

## PMR EXAMINATION

### (Form 1)

1. The following list contains the steps in a scientific investigation.

P: Record data

Q : Making conclusion

R : Interpreting data

S : Analysing data

Which of the following sequence is correct?

- A.  $Q \rightarrow P \rightarrow S \rightarrow R$
- B.  $P \rightarrow R \rightarrow S \rightarrow Q$
- C.  $S \rightarrow P \rightarrow R \rightarrow Q$
- D.  $P \rightarrow S \rightarrow R \rightarrow Q$
2. The mass of an object is 59g and its volume is  $100\text{ cm}^3$ . What is its density?
- A.  $2\text{ g cm}^{-3}$
- B.  $100\text{ g cm}^{-3}$
- C.  $0.59\text{ g cm}^{-3}$
- D.  $500\text{ g cm}^{-3}$
3. Which of the following can be used to measure length accurately, up to 0.01 cm?
- A. A metre rule
- B. Internal calipers
- C. External calipers
- D. Vernier calipers
4. Which of the following is a non renewable energy?
- A. Wind energy
- B. Solar energy
- C. Geothermal energy
- D. Nuclear energy

5. A lighted candle produces ..
- A. Light energy and heat energy
  - B. Kinetic energy, heat energy and potential energy
  - C. Chemical energy, light energy and sound energy
  - D. Potential energy, chemical energy and heat energy

6. The following are characteristic of a gas

- Slightly soluble in water
- Puts out a glowing splinter
- Turns lime water cloudy

The gas is ...

- A. Oxygen
- B. Nitrogen
- C. Carbon dioxide
- D. Argon

7. Mass is defined as ..

- A. Move with a constant velocity
- B. Occupies space and has mass
- C. Resists the motion of an object
- D. Can flow and move very easily

8. The following are the characteristic of a substance. What is the substance?

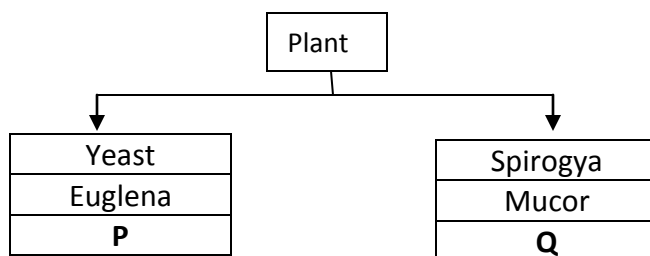
- It can drawn into very fine wires
- It has a shiny surface
- It contains only one element

- A. Sulphur
- B. Iodine
- C. gold
- D. mercury

9. Which of the following is the correct organization of cells in increasing complexity in human?

- A. Systems → organs → tissues → cells
- B. Tissues → organs → systems → cells
- C. Cells → tissues → organs → systems
- D. Organs → systems → cells → tissues

10. Diagram below shows the classification of plants.



Which of the following represents **P** and **Q** ?

	<b>P</b>	<b>Q</b>
A.	Protozoa	Paramecium
B.	Cactus	Hydra
C.	Chlamydomonas	Fern
D.	Fungi	Bacteria

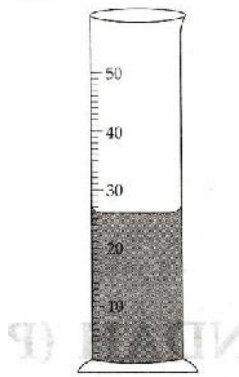
11. A group of organs that performs one function is known as a

- A. System
- B. Organ
- C. Tissues
- D. Cell

12. Which of the following includes one metal and one non-metal ?

- A. Magnesium, iron
- B. Silicon, sulphur
- C. Iron, mercury
- D. Copper, carbon

13. The diagram shows a measuring cylinder containing liquid.



What is the volume of the liquid?

- A. 25.0 ml
- B. 25.5 ml
- C. 26.0 ml
- D. 26.5 ml

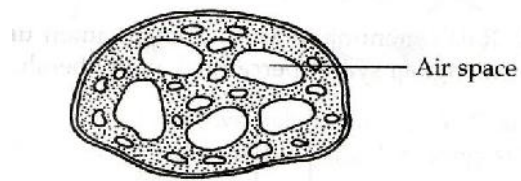
14. The diagram shows two animals of different classes.



What are the similarities between the two animals ?

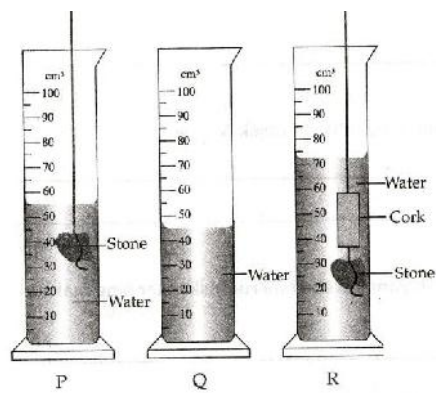
- A. Have scales and cold blooded
- B. Have dry scales and furry
- C. Lay eggs and cold blooded
- D. Have ear pinna and warm blooded

15. The diagram shows a cross section of the stem of a plant. The air space in the plant enable it



- A. To breathe
- B. To float
- C. To absorb minerals
- D. To transport food

16. The diagram shows several steps to measure the volume of a cork.



The correct sequence to measure the volume of the cork is

- A.  $P \rightarrow Q \rightarrow R$
- B.  $Q \rightarrow P \rightarrow R$
- C.  $R \rightarrow Q \rightarrow P$
- D.  $Q \rightarrow R \rightarrow P$

17. The information below shows the energy changes that occur in a candle and in a fluorescent lamp.

Energy change		
Candle	: X →	Y
Fluorescent lamp	: Z →	Light

Which of the following represents X, Y and Z ?

X	Y	Z
A. Chemical	Light	Electrical
B. Chemical	Light	Heat
C. Heat	Chemical	Heat
D. Heat	Chemical	Electrical

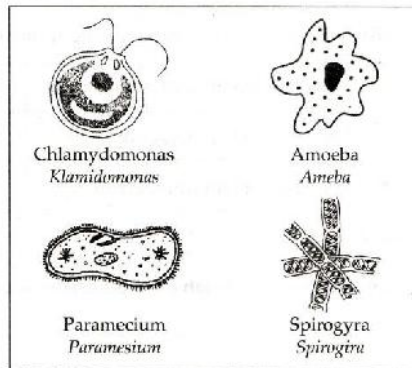
18. The following information shows the processes of changes of state in matter.

Solid	Process P →	Liquid
Liquid	Process Q →	Gas
Gas	Process R →	Liquid

Which of the following represent P,Q and R ?

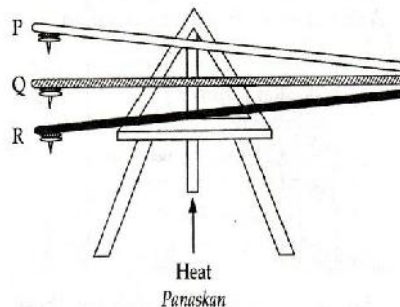
P	Q	R
A. Condensation	Boiling	Melting
B. Boiling	Condensation	Melting
C. Melting	Boiling	Condensation
D. Melting	Condensation	Boiling

19. Diagram below shows four types of microorganisms.



Which of the following are unicellular microorganisms?

- A. Amoeba, Paramecium and Spirogyra
  - B. Spirogyra, Amoeba and Chlamydomonas
  - C. Chlamydomonas, Amoeba and Paramecium
  - D. Paramecium, Spirogyra and Chlamydomonas
20. Diagram below shows the heating of three metal rods, P, Q and R. A thumbtack is attached at the end of each rod by a layer of plasticine.



The time taken for the thumb tack to drop is recorded in Table below.

	Thumbtack at P	Thumbtack at Q	Thumbtack at R
Time/s	150	210	90

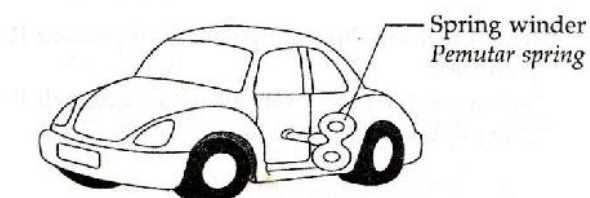
Which of the following shows the metals in ascending order of their conductivity of heat ?

- A. Q, R, P
- B. R, Q, P
- C. P, Q, R
- D. Q, P, R

21. What are the products of combustion of a candle ?

- A. Nitrogen and oxygen
- B. Water vapour and oxygen
- C. Nitrogen and carbon dioxide
- D. Water vapour and carbon dioxide

22. Diagram below shows a wound-up spring toy car.



Which energy change take place when the wound-up spring is released?

- A. Kinetic Energy → Sound Energy
- B. Potential Energy → Sound Energy
- C. Kinetic Energy → Potential Energy
- D. Potential Energy → Kinetic Energy

23. Houses in tropical countries are usually painted white to

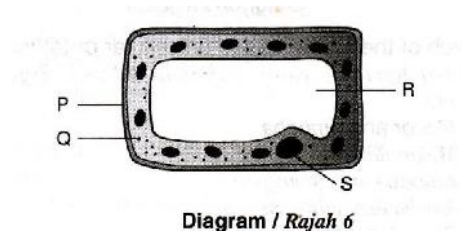
- A. Absorb heat
- B. Radiate heat
- C. Detect heat
- D. Reflect heat

24. Which cell structure is correctly matched with its function?

Cell structure	Function
A. Vacuole	Contains cell sap to keep the cell firm
B. Cell wall	Protects flow of materials in and out of the cell
C. Cell membrane	Protects and maintains the shape of the cell
D. Cytoplasm	Controls all activities of the cell



25. Diagram below shows a plant cell.



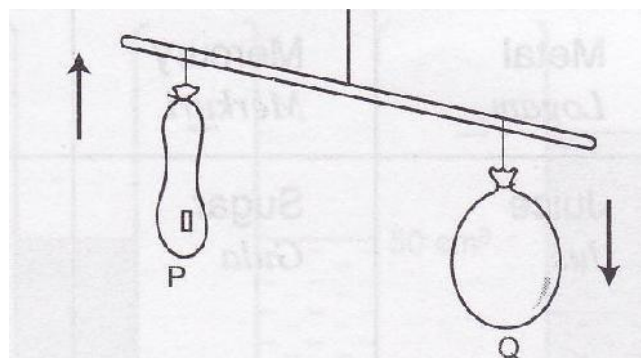
Which structure can be found in both animal and plant cell ?

- A. P and Q
- B. Q and S
- C. S and R
- D. R and P

26. Which of the following process in which type of cell is specialized to perform a specific function?

- A. Cell specialization
- B. Division of labour
- C. Complex organism
- D. Cell organization

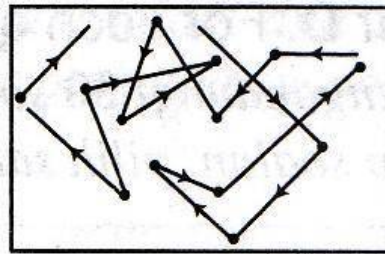
27. Diagram below shows the position of the balloons after one balloons has been pricked with a pin.



What is the inference of this experiment ?

- A. Air has mass
- B. Air occupies space
- C. Air particles move randomly
- D. Air particles in balloons Q is bigger than in balloons P

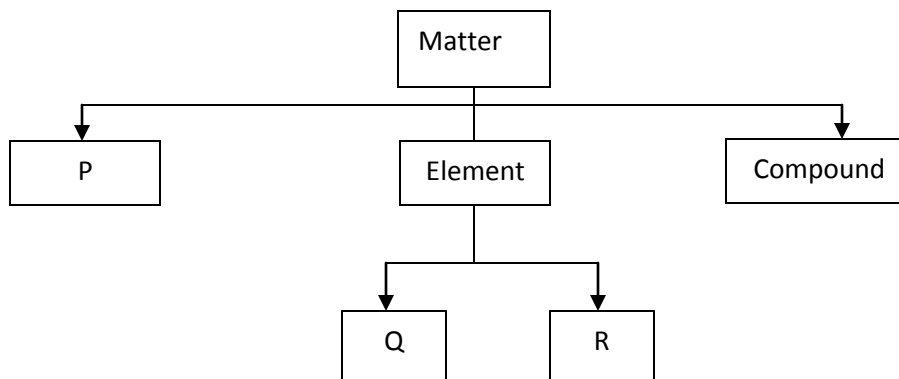
28. Diagram below shows the arrangement of particles.



What is the movement called ?

- A. Random movement
- B. Brownian movement
- C. Movement of particles
- D. Zig-zag movement

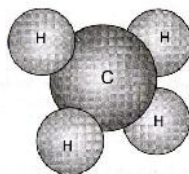
29. Diagram below shows a classification of matter.



Which matters can be represented by P, Q and R respectively?

P	Q	R
A. Air	Iron	Fluorine
B. Mathane	Mercury	Nitrogen
C. Soil	Sea Water	Carbon
D. Ammonia	Sulphur	Hydrogen

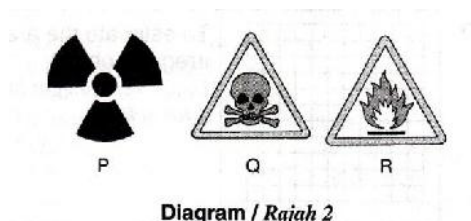
30. Diagram below shows a molecule of compound X.



What is compound X ?

- A. Ammonia
- B. Methane
- C. Carbon Dioxide
- D. Limestone

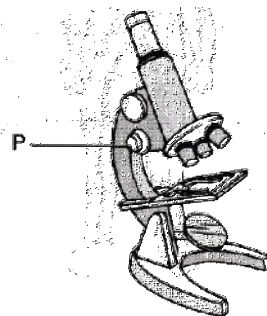
31. Diagram below shows three symbols on the bottles which contain chemicals.



Which substances have the properties represented by P, Q and R respectively ?

P	Q	R
A. Sodium	Lead	Bromine
B. Uranium	Mercury	Ethanol
C. Alcohol	Uranium	Mercury
D. Bromine	Chlorine	Hydrogen peroxide

32. Diagram below shows a microscope.



Which of the following is the function of P ?

- A. To magnify the specimen
- B. To focus the specimen in small degree
- C. To move the lens closer to the specimen
- D. To concentrate light from the mirror onto the specimen

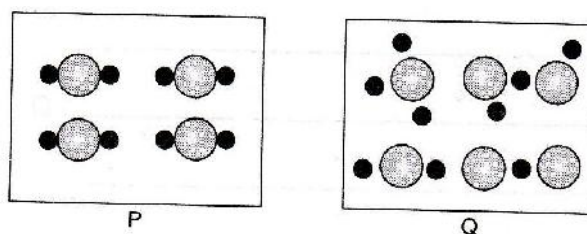
33. Table below shows the arrangement of particles in three states of matter.

State of matter	Arrangement of particles
P	Separated far apart in a disorderly manner
Q	Closely packed in an orderly manner
R	Loosely packed in a disorderly manner

Which matters can be represented by P, Q, and R respectively ?

P	Q	R
A. Lead	Oxygen	Milk
B. Hydroge	Cork	Glycerine
C. Mercury	Gold	Air
D. Helium	Water	Aluminium

34. Diagram below shows the particles in two substances.



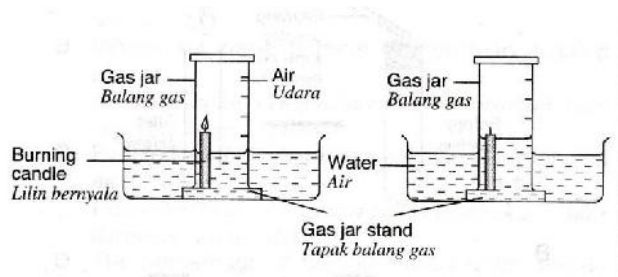
What are the substances represented by P and Q respectively ?

P	Q
A. Limestone	Brass
B. Plastic	Methane
C. Bronze	Steel
D. Petroleum	Ammonia

35. Which of the following methods is used to separate salt from salt solution ?

- A. Sieving
- B. Filtration
- C. Evaporation
- D. Separating funnel

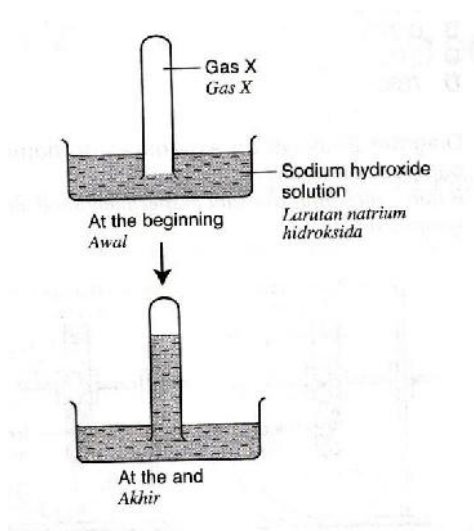
36. Diagram below shows an experiment to determine the composition of air.



Which of the following is the conclusion for this experiment ?

- A. The burning candle uses up the carbon dioxide in the gas jar.
- B. The burning candle uses up the nitrogen in the gas jar.
- C. About one-fifth of the volume of air consists of oxygen
- D. About four-fifths of the volume of air consists of oxygen.

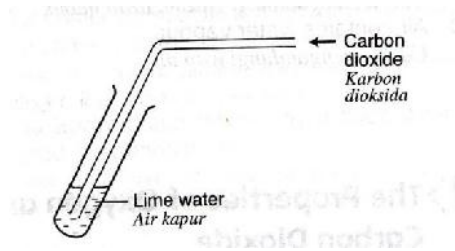
37. Diagram shows the apparatus set-up of an experiment.



Which gas can be tested by this experiment ?

- A. Oxygen
- B. Nitrogen
- C. Hydrogen
- D. Carbon Dioxide

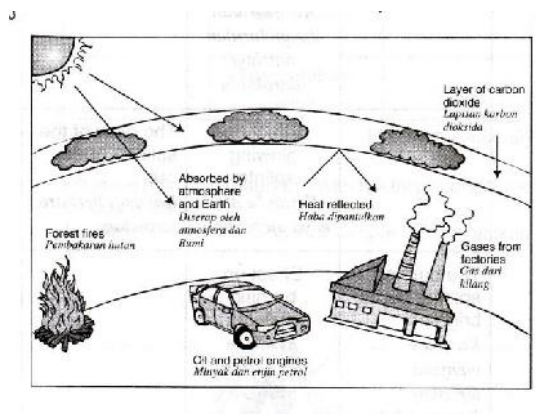
38. Diagram shows an experiment



Which of the following will be observation for this experiment ?

- A. The lime water turns cloudy
- B. The lime water has no change
- C. The lime water turns yellow
- D. Carbon dioxide will not dissolve in the lime water

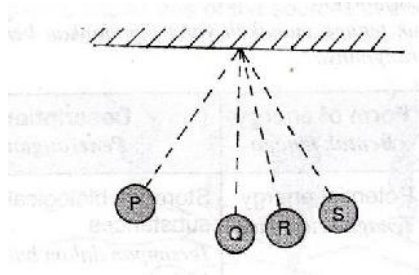
39. Diagram shows the greenhouse effect.



Which of the following causes by the greenhouse effect ?

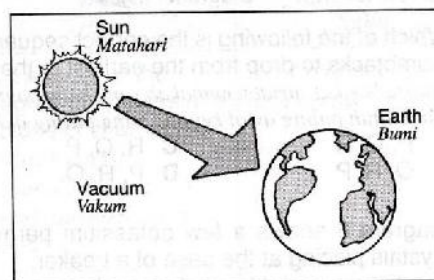
- A. Breathing mechanism
- B. Holes in the ozone layer
- C. Rises of sea level
- D. Skin Problem

40. Diagram shows a pendulum released from S and swinging up to P.



At which position does the pendulum have the highest potential energy ?

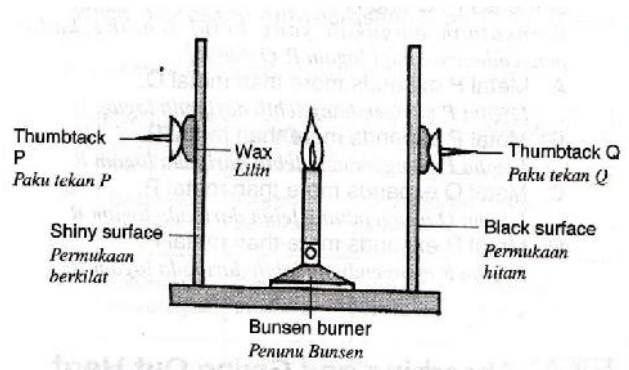
- A. P
  - B. Q
  - C. R
  - D. S
41. Which statement is correct about the fossil fuels?
- A. Fossils fuels include coal, petroleum and biomass
  - B. Coal is normally found under the sea bed
  - C. Natural gas consists of a mixture of methane, butane and ethane
  - D. Petroleum comes from the remains of dead trees buried in swampy areas
42. Diagram shows the warming of the Earth by the Sun.



Which of the following is the heat transfer from the Sun to the Earth?

- A. Radiation
- B. Heat flow
- C. Conduction
- D. Convection

43. Diagram below shows an experiment.



When the Bunsen burner is lighted, what will happen to the thumbtacks after some time ?

- A. Thumbtack P will drop faster than thumbtack Q
- B. Thumbtack Q will drop faster than thumbtack P
- C. Thumbtack P and Q will not drop
- D. Thumbtack P will drop at the same time as thumbtack Q

44. Organs in the excretory system include the

- I. Skin
- II. Kidneys
- III. Trachea

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



45. What are the advantages of having specialized cells and body system ?

- I. There is a cell division of work among the cells and the systems
- II. Life processes occur efficiently
- III. Many functions can be performed at the same time

A. III only

B. I and II only

C. II and III only

D. I,II and III

46. Which materials and its use is correctly matched ?

I. Plastic – disposable forks and spoons

II. Rubber – surgical gloves

III. Wood – fishing boats

A. I and II only

B. I and III only

C. II and III only

D. I,II and III

47. Which of the following are examples of the application of density in our everyday life ?

P – Tin are sinks to bottom of palong railings

Q – A raft floats on water

R – Oil sprayed onto the surface of stagnant water

S – Helium gas used in meteorological balloons

A. P and Q

C. Q, R and S

B. R and S

D. P,Q,R and S

48. Which of the following is matter ?

- I. Wood
- II. Margarine
- III. Light

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

49. The air that we breath out contains

- I. Carbon dioxide
- II. Some water vapour
- III. Nitrogen

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

50. Gaseous exchange in our lungs mean the exchange of the following gases :

- I. Nitrogen
- II. Oxygen
- III. Carbon Dioxide

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

## **Answer**

### **Objectives**

- |        |       |
|--------|-------|
| 1. D   | 26. C |
| 2. C   | 27. D |
| 3. D   | 28. C |
| 4. D   | 29. A |
| 5. A   | 30. B |
| 6. C   | 31. A |
| 7. B   | 32. B |
| 8. C   | 33. B |
| 9. C   | 34. A |
| 10. C  | 35. C |
| 11. A  | 36. C |
| 12. D  | 37. A |
| 13. B  | 38. A |
| 14. CB | 39. B |
| 15. B  | 40. A |
| 16. B  | 41. B |
| 17. B  | 42. A |
| 18. B  | 43. B |
| 19. A  | 44. A |
| 20. C  | 45. D |
| 21. C  | 46. D |
| 22. A  | 47. D |
| 23. D  | 48. B |
| 24. D  | 49. D |
| 25. D  | 50. C |