Class 5

ANSWER KEY

Touchpad MODULAR Ver 2.0

1. Evolution of Computers

Exercise

A. 1. a 2. c 3. c 4. a

B. 1. Charles Babbage 2. Lady Ada Lovelace
3. John Mauchly 4. IBM

C. 1. 1642 2. 1946 3. 1944 4. 1985

D. 1. The people used to calculate or count with the help of fingers, toes, pebbles, stones, sticks and bones in the ancient times.

2. In fourth generation of computers microprocessors were used.

3. ENIAC was the first general purpose electronic computer built by John Mauchly and Presper Eckert in 1946.

E. 1. The first generation computers were made up of vacuum tubes whereas second generation computers were made up of transistors.
Second generation computers were less expensive than the first generation.

2. Two features of third generation computers are:

(i) Third generation computers used IC's (Integrated Circuits).

(ii) They were more affordable and dependable.

In the Lab Subject Enrichment

Do yourself.

2. Working with Windows 10

Exercise

A. 1. a 2. a 3. c 4. c

B. 1. Video file 2. Music file 3. Image file 4. Spreadsheet file

C. 1. T 2. T 3. T 4. T

D. 1. Name of the common folders provided by Windows 10 are Documents, Videos, Pictures, Music and Downloads.

2. Organised files and folders help us find the right files to use when we run a program.

E. 1. A folder is collection of various files and sub folders whereas a file is a collection of related information.

2. Steps to delete a file or folder:

Step 1 Open the folder that contains the file you want to delete.

Step 2 Right-click on File or folder.

Step 3 Click on **Delete** option.

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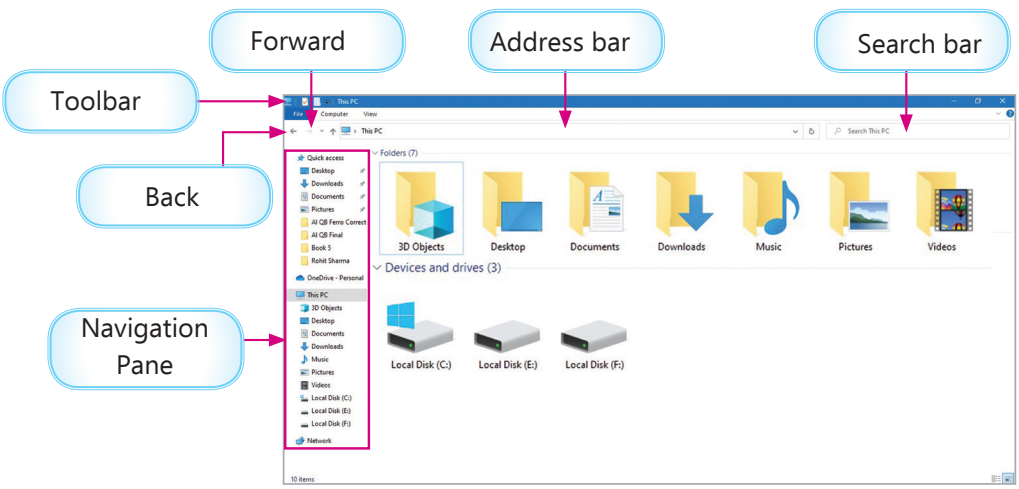
Worksheet 1

(Based on chapters 1 & 2)

A. 1. Analytical Engine 2. ENIAC

3. Pascaline adding machine 4. Tabulating Machine 5. Step Reckoner

B.



C. 1. Video file 2. Transistor 3. Pascaline 4. Folder

3. More on Internet

Exercise

A. 1. a 2. c 3. b 4. a

B. 1. information 2. search engines
3. downloading 4. uploading

C. 1. GOOGLE CHROME 2. TWITTER
3. INSTAGRAM 4. MODEM

D. 1. Internet is a global network of millions of computers and computer networks all over the world.
2. Instagram, Facebook and Twitter
3. Getting the data from the host computer (server) to the client computer (user's computer) is known as downloading.

E. 1. Uses of Internet are:
(i) Internet is used to search information on any topic.
(ii) Internet is used to buy and sell products all over the world.
2. The things required for having an Internet connection are computer system, telephone and cable lines, modem, web browser and ISP.

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THE CT CORNER!

PROBLEM SOLVING

A. 1. HELLO 2. LOGO 3. DVD 4. MOUSE 5. DATA

B.

Name of the Item	Number of the Item
1. Shuttle Cock	7
2. Football	5
3. Chair	4
4. Table	3
5. Hockey Stick	5

1. Shuttle Cock 2. Table

Sorting of items in descending order:

Shuttle cock>Football=Hockey stick>Chair>Table

4. Algorithm and Flowcharts

EXERCISE

A. 1. b 2. c 3. c 4. c

B. 1. F 2. T 3. F 4. T 5. F

C. 1. Start/stop 2. Process 3. Decision 4. Input/Output

D. 1. Algorithm is a set of steps in a sequential manner to solve a problem or to complete a task.

2. Flowchart is a graphical representation of the sequence of operations in an information system or program.

E. 1. Process symbol is used to show a process or action step.
Input/ Output symbol is used to represent the material or information entering or leaving the system, i.e. input and output.

2. Algorithm to check whether the given number is even or odd:

Step 1 Start.

Step 2 Read number and store them in A.

Step 3 Check if A%2 == 0.

Step 4 Print A is even or Odd.

Step 5 Stop.

IN THE LAB

Art Integration

Do yourself.

Worksheet 2

(Based on chapters 3 & 4)

A. 1. This symbol is used to show a process or action step.

2. This symbol is used to show the direction in which the process flows.

3. This symbol is used to show a branch in the process.

4. This symbol is used to show the start and stop points of the flowchart.

B. 1. URL 2. Surfing 3. Telephone or cable line 4. web browser

C. 1. Gmail 2. Modem 3. Twitter

Test Sheet 1

(Based on chapters 1 to 4)

Section A

A. 1. (iii) 2. (ii) 3. (i) 4. (ii) 5. (iii)
6. (iii) 7. (i) 8. (i)

B. 1. IBM 2. folder 3. sub folder 4. downloading 5. network

C. 1. T 2. T 3. T 4. F
5. T 6. T

Section B

A. 1. Fourth generation computers

2. Algorithm is a set of steps in a sequential manner to solve a problem or to complete a task.

3. Organised files and folders help us find the right files to use when we run a program.

4. Instagram, Facebook and Twitter

B. 1. Steps to delete a file or folder:

Step 1 Open the folder that contains the file you want to delete.

Step 2 Click on File or folder.

Step 3 Click on Organize.

Step 4 Click on Delete.

Step 5 Click on Yes.

2. Algorithm to check whether the given number is even or odd:

Step 1 Start.

Step 2 Read number and store them in A.

Step 3 Check if A%2 == 0.

Step 4 Print A is even or Odd.

Step 5 Stop.

3. The things required for having an Internet connection are computer system, telephone and cable lines, modem, web browser and ISP.

5. Introduction to Scratch

EXERCISE

A. 1. b 2. b 3. b 4. b

B. 1. F 2. F 3. F 4. T

C. 1. a 2. b 3. d 4. e 5. c

D. 1. You can create animations, quizzes and stories.

2. Three components of Scratch desktop are Sprite, Script and Block menu.

3. Motion block is used to control the movement of a Sprite.

E. 1. Steps to change the appearance of a sprite are:

Step 1 Click on the **Costumes tab**. An image of the selected sprite appears in the tab. Here the selected sprite is cat.

Step 2 Click on the image of the sprite. Drag the selection blue border to select the cat. A border appears around it.

Step 3 Click on Fill and Outline options to change the colours of the cat and the outline.

2. To save a project, follow the given steps:

Step 1 Click on File tab.

Step 2 Select Save to your computer option. The Save as dialog box appears.

Step 3 Open the location where you want to save the project. Type the name in the File name box.

Step 4 Click on the Save button.

F. Click on the **Choose a Sprite** tool in the Sprites Info Pane and Click on a desired sprite to add it to the project.

G. Do yourself.

IN THE LAB Subject Enrichment

Do yourself.

6. More Blocks in Scratch

EXERCISE

A.	1. a	2. b	3. a	4. c
B.	1. Say	2. Go to	3. Sound	4. Move
C.	1. T	2. T	3. F	4. F

D. 1. This block lets the Sprite turn in **clockwise** direction by the given degrees.

2. This block stops all sounds being played on all sprites.

3. This block adds a **speech bubble** to the Sprite for the given time in seconds.

4. This **block** repeats a set of blocks for a given number of times.

E. 1. say...for...secs block is used to add a **speech bubble** to the Sprite for the given time in seconds.

2. Motion blocks are used to control the movement of a Sprite.

F. 1. The position of a sprite is given by the x and y values on the stage. Go to block is used to set the position of the sprite. So we can set the position of sprite using desired x and y values in the go to block.

2. Control blocks are used when the same blocks have to be repeated for a number of times. Two control blocks are repeat block and forever block.

Hands-On Creativity

Do yourself

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Do yourself.

Worksheet 3

(Based on chapters 5 & 6)

A. 1. Stage area 2. Script 3. Go button 4. Scratch

B. 1. c 2. d 3. a 4. b

C. Do yourself.

7. Creating Shapes in Scratch

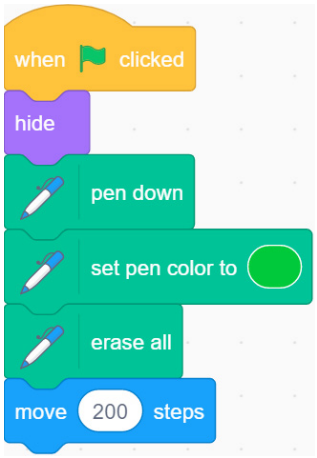
Exercise

A. 1. a 2. c 3. c 4. b

B. 1. F 2. F 3. T 4. T

C. 1. Pen block draws a trail as the Sprite moves on the stage.

2. Steps to draws a line in Scratch:



D. 1. **Polygons** are 2D shapes with three or more straight lines and angles.

Three polygon shapes are triangle, square and pentagon.

2. The main difference between drawing a square and a rectangle in Scratch is the number of steps used in script. In square we use Repeat 4 Move 100 Steps Turn 90 degrees whereas in rectangle we use Repeat 4 Move 200 Steps Turn 90 degrees Move 100 Steps Turn 90 degrees.

E. 1. Sides 1

Degree 360

2. Sides 4

Degree 90

3. Sides 5

Degree 72

Hands-On Experiential Learning

Do yourself

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Do yourself.

8. Creating a Game in Scratch

EXERCISE

A. 1. c 2. b 3. a 4. b

B. 1. Hat 2. Sensing 3. Variables 4. Ask

C. 1. T 2. T 3. F 4. F

D. 1. Hat blocks, Stack blocks and Boolean block.

2. **Sensing blocks** in Scratch sense the input from the keyboard or the mouse at the time of execution of a script.

E. 1. Variable is an element that stores all the numbers, text, date or pictures that we use in a program.

To create variables in Scratch, follow the given steps:

Step 1 Click on **Variables** block category.

Step 2 Click on **Make a Variable** block. Type a variable name in the **New variable name** box.

Step 3 Click on the radio button of either of the options.

Click on For all sprites if you want this variable to appear for all the sprites.

Or

Click on **For this sprite only** if you want this variable to appear all the the sprites only. Here we have added the variable fruit. It will be available for all the sprites.

Step 4 Click Ok button.

2. Scratch has two conditional blocks. They are:

a. **If...then block:** In this block if the condition is true, the blocks inside conditional block will run. If the condition is false, the blocks inside conditional block will not run. Only the blocks outside the conditional block will run.

b. **If...then.....else block:** In this block if the condition is true, the blocks inside then condition will run. If the condition is false, the blocks inside else condition will run.

3. To add sensing blocks to the script, follow the given steps:

Step 1 Click on the **Sensing** block category in Tabs.

Step 2 Insert a sprite, Penguin2 on the stage. Delete the cat sprite.

Step 3 Add a new backdrop to the stage, Arctic.

Step 4 Now drag the **ask** block to the script area. Click on the block. A speech bubble appears above the penguin with the text, "What's your name?".

Step 5 To display the typed name also, click on the check box before the answer block. The answer appears on the stage.conditions.

Hands-On Communication

Do yourself

IN THE LAB Subject Enrichment

Do yourself.

Worksheet 4

(Based on chapters 7 & 8)

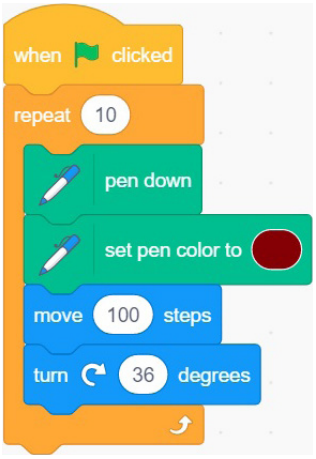
A. 1. This block is used to repeat a set of statements until a condition becomes false.

2. This block is used to repeat a set of blocks infinitely.

3. This block sets the value of a variable.

B. 1. d 2. c 3. a 4. b

C.



Test Sheet 2

(Based on chapters 5 to 8)

Section A

A. 1. (iii) 2. (ii) 3. (ii) 4. (ii) 5. (iii)

B. 1. 360 2. regular 3. input 4. Forever
5. stage 6. brown 7. backdrop

C. 1. F 2. T 3. F 4. T 5. T
6. F 7. T 8. F 9. F

Section B

A. 1. Sprite, Stage, Script area and Menu bar

2. Sensing block is used to sense events.

3. Stamp block is used to draw patterns.

4. Answer and timer

B. 1. Blocks are puzzle piece shapes that are used to give instructions to the computer.

(1) Looks blocks: These blocks control what your sprites and backdrop look like.

(2) Events Block: This is the topmost block. It helps run the script on the stage as it controls the starting of scripts. It gives you the control of all the blocks as without an event block no program will run.

2. Motion blocks are used to control the movement of a Sprite.

3. Turn block is used to change the direction of the Sprite. The block will turn the Sprite in clockwise direction by the specified number of degrees. The block will turn the Sprite in anticlockwise direction by the specified number of degrees.

4. 'If...then' block checks only one condition whereas, 'If...then...else' block checks multiple conditions.