

## COMPETENCY BASED ASSESSMENT TEST

**SUBJECT: SCIENCE**  
**CLASS: VI**

**TOTAL MARKS: 100**  
**TIME: 2 HOURS 15 MINS**

<b>Name:</b> _____	<b>Roll No:</b> _____
<b>School:</b> _____	<b>Section:</b> _____
<b>Dzongkhag:</b> _____	

**READ THE FOLLOWING INSTRUCTIONS CAREFULLY:**

1. In this booklet you will find **NINE** questions. You must answer all the questions.
2. Answers to **all** the questions must be written neatly in the spaces provided.
3. Do **not** write during the first **fifteen minutes**. This time is to be spent on reading the questions.
4. You will have **TWO** hours to answer all the questions.
5. You will be allowed to leave the examination room only half-an-hour before the completion of the stipulated time.
6. This booklet contains 25 pages.

(**FIFTEEN** minutes is to be allowed for teachers on duty to explain the instructions in addition to the two hours for answering the questions)

*For Teachers' use only*

Question	Q1	Q2	Q3	Q4	Q5					Q6					Q7	
<b>Mark</b>	<b>25</b>	<b>10</b>	<b>10</b>	<b>10</b>	a(2)	b(2)	ci(2)	cii(1)	d(2)	a(3)	b(2)	c(1)	d(2)	e(1)	a(2)	b(2)
<b>Mark scored</b>																
<b>Initial</b>																
<b>Total</b>																

Question	Q7				Q8					Q9						
<b>Mark</b>	c(2)	d(2)	e(1)	a(1)	b(1)	c(2)	d(1)	e(2)	f(2)	a(1)	b(2)	c(1)	d(2)	e(1)	f(1)	g(1)
<b>Mark scored</b>																
<b>Initial</b>																
<b>Total</b>																

**Final Marks:** \_\_\_\_\_

**Initial of the tabulator:** \_\_\_\_\_



**Question 1****[25 Marks]**

**Direction:** Each question is followed by FOUR possible answers. Choose the most correct answer and write it down in the space provided.

i. The symbol of mercury is

- A** Mg.
- B** Mn.
- C** Hg.
- D** He.

Answer:.....

ii. 'It is the smallest particle which may or may not have free existence. Thousands of them can fit on the tip of a pencil.' This best describes

- A** an atom.
- B** an element.
- C** a molecule.
- D** a compound.

Answer:.....

iii. Which of the following is the advantage of hard water?

- A** It irritates skin.
- B** It does not form lather easily.
- C** It strengthens teeth and bones.
- D** It deposits insoluble salts on the wall of the water pipes.

Answer:.....

iv. Pema planted a sapling when he was in Class III. After five years, his sapling had grown bigger and taller. The changes occurred in the sapling are

- I physical change
- II chemical change
- III temporary change
- IV permanent change

**A** I and II.

**B** II and IV.

**C** III and IV.

**D** IV and I.

Answer:.....

v. The process of separating miscible liquids with different boiling points is

**A** decantation.

**B** distillation.

**C** sedimentation.

**D** separating funnel.

Answer:.....

vi. The process of beating the stalks to separate grains is called



- A** hand picking.
- B** winnowing.
- C** threshing.
- D** sieving.

Answer:.....

vii. What will be the weight of a box, if its mass is 8kg and the force acting on it is 10 units?

- A** 8kgf
- B** 10kgf
- C** 18kgf
- D** 80kgf

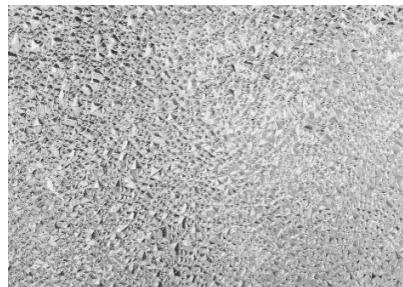
Answer:.....

viii. The shrillness of the sound is called pitch. An example of the low pitched sound is

- A** whispering.
- B** baby crying.
- C** bell ringing.
- D** whistling.

Answer:.....

ix. Frosted glass allows only some light to pass through it because it is



- A** a shiny object.
- B** an opaque object.
- C** a transparent object.
- D** a translucent object.

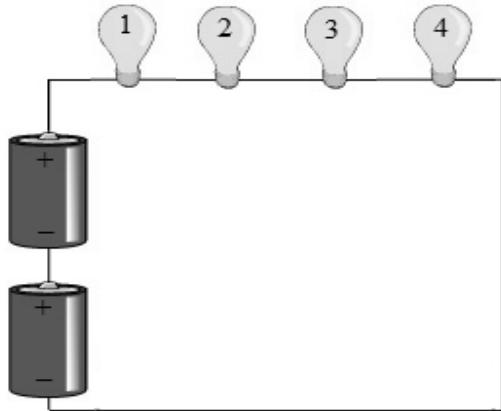
Answer:.....

x. What could be the total voltage of four batteries if each battery has 1.5 volts?

- A** 3.0 volts
- B** 4.5 volts
- C** 6.0 volts
- D** 7.5 volts

Answer:.....

xi. Which bulb will glow the brightest in the circuit below?



- A** bulb 1
- B** bulb 2
- C** bulb 3
- D** bulb 4

Answer:.....

xii. Hydrilla is a plant that is adapted to grow in the water body.



Such type of plant shows the characteristics of a

- A** mesophyte.
- B** hydrophyte.
- C** lithophyte.
- D** xerophyte.

Answer:.....

xiii. Which disease is caused by fungus?

- A** AIDS
- B** conjunctivitis
- C** ring worm
- D** tuberculosis

Answer:.....

xiv. The gas produced during photosynthesis is

- A** oxygen.
- B** nitrogen.
- C** hydrogen.
- D** carbon dioxide.

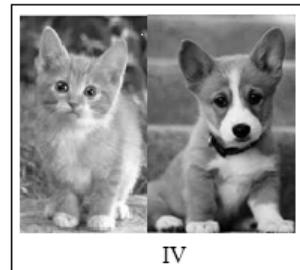
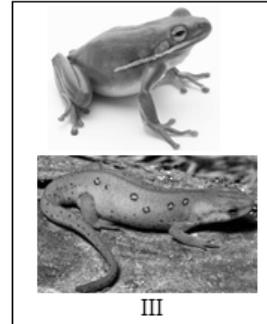
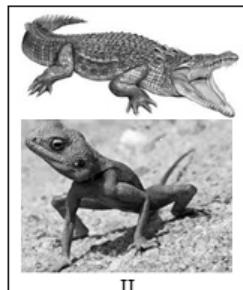
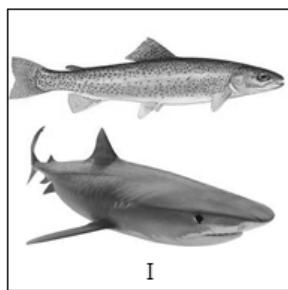
Answer:.....

xv. The untimely falling of leaves and weakening of plants are due to lack of

- A** calcium.
- B** nitrogen.
- C** potassium.
- D** phosphorus.

Answer:.....

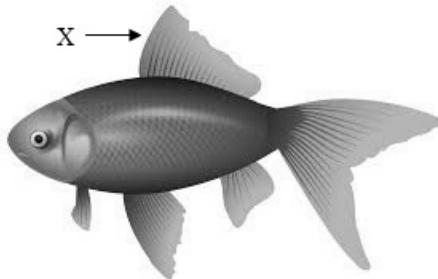
xvi. Which of the following groups of animals are amphibians?



- A** I
- B** II
- C** III
- D** IV

Answer:.....

xvii. The part labelled X in the diagram is



- A** scale.
- B** gill.
- C** tail.
- D** fin.

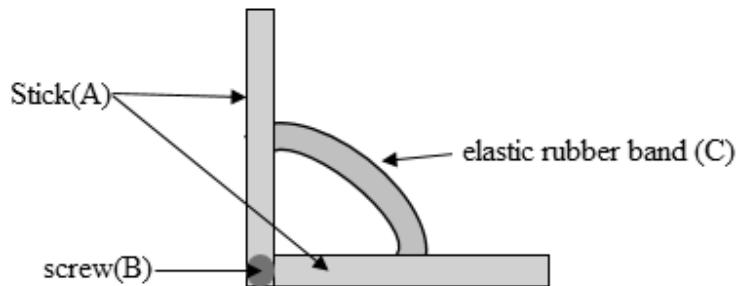
Answer:.....

xviii. The blood vessel that carries blood from heart to lungs is

- A** veins.
- B** arteries.
- C** pulmonary artery.
- D** pulmonary vein

Answer:.....

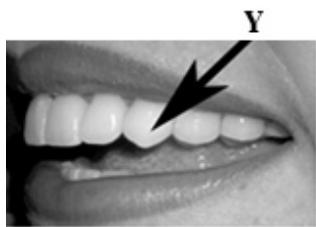
xix. Part C in the figure below can be compared to a



- A** jaw.
- B** bone.
- C** joint.
- D** muscle.

Answer:.....

xx. Study the human teeth given below and answer the following question.



What is Y used for?

- A** biting
- B** tearing
- C** chewing
- D** grinding

Answer:.....

xxi. Stored energy is also called

- A** kinetic energy.
- B** radiant energy.
- C** potential energy.
- D** electrical energy.

Answer:.....

xxii. Which pair is the best example of wheel and axle?

- A** crow bar and knife
- B** bicycle and crane
- C** staircase and axe
- D** prayer wheel and fan

Answer:.....

xxiii. An imaginary horizontal line that divides the Earth into two equal halves is

- A** equator.
- B** latitude.
- C** longitude.
- D** prime meridian.

Answer:.....

xxiv. The polar regions are very cold because they

- A** remain covered with snow.
- B** receive light for 24 hours.
- C** do not receive direct sunlight.
- D** experience night for six months.

Answer:.....

xxv. Which of the following conditions is **NOT** required for germination?

- A** air
- B** light
- C** water
- D** carbon dioxide

Answer:.....

**Question 2****[10 Marks]**

**Direction: Fill in the blanks with appropriate word(s). Write the answers in the spaces provided below.**

- i. While conducting a litmus test on lemon juice, the litmus colour changes to \_\_\_\_\_.
- ii. The water which does not form lather easily with soap is called \_\_\_\_\_.
- iii. Kerosene and water can be separated by using separating funnel and \_\_\_\_\_.
- iv. Bending of light is called \_\_\_\_\_.
- v. An electromagnet is a \_\_\_\_\_ magnet.
- vi. Fish and duck are examples of \_\_\_\_\_ animals.
- vii. Leaves of plants are green due to the presence of \_\_\_\_\_.
- viii. The animals which have hair on their body, give birth and suckle their young ones are known as \_\_\_\_\_.
  
- ix. The Law of Conservation of Energy states that energy can neither be created nor be \_\_\_\_\_.
- x. The spinning of the Earth on its axis is called \_\_\_\_\_.

**Question 3****[10 Marks]**

**Direction: Match each item in column I against the most appropriate item in column II. Write only the alphabet against the number in the space provided below.**

Column I		Column II	
1	It has padded feet and hump	a.	embryo
2	It develops into shoot after germination	b.	potassium
3	It has moist and slimy skin	c.	camel
4	Micro-organism	d.	yeast
5	Primary nutrient	e.	frog
6	The only mammal that can fly	f.	plant
7	Producer	g.	snake
8	The process of preparing food by plants	h.	bat
9	It's body is covered with dry scales	i.	food chain
10	The feeding relationship between organisms	j.	photosynthesis
		k.	cotyledon

**Question 4****[10 Marks]**

**Direction: Write TRUE or FALSE against each statement in the space provided.**

- i. Hydrochloric acid is present in our stomach. (.....)
- ii. Plants are autotrophs as they can prepare their own food. (.....)
- iii. Common salt is obtained from the sea by the process called filtration. (.....)
- iv. Sunlight needs medium to travel. (.....)
- v. Magnetic lines of force always run from south pole to north pole. (.....)
- vi. Series of heart beat felt as jerks in blood vessels when heart pumps is called pulse. (.....)
- vii. Milk and cheese contain only carbohydrate. (.....)
- viii. Crude oil can be separated into different fuels by fractional distillation. (.....)
- ix. Car is an example of simple machine. (.....)
- x. During lunar eclipse, the Moon casts shadow on the Earth. (.....)

**Direction: Answer the following questions as directed and the answers must be written in the spaces provided. The marks for each question are given in the brackets [ ].**

**Question 5**

**[9 Marks]**

a. Zangmo needs suggestions to test the nature of a solution besides its taste and corrosiveness. What suggestions would you recommend her to identify the acidic and the alkaline nature of the solution?

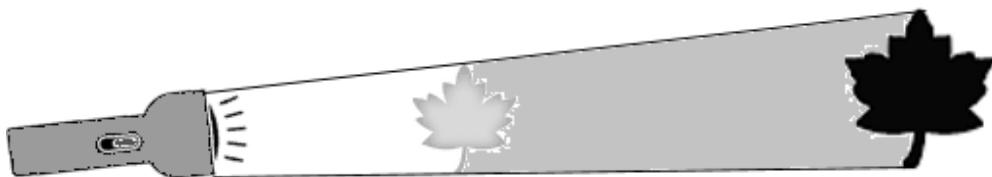
**[2]**

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b. Why do you need to mash flower petals in a mortar and pestle while making an indicator? **[2]**

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c. Refer the diagram given below and answer the following questions.



i. What can you conclude about the nature of light from the above figure? [2]

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ii. Name any **TWO** media through which light travels. [1]

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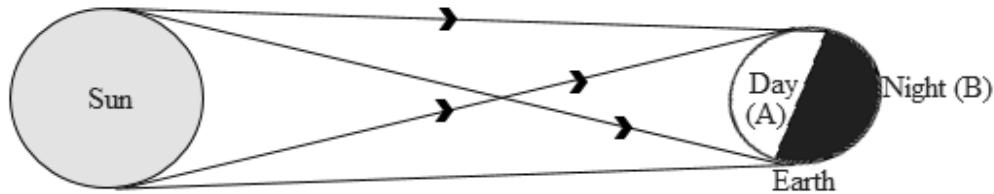
d. Our forefathers used manure in their garden. However, with the development of our country many farmers now use chemical fertilizers. Do you think Bhutanese farmers should be encouraged to use chemical fertilizers? Give **TWO** reasons. [2]

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## Question 6

[9 Marks]

a. Study the diagram given below.



Write a short imaginary story about the plants and animals living in position B, if such position of Earth remains same for six months. [3]

b. Compare physical change and chemical change based on the formation of new substances.

c. Name the part of an egg which provides food to the developing embryo. [1]

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d. The weight of a woman in Gasa is 65kgf. Will her weight increase or decrease in Phuntsholing? Why?

[2]

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e. What is the difference between beam balance and spring balance? [1]

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## Question 7

[9 Marks]

a. Which of the drums shown below will produce louder sound? Why?

[2]



b. Rain water is soft water. Do you agree or disagree? Justify with **TWO** reasons.

[2]

c. State one similarity and a difference between permanent and electromagnet. [2]

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d. What are the **TWO** ways of increasing the strength of an electromagnet? [2]

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e. What do you understand by the term balanced diet? [1]

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## Question 8

[9 Marks]

a. Write **TWO** adaptive characteristics of polar bears.

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b. Define habitat in your own words.

[1]

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c. Write one similarity and one difference between a fish and a reptile.

[2]

d. How mammals are different from birds? State one difference.

[1]

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e. Is Bhutanese diet generally healthy? Do you agree or disagree? Support with reasons.

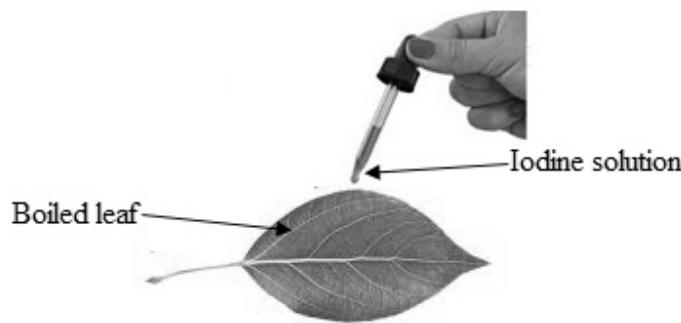
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f. How is a child different from an adolescent? State **TWO** differences.

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**Question 9****[9 Marks]**

a. What is the purpose of the above test?

**[1]**

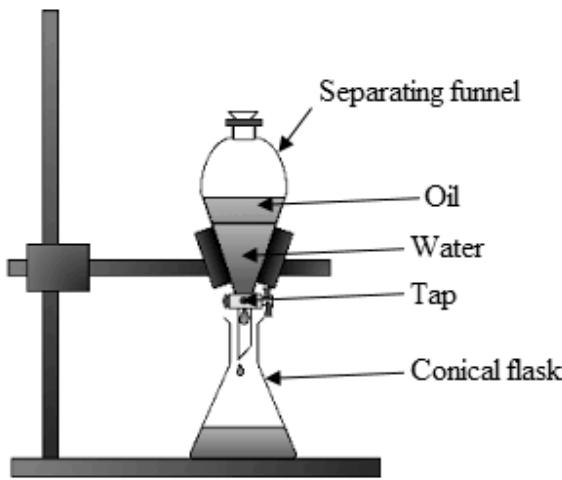
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b. Why is it possible to separate mixture of two miscible liquids of different boiling points by distillation? Explain.

**[2]**

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c. Study the diagram given below and answer the question. [1]

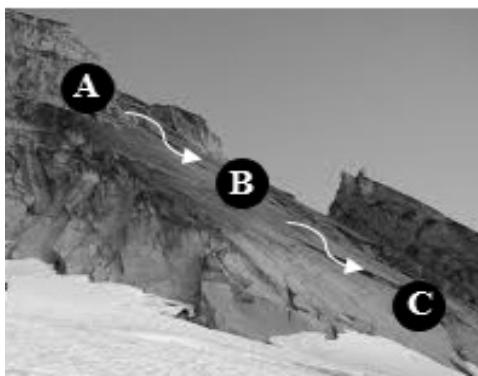


What is collected in the conical flask?

d. Draw a labeled diagram to show the relationship between mass, speed and kinetic energy using a pile of books, wooden ruler and a marble. [2]

e. The use of nuclear fuel is unsafe for human beings. Support the statement with a reason. [1]

f. In the diagram given below, which position does the stone have kinetic energy? [1]



g. A road has been blocked by a huge stone. What simple machine will you suggest to use to remove it easily? [1]

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