

SPE REVISION 1

Answer ALL questions in this section.

Each question or statement is followed by four suggested answers or completions. Choose the **BEST ANSWER** or **COMPLETION** and write the letter in the answer box.

1. Figure below shows a glue that is used for fixing broken glass. It has a hazard symbol on it.

What does the hazard symbol means?

- A. Corrosive.
- B. Explosive.
- C. Flammable.
- D. Toxic.

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2. What is the correct procedure for students to follow if a chemical is spilled in the laboratory?

- A. Ask to go to the toilet.
- B. Run out of the room quickly.
- C. Splash large amount of water onto the spill.
- D. Stand back and inform the teacher of the spill immediately.

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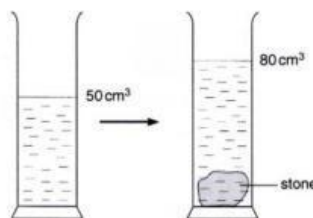
3. Which sequence of action is correct for lighting up a Bunsen burner?

- A. Open the air hole → Light up the match → Turn on the gas knob.
- B. Close the air hole → Light up the match → Turn on the gas knob.
- C. Light up the match → Turn on the gas knob → Close the air hole.
- D. Turn on the gas knob → Light up the match → Open the air hole.

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4. Figure below shows a method to determine the volume of an irregular stone. What is the volume of the stone?

- A. 20 cm³
- B. 30 cm³
- C. 40 cm³
- D. 50 cm³

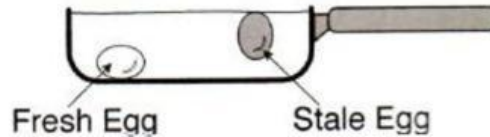
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5. A cube of mass 128 g has a density of 2 g/cm³. What is the length of each side of the cube?

- A. 4 cm
- B. 8 cm
- C. 64 cm
- D. 256 cm

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6. A fresh egg will sink to the bottom of a saucepan of water, while a stale egg will rise to the surface of the water as shown in figure below. Which of the following best explains the behaviour of the stale egg?



- A. Some of the contents of the egg escape which makes it lighter.
- B. The density of the egg increases as it goes stale.
- C. The density of the egg decreases as it goes stale.
- D. Some of the egg shell falls off which makes it lighter.

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7. Shahrul suggested that the solubility of salt is affected by the temperature of water. He decided to investigate this further by conducting a scientific investigation. He wrote down the variable that should be kept constant and the variable that was not kept constant in his note.

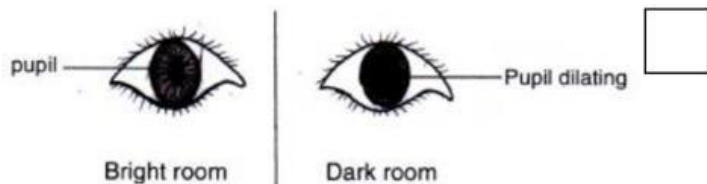
Which descriptions written by Shahrul are correct?

	Variable kept constant	Variable not kept constant
A.	Amount of salt	Temperature of water
B.	Amount of water	Amount of salt
C.	Temperature of water	Amount of salt
D.	Temperature of water	Amount of water

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8. Figure below shows how a pupil of the eye dilates when a person steps into a dark cinema. Which of the following characteristics of living things does this shows?

- A. Living things are made of cells.
- B. Living things reproduce.
- C. Living things grow and develop.
- D. Living things respond to stimuli.


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9. Which one of the following processes involves getting rid of toxic products from the body?

- A. Absorption
- B. Digestion
- C. Excretion
- D. Nutrition

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10. Which of the following best describes solids?

- A. Have fixed volume, fixed shape and do not flow.
- B. Have fixed volume, no fixed shape and do not flow.
- C. No fixed volume, fixed shape and flow in all directions.
- D. No fixed volume, no fixed shape and flow in all directions.

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11. Figure below represents three states of water, labeled X, Y and Z.



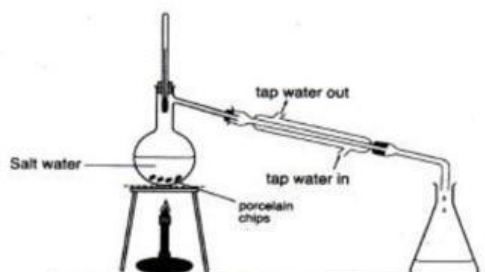
Which of the following correctly identifies the states of water in figure above?

	X	Y	Z
A.	Liquid	Gas	Solid
B.	Liquid	Solid	Gas
C.	Solid	Liquid	Gas
D.	Solid	Gas	Liquid

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12. Study figure below carefully. It shows the process of distillation of salt water. What is the temperature shown by the thermometer when the salt water is **boiling**?

- A. 98°C
- B. 99°C
- C. 100°C
- D. 101°C


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13. Which of the following is true about boiling and evaporation of water?

	Evaporation	Boiling
A.	Takes place at all temperature	Takes place at all temperature
B.	Takes place at all temperature	Takes place at 100°C
C.	Takes place at room temperature only	Takes place at 100°C
D.	Takes place on hot days only	Takes place when water is heated all the time

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14. Iron filing, sulfur powder and salt are accidentally mixed together in the laboratory. The following steps are used to separate the three components. The steps are not in order.

- Place the filter paper into the funnel and pour the mixture of sulfur and salt solution through the filter paper and funnel.
- Use a magnet to separate the iron from the sulfur and salt.
- Stir the mixture. The distilled water will dissolve the salt.
- Place the salt solution in an evaporating dish and heat the salt solution.
- Add distilled water into the mixture.

Which of the following shows the correct sequence of steps?

- ii → v → iii → i → iv
- ii → i → v → iv → iii
- iii → ii → iv → v → i
- v → iii → i → ii → iv

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15. Emilia took some cells from a plant and an animal. She labeled the cells J, K, L and M. She observed them under a microscope and recorded her observations in table below.

	Cell membrane	Cell wall	Chloroplast	Nucleus	Cytoplasm
Cell J	/	/	/	/	/
Cell K	/	X	X	/	/
Cell L	/	X	X	X	/
Cell M	/	/	/	/	/

Which of the groups correctly represent animal and plant cells?

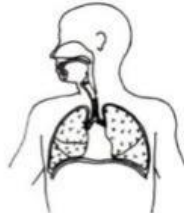
	Animal cells	Plant cells
A.	Cell J and K	Cell L and M
B.	Cell J and M	Cell K and M
C.	Cell K and L	Cell J and M
D.	Cell L and M	Cell J and M

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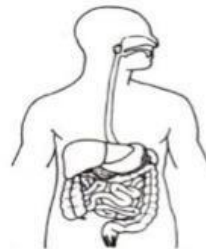
16. Which of the following represents the transport system of the human being?



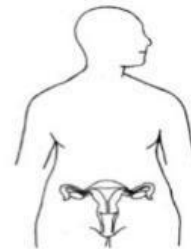
A.



B.



C.



D.

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17. Study the diagram below.

Why do high heel shoes damage the floor more than the sport shoes?



high heel

sport shoe

- A. High heel has smaller surface area and produce more pressure.
- B. High heel has smaller surface area and produce less pressure.
- C. High heel has larger surface area and produce more pressure.
- D. High heel has larger surface area and produce less pressure.

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18. The touch-screen hand phone in figure below is switched on. Which of the following shows correctly the energy changes taking place in figure above?



- A. Chemical potential energy → electrical energy → light energy.
- B. Electrical energy → light energy → heat energy.
- C. Kinetic energy → chemical potential energy → sound energy.
- D. Light energy → sound energy → kinetic energy.

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19. Which of the following is the right way to conserve energy?

- A. Cooking without putting lid on pan.
- B. Switch on the air conditioner all the time.
- C. Switch on all the lamps in the house.
- D. Turn off lights when leaving an empty room.

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20. Which of the following proves that a piece of metal is already a magnet?

- A. A magnet is attracted to it.
- B. Both ends of a compass needle are attracted to it.
- C. Copper wire is repelled by it.
- D. One end of a compass needle is repelled by it.

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21. Complete the following passage using the words provided below. Each word may only be used ONCE or not at all. [5]

Nuclear	electrical	tidal	sun	conservation
chemical	condensation	light	kinetic	sound

Energy exists in many different forms. One form of energy can be turned into another.

This is the law of _____ of energy. It states that energy cannot be made or destroyed. For example, a battery contains _____ energy. This is a kind of potential energy. The battery turns the potential energy into _____ energy.

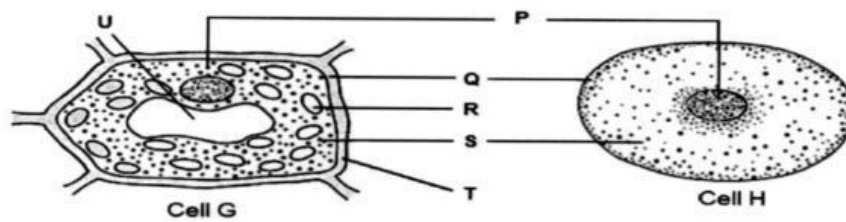
A thrown basketball is an example of a _____ energy that could be converted into _____ energy as it contacts with a baseball bat.

22. Write **TRUE** or **FALSE** in the box provided for each of the statement below. [5]

- a) Bacteria and viruses are examples of microorganisms
- b) Diffusion takes place faster in liquids than in gases
- c) A mixture can be separated by chemical methods
- d) Our body respiratory system supply blood with oxygen
- e) Matter is anything that has mass and volume.

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23. Figure below shows two typical cells from two different organisms.



a) Identify the two types of cells shown in the figure above:

i. Cell G: _____

ii. Cell H: _____

[2]

b) On the following table, match the function of each parts P, Q, R, S, T and U of the cells shown in figure above.

[5]

Function of parts of the cell	Part of the cell
(i) Controls the movement of substances in and out of the cell e.g. food, water, oxygen, waste.	
(ii) Controls all activities in the cell and reproduction of the cell.	
(iii) Contain chlorophyll which absorbs light to make food.	
(iv) Carries out most of the chemical reactions in the cell.	
(v) Contains cell sap which consists of mainly water and food substances. It helps to control the hardness of the cells.	
(vi) Protects supports and gives the cells a regular shape.	

c) Write **TRUE** or **FALSE** on the following sentences:

[3]

(i) Red blood cell is the only cell that has no nucleus.

(ii) The capillaries is only one cell thick.

(iii) The function of white blood cell is to kill bacteria.