Term: II
Session: 2023 – 2024

TNG
The Next Generation
School

Name: _____
Date: _____

I. Choose the words from bank.

| steps | understand | arrange | solution | algorithms |

1) We create _____ to help solve a problem or perform a task.

2) To write an algorithm, we must _____ the problem and come up with a _____ that makes sense.

3) We can use logical thinking to break down a problem into smaller pieces and think about the _____ that give us the results we need.

4) _____ the steps in an order that makes sense.

II. Match the following with the file type.

1) Text	a) Moving pictures with sound captured with a camcorder
2) Audio	b) Apps and programs that we play and allow us to have fun
3) Video	c) Music, sound or voice stored on the computer
4) Game	d) Photographs, pictures and drawings
5) Image	e) A combination of letters and numbers

1)	2)	3)	4)	5)

III. State whether the statement is true or false.

Image and video files are the same.	
A text file does not contain any numbers.	
A computer-controlled device can be found at a supermarket.	
The Internet of Things is a place on the internet to purchase things.	
Robots in a factory can build items.	

IV. Choose the correct option.

Certain types of file are saved when Pia uses her digital camera.

a) Text	b) Audio
c) Game	d) Video
e) Image	

Maris wants to record the songs she created. She knows that it will be saved as
_____files on her computer.

f) Text	g) Audio
h) Game	i) Video
j) Image	

Banko downloads a few of these to play with his friends. Sorne of them need a joystick or controller.

a) Text	b) Audio	c) Image
d) Game	e) Video	

V. State which of the following statements are true or false.

a Farmers use smart tags on animals – the tag is an Internet of Things device.

b A printer that can reorder ink cartridges is not an Internet of Things device.

c A fire/smoke alarm that can call the fire station is an Internet of Things device.

d All home appliances can connect to the internet.

e Smart mirrors can display the time by connecting to the internet.

f Computers control other devices.

g A tablet is an Internet of Things device.

VI. Fill in the blank using words below.

fewer errors   social skills   learn from each other

solve coding problems

- Team members can _____ by sharing their knowledge.

- Team members can develop _____ through communication and teamwork.

- Working with others to code a program results in code with _____.

- Team members can work together to _____ that arise in the program.

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VII. Use the given information to fill in the blanks.

- plays the ringtone melody once at a volume of 180

- displays the heart icon
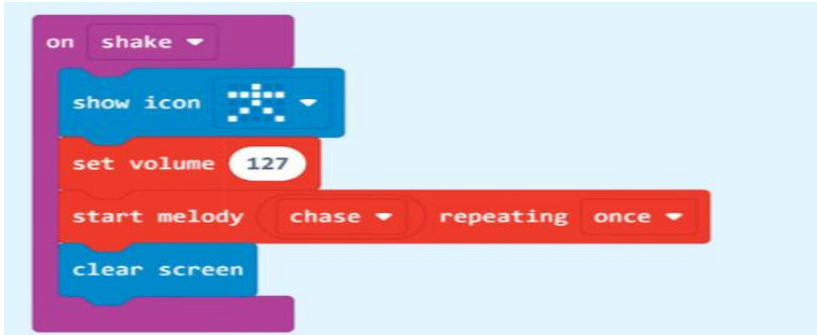
- clears the screen after 2 seconds.

Step	Instruction
1	Start program when _____ is pressed
2	Set volume to _____
3	Start melody _____ repeating _____
4	Show icon _____
5	Pause _____ seconds
6	_____ screen
7	Stop program

VIII. Use the following to complete the Algorithm.

```
on logo  pressed ▼
set volume  193
play sound  giggle ▼  until done
show string  "Hahaha!"
```

Step	Instruction
1	Start program when logo is _____
2	Set volume _____
3	Play sound _____ until done
4	Show string _____
5	Stop program

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IX. Use the following to complete the Algorithm.

Step	Instruction
1	Start program when micro:bit is _____
2	Show icon _____
3	Set volume _____
4	Start melody _____ repeating _____
5	_____ screen
6	Stop program

X. Answer the following questions:

a) How can we describe the difference between characters with **code** and **static objects** in a program, and why might it be useful to include both in our programs?

_____

_____

b) How are files **organized** on a computer's hard drive? Why is it important for files to have different **names** and be **stored** in folders?

_____

_____

_____

c) Name any **four** types of files you might find on a computer.

1)	2)
3)	4)

d) Smart devices can be found in the home, school or in industries.

Name any **four smart devices**:

1)	2)
3)	4)

e) List three **computer-controlled devices**.

1) _____

2) _____

f) Identify three roles of **robots in the factory**.

1) _____

2) _____

3) _____

g) Briefly explain the use of logical thinking.

_____

_____

_____