Pioneer Preparatory School of Gabes

Name : ....

First name : ....

Class : 9P .....

Full-Term Test N°1

Computer Science

S.Y : 2021-2022

Teacher: Mrs. BEN MIMOUNA Sana

Date : 03 - 12 - 2021

Duration : 1h

............./20

Ahmed is very fun of new technologies. But nowadays everyone talks about smart objects.

But he doesn't understand the meaning of this term

So, you will help this child to understand the smart objects

Question1: Smart object is related with <u>communicant object</u>. So, let's start with its meaning

/3 pts

a) Give two characteristics of a communicant object:

✦ ....

✦ ....

b) Complete the following sentence:

When the objects communicate with each other through Internet, we talk about

....

c) Give two examples of a communicant object:

✦ ....

✦ ....

Question2: When talking about smart objects, we have to talk about necessary devices
So let's explain their function to Ahmed

.... / 1 pt
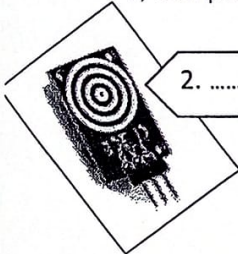
Complete the following sentences:

✓ I need a device whose function is to detect events or environment's change:

It is called ....

✓ I need a device whose function is to produce action or motion:

It is called ....

Question3: You can explain more these devices by giving some examples for Ahmed

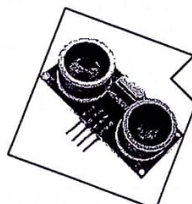.......... / 3 pts

These are the pictures of some devices:
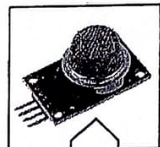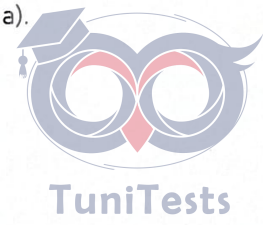
a) Complete with the name of each device.

1. ....

2. ....

3. ....

4. ....

b) Complete this table with the number of the device from the question a).

| N°	Device's function
....	It is used to detect motion
....	It is used to detect physical touch
....	It is used to measure the distance to an object
....	It is used to detect different types of gasses

Ahmed is very thankful to you 😊

Now he knows the meaning of smart objects.

Talking about smart objects, Ahmed's friend invited him to discover his Micro:bit card

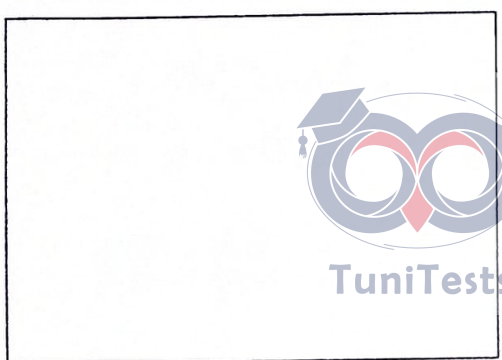**Question4:** Let's discover some parts of the Micro:Bit card ...... / 1.5 pt
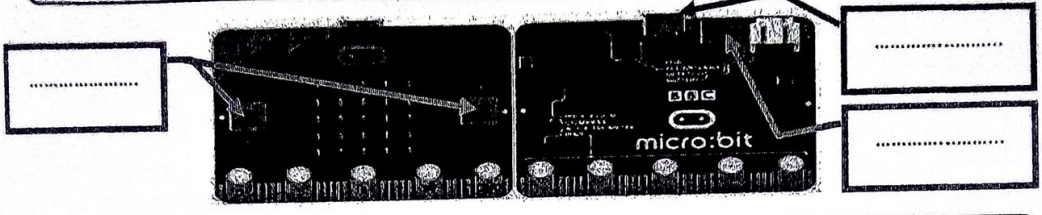
Question5: When connecting the card to the computer the LEDs shows text and icons ...... / 2.5 pts

Write the program that allows to:
Show the text "hello" at the beginning then, an icon appears and disappears forever.

This list of blocks can help you

Question6: Ahmed proposes to play the Fake or Real game with his friends ...... / 7 pts

Game rules: When the smile icon is shown in this card, they should say a **Real news** and when a sad icon is shown, they should say a **Fake news** from our daily life.

Work to do: Make the diagram of fake or real game knowing that:
   ★ Every time they shake the card one of the Fake or real icon will be shown.
   ★ They click on A to know the number of Real news said.
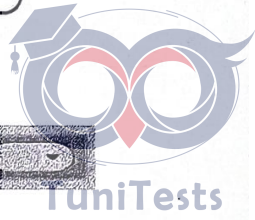   ★ They click on B to know the number of Fake news said.

On start	On shake	On A pressed

Variables' name :

		On B pressed

Question5: Now Ahmed can program a card with makecode thanks to you. So let's review some blocks together.
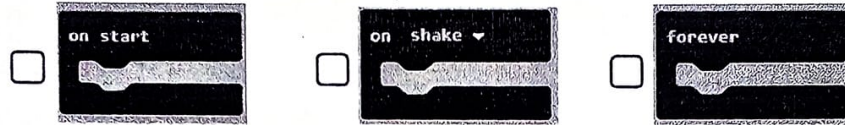
Tick the correct answer:

a. To repeat the same action many times, I use the block.

☐ if ___ then   ☐ repeat ___ times do   ☐ pause (ms) ___

b. To display a number in the card, I use the block

☐ show number ___   ☐ pick random ___ to ___   ☐ show string ___

c. To repeat the same action always, I use the block

☐ on start   ☐ on shake ▼   ☐ forever

d. To control the LEDs light, I use the block

☐ show icon ___   ☐ set brightness ___   ☐ clear screen

e. To show an icon at the beginning, I use the block

☐ on start   ☐ forever   ☐ on shake ▼

f. To increase the number of a variable I use the block

☐ set number ▼ to ___   ☐ change number ▼ by ___   ☐ number ▼

g. When there is a condition, I use the block

☐ on button A ▼ pressed   ☐ if true ▼ then   ☐ on shake ▼

h. To make an action just when clicking on a button, I use the block

☐ on shake ▼   ☐ on start   ☐ on button A ▼ pressed

This test was
⬤ ⬤ ⬤
☐ ☐ ☐

Good LUCK!