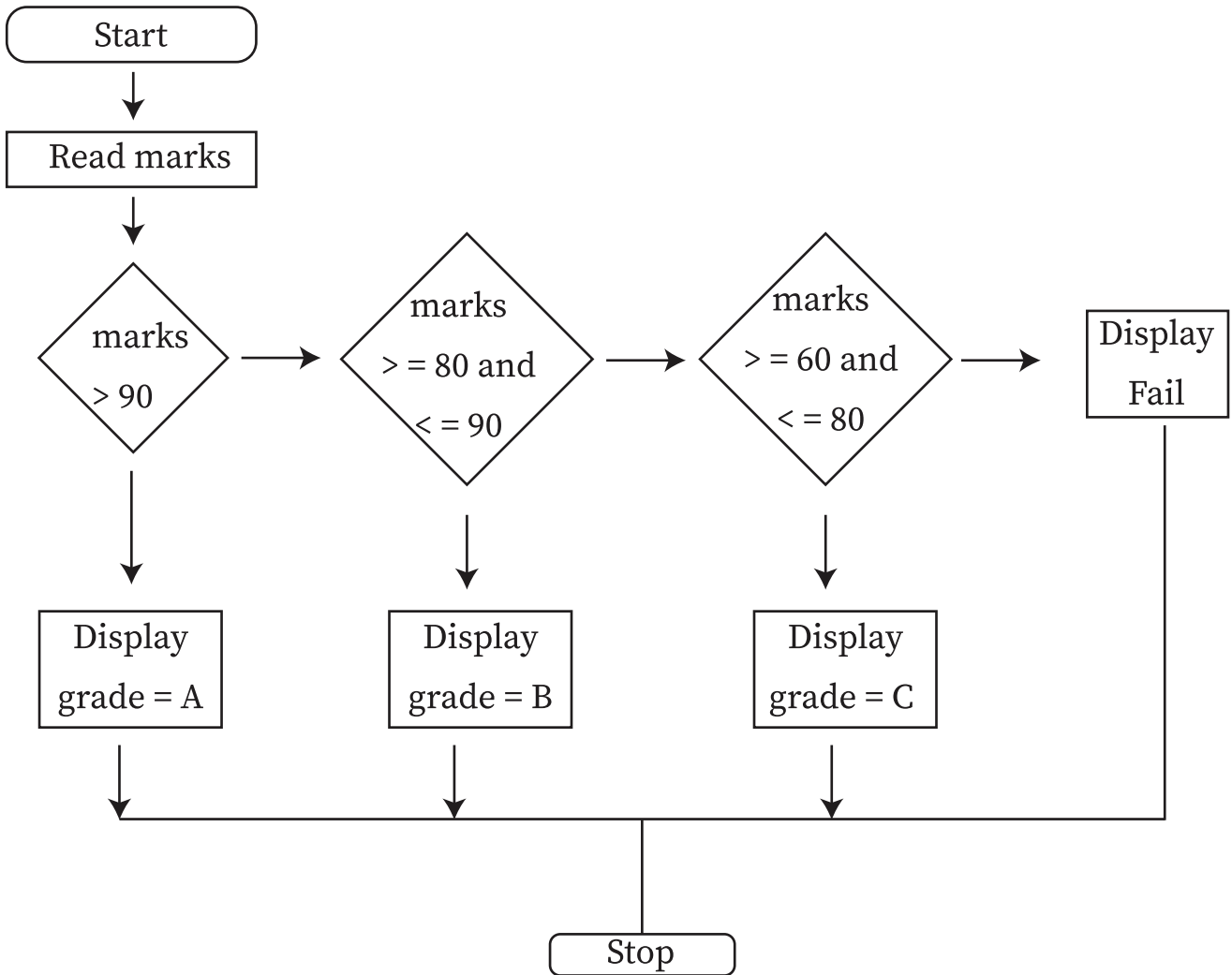
if (n%2) == 0 :

Print ("Number is even ")

else :

Print ("Number is odd ")

5.



6. # Program to get age and display you can vote or not.

age = int (input ("Enter your age : "))

if age > = 18 :

Print ("You can vote as your age > = 18 ")

else :

Print ("you can not vote as your age is not > = 18 ")

7. i) Lasso Tool : is used to select an object by drawing a freehands border arround it.
ii) Crop Tool : is used to select and cut the part of an image. Also used to display and focus on desired specified area.
iii) Magnetic Lasso Tool : It is quite useful in quick selection of areas which have complex edges.
8. i) Rectangular Marquee Tool : It is a tool to display image in rectangular form. Marquee tool is used to select a part of image in regular shapes.
ii) Eye Dropper Tool : It is used to select the desired color.

Sample Paper - 3

(A) Choose the right answer :

1. (b) 2. (c) 3. (c) 4. (c)

(B) Fill in the blanks:

1. Pattern Stamp
2. Addressing system or letter addressing system
3. Search engine optimization
4. Geographical and Non-Geographical

(C) State whether following statements are T or F:

1. (T) 2. (F) 3. (F) 4. (T)

(D) Answer the following:

1. a) Healing Brush Tool :- It is used to correct the impertection (like blemishes, etc) from the scanned images.
b) Pattern Stamp Tool : This tool is used to fill an area with a specified pattern.
2. a) Spot healing brush : It is just like healing brush tool, It is used to correct the imperfection from the scanned images.
b) Color Replacement Tool : This tool is used to replace the existing color of the image with another specified color.
3.

Ip addressing	DNS addressing
i) It is directly understood by computer.	It is not understand by computer directly but can be understood by human easily.
ii) It is based on numbers.	It is based on name.
iii) It is quite difficult to remember.	It is easy to remember for user.
4. a) URL Address :- Stands for Uniform Resource Locator each web page or website on internet is given a unique address. This unique address is known as it's URL.
b) Surfing :- Searching information on Internet is known as Net Surfing or Surfing Internet.
5. Searching tips :
 - i) Clarity about Requirement :- before searching you must be clear about your requirements.
 - ii) Use Web Words :- Always try to use word that you after see on the websites.
 - iii) Use of + :- Introduce + sign between two keywords. It will look for the information

that includes any one of them.

iv) Case Sensitivity : The lowercase alphabets are not case sensitive whereas upper case alphabets are case sensitive.

6. Digital Marketing is an online marketing approach to connect with the target audience all over the world through. Various digital channels and platforms such as search engines, Social media and E-mail.

✳ Four advantages of Digital Marketing are :

i) Global Reach : Traditional Marketing is restricted to a particular area. International market is quite expensive & time consuming, but digital marketing is easy, cheap, quick and has reach all over the world.

ii) Targeted Audience : Digital Marketing provide efficient way to reach and focus marketing around targeted audience through various social media platforms and mobile apps.

iii) Cost Efficient : Digital Market is cost efficient than traditional marketing methods such as newspaper.

iv) Interactivity : Digital helps us to communicate directly with the target audience through website comments, messages, receivers and social media posts and also provide feedback to make better strategies.

7. a) Push Marketing : refers to marketing efforts designed to send a specific message to targeted existing or potential customers. It may include E-mail campaigns or pop up advertisement.

b) E-mail Marketing : It is the process of sending E-mail alerts to target audience. These may include brand, product, services, loyalty bonus, for existing customers offer for new customers, to attract new customers.

8. Three Marketing Channels are :

i) Website : It is most fundamental marketing channels organizations use websites to advertise their products.

ii) Mobile Marketing : Brand remain connected customer through mobile apps, mobile-friendly websites and social media.

iii) Content Marketing : Contents are created to inform, entertain and inspire the buyers. Some most common formats of content are : blogs, videos, images and e-books.

NATIONAL CYBER OLYMPIAD

- | | |
|---------|---------|
| 1. (a) | 16. (b) |
| 2. (b) | 17. (a) |
| 3. (a) | 18. (b) |
| 4. (b) | 19. (b) |
| 5. (d) | 20. (c) |
| 6. (d) | 21. (c) |
| 7. (b) | 22. (b) |
| 8. (b) | 23. (b) |
| 9. (d) | 24. (b) |
| 10. (a) | 25. (a) |
| 11. (b) | 26. (c) |
| 12. (a) | 27. (b) |
| 13. (b) | 28. (d) |
| 14. (c) | 29. (d) |
| 15. (a) | 30. (c) |