



**BAHAGIAN PENGURUSAN
SEKOLAH BERASRAMA PENUH DAN SEKOLAH KLUSTER
KEMENTERIAN PELAJARAN MALAYSIA**

PEPERIKSAAN PERCUBAAN PMR 2009

55/1

SCIENCE

Kertas 1

Ogos

1 jam

Satu jam

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

- 1. Kertas soalan ini adalah dalam Bahasa Inggeris .*
- 2. Calon dikehendaki membaca maklumat di halaman belakang kertas soalan ini.*

Kertas soalan ini mengandungi 20 halaman bercetak

1. Diagram 1 shows a hazard symbol.



Diagram 1

Which of the following substances is labelled with the symbol?

- A Ethanol
 - B Mercury
 - C Ammonium solution
 - D Concentrated sulphuric acid
2. Diagram 2 shows the sequence of cell organisation in humans.

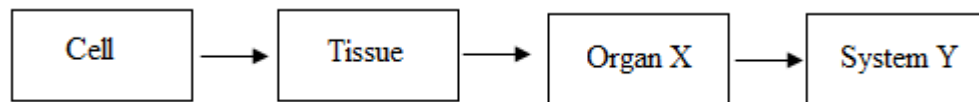


Diagram 2

Which pair of organ X and system Y is matched correctly?

	Organ X	System Y
A	Eye	Nervous
B	Lung	Respiratory
C	Liver	Skeletal
D	Kidney	Digestive

3. Diagram 3 shows the comparisons of mass among solid P, Q and R of the same volume.

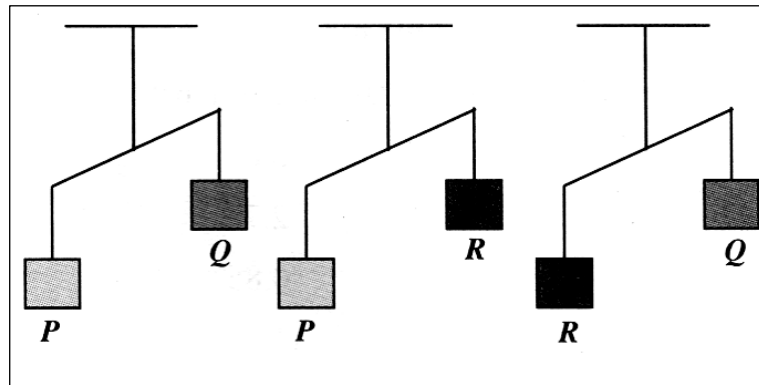
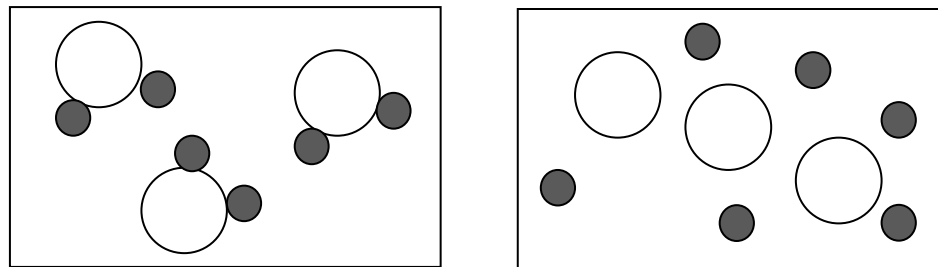


Diagram 3

Which of the following shows the arrangement of the densities of solids in increasing order?

- A P, Q, R
 B P, R, Q
 C Q, P, R
 D Q, R, P
4. Diagram 4 shows the particles of material M and material N.



M

N

Diagram 4

Which of the following material is true about material M and material N?

	M	N
A	Orange juice	Gold
B	Gold	Sea water
C	Carbon dioxide	Sea water
D	Orange Juice	Carbon dioxide

5. Diagram 5 shows a pie chart that represents the composition of air in the atmosphere.

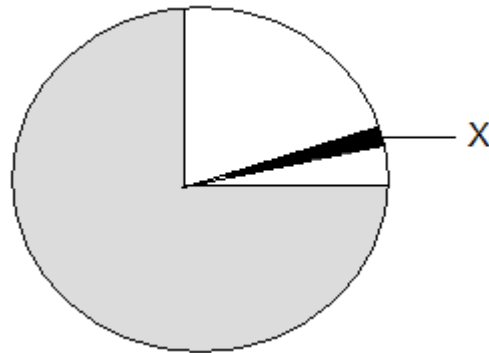


Diagram 5

Which of the following is true about gas X?

- A Slightly soluble in water
 - B Turns lime water cloudy
 - C Soluble in alkaline pyrogallol solution
 - D Support combustion but does not burn
6. The information below shows the characteristics of energy.

- Can be radiated
- Can travel through a metal
- Can travel through a vacuum

Which form of energy has the characteristics shown above?

- A Sound energy
- B Heat energy
- C Light energy
- D Chemical energy

7. Diagram 6 shows a bimetallic strip being heated.

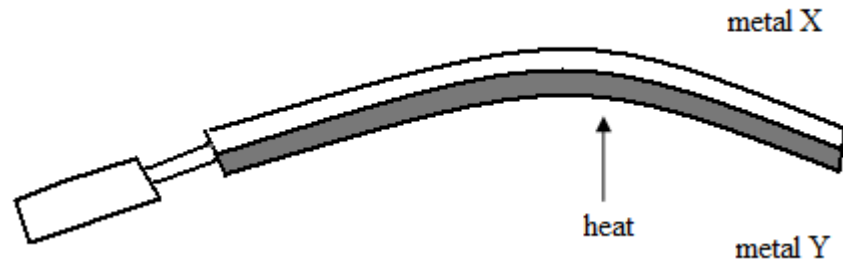


Diagram 6

Why would the bimetallic strip bend when it is heated?

- A Metal Y is hotter than metal X
 - B Metal X expands more than metal Y
 - C The size of atoms increases more in metal X than that of metal Y
 - D The kinetic energy of the atoms in metal Y increases more than that of metal X
8. Diagram 7 shows two mirrors J and K which are placed parallel to each other.

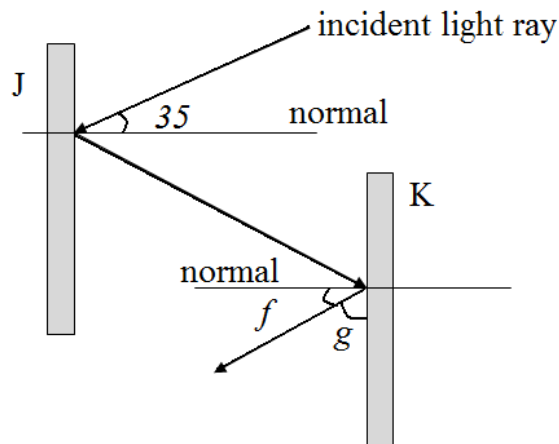


Diagram 7

Which is the value of the angle g ?

- A 25°
- B 35°
- C 55°
- D 65°

9. Table 1 shows the X and Y solutions that are required for the food tests.

Food	Food Test
Milk	X
Corn powder	Y

Table 1

Which of the following are most probably X and Y?

	X	Y
A	Iodine solution	Benedict's solution
B	Ethanol and water	Millon's reagent
C	Millon's reagent	Iodine solution
D	Benedict's solution	Millon's reagent

10. Diagram 8 shows the classification of plants.

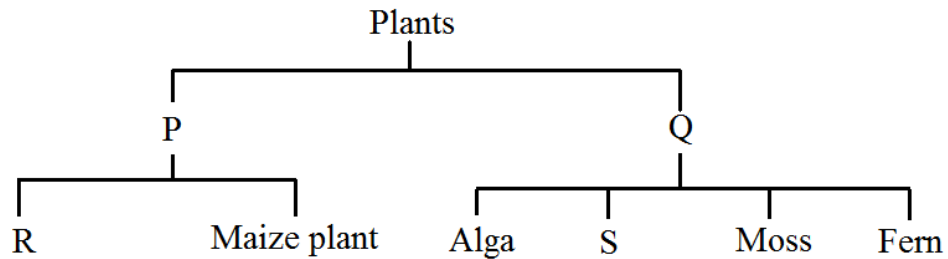


Diagram 8

Which of the following is true about P, Q, R and S?

	P	Q	R	S
A	Flowering plant	Non-flowering plant	Mango tree	Fungus
B	Non-flowering plant	Flowering plant	Dicotyledonous	Fungus
C	Flowering plant	Non-flowering plant	Paddy plant	Mushroom
D	Non-flowering plant	Flowering plant	Monocotyledonous plant	Mushroom

11. Diagram 9 shows a pyramid of numbers.

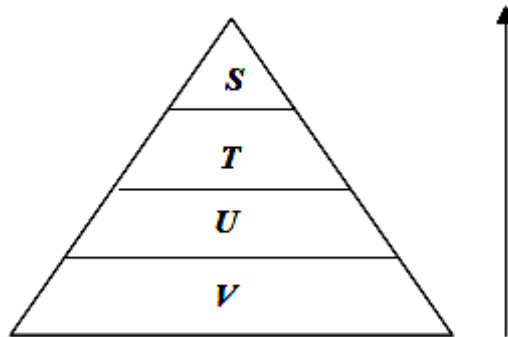


Diagram 9

As the level goes higher in a pyramid of numbers,...

- A more energy is lost in each level
 - B the size of the organisms in each level decreases
 - C the number of organisms in each level increases
 - D the mass of the organisms in each level decreases
12. Diagram 10 shows two pieces of wet filter paper that are hung under the sun.

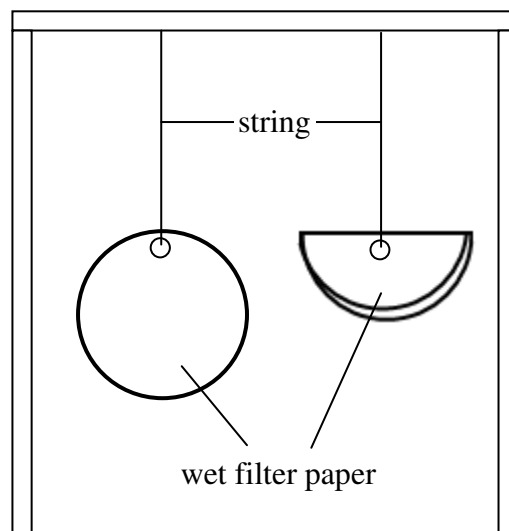


Diagram 10

It is observed that P dries first. This is probably because

- A air circulation at P is faster
- B P receives more heat than Q
- C the exposed surface area for P is larger
- D the air around Q is more humid than P

13. Diagram 11 shows an insecticide sprayer.

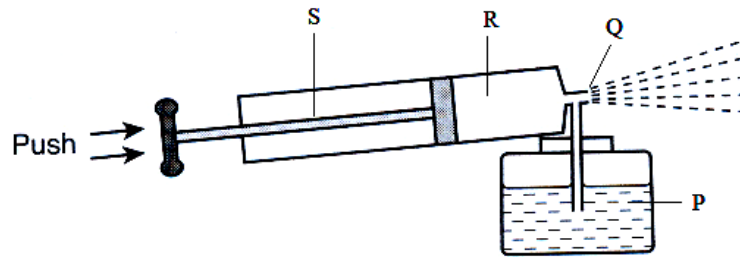


Diagram 11

Which part of the insecticide sprayer has the lowest air pressure when the piston is pushed?

- A P
 - B Q
 - C R
 - D S
14. Diagram 12 shows a wooden block being pulled on the surface of a table.

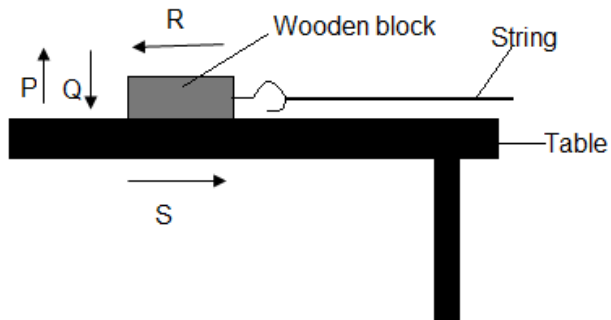


Diagram 12

Based on the diagram, which of the arrows labeled P, Q, R and S represent the direction in which a frictional force is exerted?

- A P
 - B Q
 - C R
 - D S
15. Which of the following groups of organisms has the same method of support?
- A Camel, elephant, crab
 - B Water lily, lotus, duckweed
 - C Prawn, cockroach, caterpillar
 - D Bougainvillea plant, pea plant, maize plant

16. Diagram 13 shows four wooden tables.

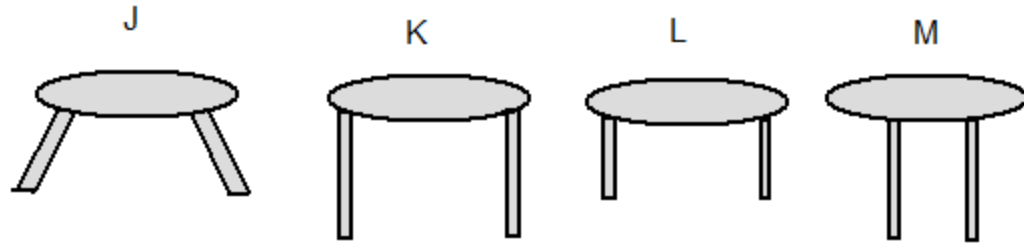


Diagram 13

Based on the picture above, arrange the tables in descending order of stability.

- A M, K, L, J
 B M, L, K, J
 C J, K, L, M
 D J, L, K, M
17. Diagram 14 shows two types of levers.

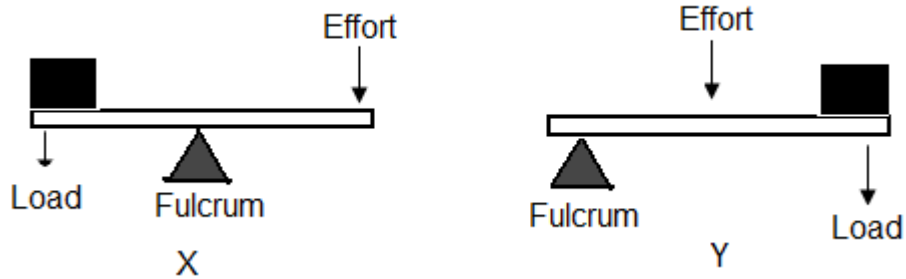


Diagram 14

Which of the following tools represent X and Y ?

	X	Y
A	A fishing rod	A nutcracker
B	A broom	A paper cutter
C	Scissors	A wheelbarrow
D	A claw hammer	A fishing rod

18. What property of alveoli enables oxygen to diffuse through the walls of alveoli easily?
- A The alveoli have small surface areas and thin walls
 - B The alveoli are made up of a network of blood capillaries
 - C The alveoli consist of many living cells which are involved in the diffusion process
 - D The alveoli are surrounded by a network of capillaries which possess very thin walls
19. Which of the following is **true** about the aorta?
- A It is the smallest artery in the human body
 - B It has a large lumen with thin muscular walls
 - C It has many valves that allow blood to flow in one direction.
 - D It carries oxygenated blood from the heart to all parts of the body
20. Diagram 15 shows a cross section of a stem.

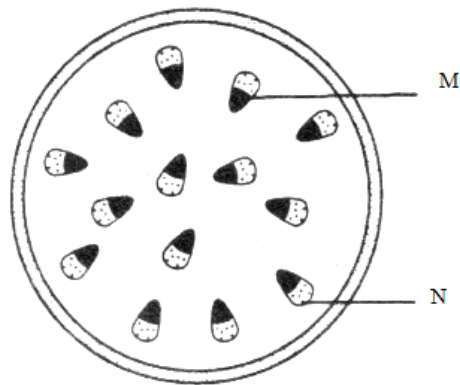
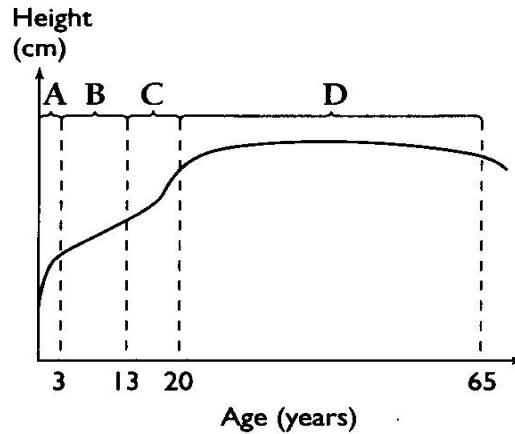


Diagram 15

Which of the following is true about tissue M and N.

	Tissue M	Tissue N
A	Transport water	Transport food
B	Transport food	Transport water
C	Soft living tissue	Long hollow tissue
D	Does not provide support for plants	Provides support for plants

21. The graph below shows the growth curve of a human. Which stage represents a form three student?



22. Pollination is the
- A germination of pollen grains and ovule.
 - B fusion of male and female gamete in the ovary.
 - C transfer of pollen grains from the anther to the stigma.
 - D transfer of pollen grains from the stigma to the anther.
23. Mother's breast milk is ideal for a baby because it
- A is rich in fibre.
 - B supplies oxygen to the baby.
 - C contains a high amount of iron.
 - D contains the most nutrients needed by a baby.
24. A low protein diet slows down children's body growth because protein is needed for
- A preventing anaemia
 - B building strong teeth
 - C building strong bones
 - D building new body tissues

25. In which of the following parts do plants store their waste products ?

- I. Leaf
- II. Stem
- III. Fruit

- A I and II only
- B I and III only
- C II and III only
- D I, II and III

26. Diagram 16 below, shows one of the excretory organs in humans.

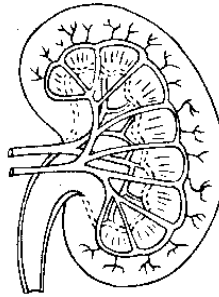


Diagram 16

What are the excretory products from the organ shown above?

- A Water only
- B Water and carbon dioxide
- C Water, mineral salts and urea
- D Water, mineral salts, glucose and urea

27. Diagram 17 shows the apparatus set-up to investigate the reaction between magnesium and oxygen.

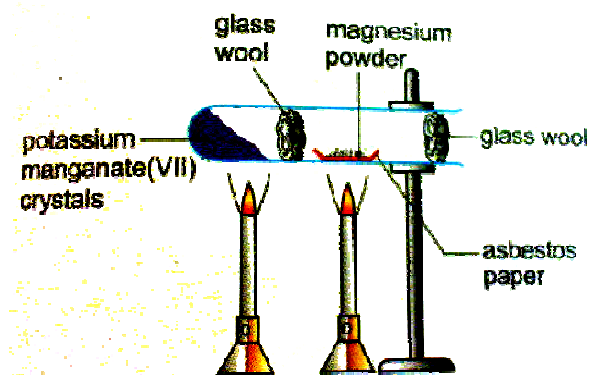


Diagram 17

Why is the magnesium powder being heated first?

- A To melt it
 - B To turn it into gas
 - C To make it react with the potassium manganate (VII)
 - D To make it hot enough and ready to react with oxygen
28. Diagram 18 shows three types of vehicles that run on fuels extracted from petroleum.

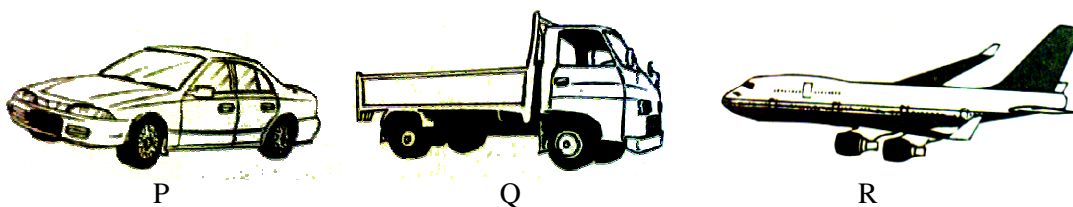


Diagram 18

Which of the following states correctly the fuels used by P, Q and R respectively?

	P	Q	R
A	Diesel	Kerosene	Petrol
B	Diesel	Petrol	Kerosene
C	Petrol	Kerosene	Diesel
D	Petrol	Diesel	Kerosene

29. Diagram 19 shows a complete electrical circuit.

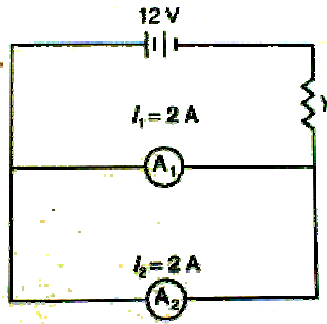


Diagram 19

Both A_1 and A_2 show readings of 2A. What is the resistance of Y in ohms?

- A 1
 - B 2
 - C 3
 - D 4
30. Diagram 20 shows a positively-charged electroscope.

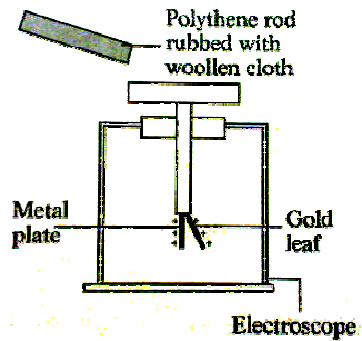
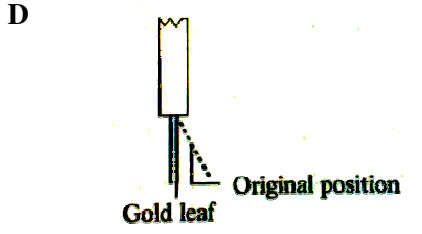
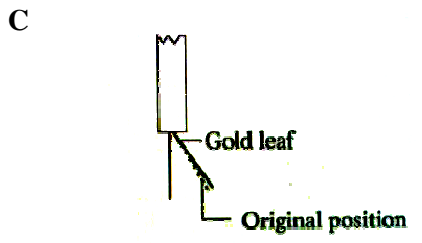
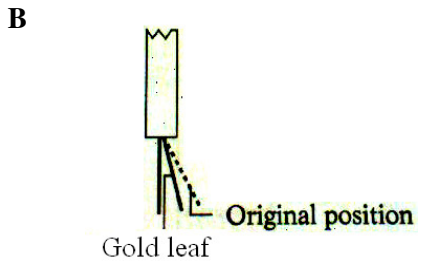
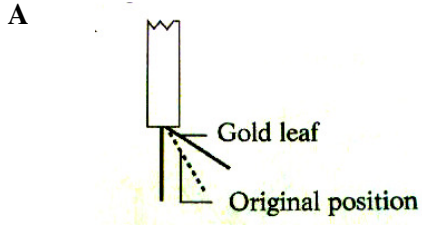


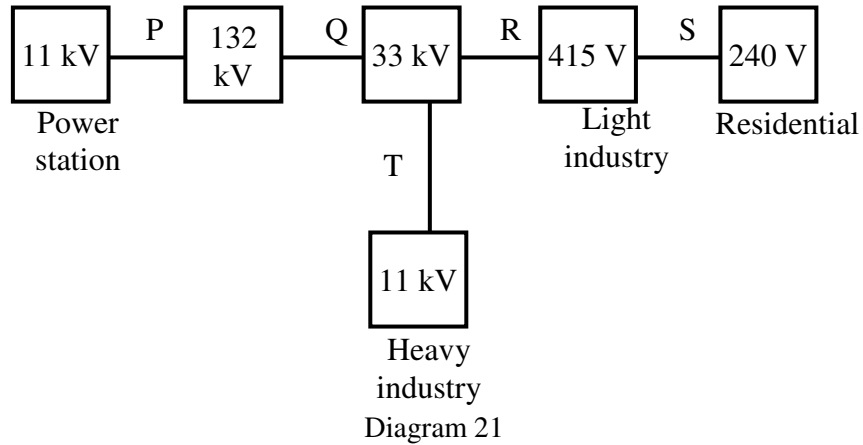
Diagram 20

A polythene rod which has been rubbed with a piece of woollen cloth is brought close to the metal cap of the electroscope.

Which of the following shows the most likely final position of the gold leaf?



31. Diagram 21 shows a cable that transmits electrical power from the power station to the consumer.



The position of the step-down transformer is at

- A P only.
 B Q, R and S only.
 C Q, R, S and T only.
 D P, Q, R, S and T.
32. Diagram 22 shows an electrical appliance with its power and voltage ratings.

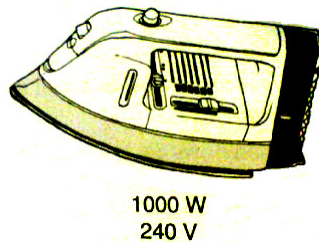
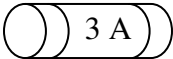
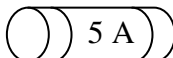
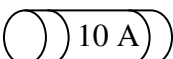
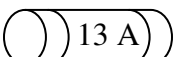


Diagram 22

Which of the following fuses is the most suitable to be used for the appliance?

- A  3 A
- B  5 A
- C  10 A
- D  13 A

33. Diagram 23 shows the internal structure of a 3-pin plug and the wires connected to it.

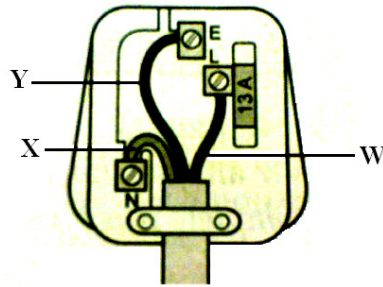


Diagram 23

What are the colours of the wires W, X and Y according to the International Colour Code for Wires used in this country?

	W	X	Y
A	Brown	Black	Green
B	Blue	Green with yellow stripes	Brown
C	Brown	Blue	Yellow with green stripes
D	Red	Brown	Blue

34. Which of the following units is used to measure heat?

- A Joule (J)
- B Kelvin (K)
- C Fahrenheit (F)
- D Degree celsius ($^{\circ}\text{C}$)

35. Diagram 24 shows a beaker filled with water and pieces of paper. When the water is heated, the pieces of paper will move in the direction as shown in Diagram 24.

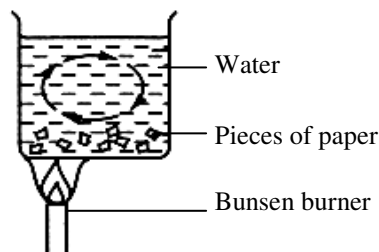


Diagram 24

Which of the following appliances use this principle?

- A Icebox
- B Refrigerator
- C Thermos flask
- D Washing machine

36. The pie chart in Diagram 25 below shows the constituents of the different classes of food in food sample X.

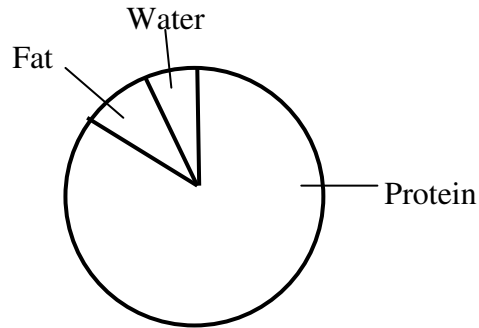


Diagram 25

Which of the following statements is true?

- A Food X is rice
 - B Food X is essential for growing toddlers
 - C Food X shows a positive result when tested with Benedict solution
 - D Food X provides more energy than the energy provided by carbohydrates.
37. Which of the following is a permanent contraceptive method?
- A Ligation
 - B Spermicides
 - C In Vitro Fertilization (IVF)
 - D Intrauterine contraceptive device (IUCD)
38. Diagram 26 shows a ginger that reproduce by their vegetative part.



Diagram 26

Which of the plants below reproduce same way as the plant in Diagram 26 ?

- A Potato
- B Carrot
- C Sweet potato
- D Bryophyllum

39. Which of the following statements is true about prominences?

- A They emit gamma rays
- B They last for a few years
- C They occur in the inner layer of the sun
- D They throw out matter from the Sun into space

40. In 1996, Malaysia launched a satellite called MEASAT as shown in Diagram 27.



Diagram 27

What is the satellite used for?

- A To explore planets
- B To obtain data on the universe
- C To carry out experiments in space
- D To help in broadcasting and communication services.

END OF QUESTION PAPER

INFORMATION FOR CANDIDATES

1. This question paper consists of **40** questions.
2. Answer **all** questions.
3. Each question is followed by four alternative answers, A, B, C or D. For each question, choose one answer only. Blacken your answer on the objective answer sheet provided.
4. If you wish to change your answer, erase the blackened mark that you have made. Then blacken the new answer.
5. The diagrams in the questions provided are not drawn to scale unless stated.
6. You may use a non-programmable scientific calculator.