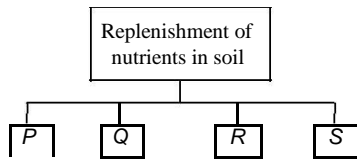


PRACTICE SET 1

A Whole Content Based Test for Class 7th Science Asiad

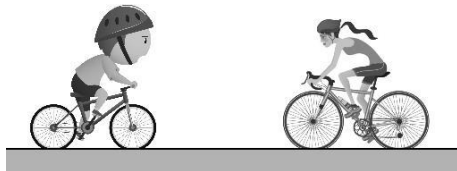
1. There is a flow chart given below, it shows the components involved in the replenishment of nutrients in soil. Identify *P*, *Q*, *R* and *S*.



Codes

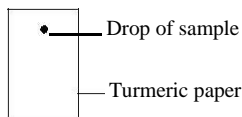
P	Q	R	S
A Cattle dung	Saprophytes	Compost	Fertilisers
B Parasitic plants	Carbon dioxide	Fertilisers	Cattle dung
C Fertilisers	Cattle dung	Compost	Leguminous crops
D Chlorophyll	Carbon dioxide	Compost	Fertilisers

2. Two bicycles are approaching each other with speed 15 km/h. Initially, the distance between them is 60 km. How long will they hit each other?



- A 1 h B 2 h C 3 h D 4 h

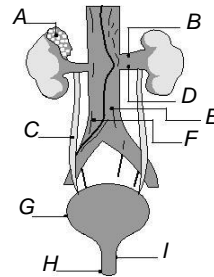
3. Seema took some turmeric powder in a cup and made a paste by adding some water to it. Then, she take some paper strips and apply the paste over them. She dried the strips and use them to test the nature of following solution by keeping a few drops of the solution on the strips as shown below.



If the solutions used by her are (i) solution of common salt (ii) solution of baking soda (iii) lemon juice (diluted) and (iv) lime water, then the change in colour observed by her is

- | | (i) | (ii) | (iii) | (iv) |
|---|--------|--------|--------|--------|
| A | Yellow | Red | Yellow | Red |
| B | Yellow | Red | Red | Yellow |
| C | Yellow | Yellow | Red | Red |
| D | Red | Red | Yellow | Yellow |

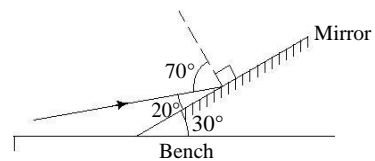
4. Observe the figure given below of excretory system and identify the part through which the waste carrying blood reach kidney and clean blood flows out of it.



Choose the correct option

	Waste blood carrier	Clean blood carrier
A	A	B
B	B	C
C	B	D
D	B	F

5. A mirror is tilted at an angle of 30° to the bench. A ray of light is directed so that it hits the mirror at an angle of 20° to the surface of the mirror.



What is the angle of reflection?

- A 20° B 50° C 30° D 70°

6. Classify the following processes into physical P or chemical changes C.

- (i) Beating of aluminium metal to make aluminium foil.
- (ii) Digestion of food.
- (iii) Cutting of a log of wood into pieces.

(iv) Burning of crackers.

Codes

	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)
A	P	C	P	C	B	P	P	C
C	P	C	C	P	D	C	P	P

7. Consider the following statements.

- I. Wasp sting venom can be neutralised by an acid.
- II. Indicators become green in neutral solution.
- III. Salts obtained from nitric acid are called nitrates.

The correct statements are

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

Direction (Q. Nos. 8-10) Ah May leaves home at 8:15 am. She drives at 70 km/h to work. She reaches her office at 8:30 am.

8. How far is Ah May's office from her home?

- A 4.7 km
- B 17.5 km
- C 280 km
- D 1050 km

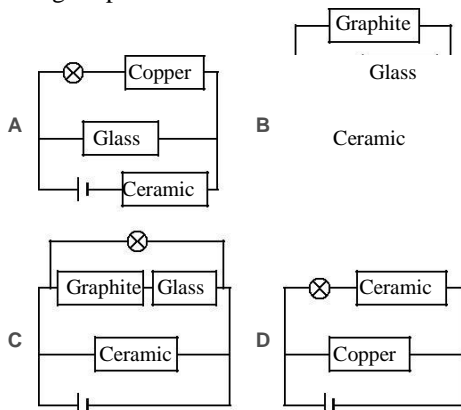
9. How fast must Ah May drive if she wants to reach her office at 8:25 am?

- A 47 km/h
- B 105 km/h
- C 170.5 km/h
- D 176.7 km/h

10. Ah May wants to reach her office by 8:15 am. but, because of the heavy traffic she can only travel at 50 km/h. What time would you advise Ah May to leave her home?

- A 7:30 am
- B 7:40 am
- C 7:54 am
- D 7:56 am

11. In which of the following circuits would the bulb light up?

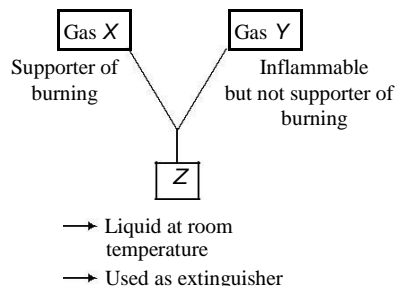


12. A convex lens is also called converging lens. Which statement about the image formed by a converging lens is correct?

- A It is always real and erect
- B It is always real and inverted

- C It is always virtual and erect
- D It may be either real or erect

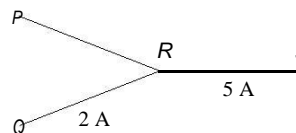
13.



The above process is an example of

- A reversible change
- B temporary change
- C physical change
- D chemical change

14. The diagram below shows three connecting wires from part of a circuit. The current in wire RS is 5 A and the current in wire QR is 2 A.



What will the current in wire PR be?

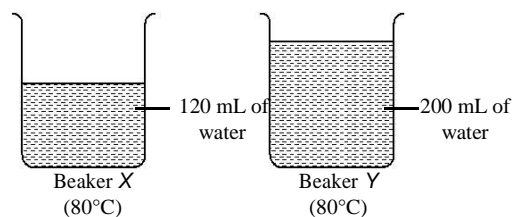
- A 3 A
- B 5 A
- C 7 A
- D 9 A

15. **Assertion** (A) Blood is red in colour.

Reason (R) Blood contains RBCs with haemoglobin.

- A Both A and R are true and R is the correct explanation of A
- B Both A and R are true, but R is not the correct explanation of A
- C A is true, but R is false
- D Both A and R are false

16. The diagrams below show two beakers X, and Y, filled with different amounts of water. The water in both beakers is heated upto 80°C.



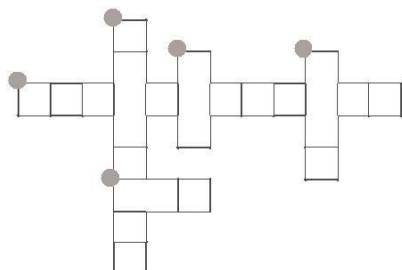
Which of the following statements is true about the two beakers of water?

- A The water in both beakers has the same amount of heat energy and temperature
- B The water in both beakers has different amount of heat energy

C The water in both beakers has the same amount of heat but different amount of energy

D The water in beaker Y will evaporate faster than the water in beaker X

17. Solve the given crossword.



Across

3. Wear and tear of insulated wires cause
4. The safety mark necessary on all the electrical appliances

Down

1. Safety device used in circuits
2. Safety switches which work on the principle of magnetic effect of current
5. Connecting an electric circuit with ground to avoid an electric shock

18. Some process alongwith their reversibility and chemical composition are tabulated below.

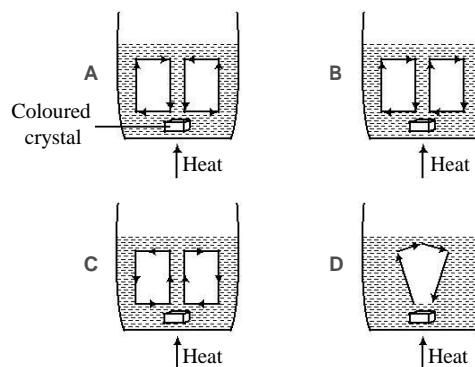
	Process	Reversible	Chemical composition
I.	Combustion	o	Different
II.	Crystallisation	π	Different
III.	Curd formation	o	Same
IV.	Digestion	o	Same

Key π Yes
o No

The correct matching(s) is/are

- A I and II B Only I
C I, III and IV D All of these

19. Which of the following correctly shows the direction of the convection currents when water is heated?



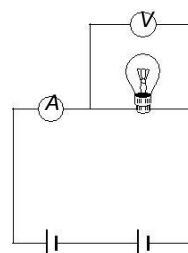
20. Consider the given below statements.

- I. In plants, the extra food is stored as starch.
- II. Minerals from soil travel throughout the plants through vascular tissues.
- III. Cortex lies in between the epidermis and vascular cylinder.
- IV. Sunlight and carbon dioxide enters into the leaves through stomata.
- V. *CUSCUTA* is an example of a saprophytic plant

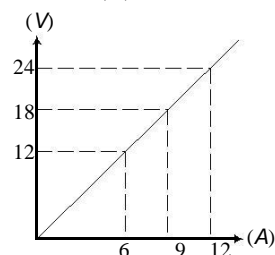
Which of the above statement(s) is/are true?

- A I, II and III B I and III
C Only III D I and IV

21. Bernard did a simple experiment as shown below:

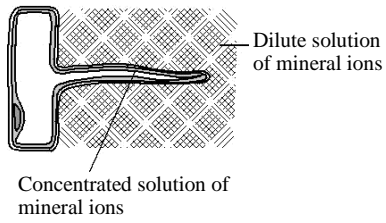


Here, he plots the readings of the voltmeter (V) and the ammeter (A).



Which of the following statement is true?

- A Bernard used a fixed number of batteries throughout the experiment
- B Bernard used a 2Ω resistor
- C Bernard used 12 V batteries only
- D Bernard used several numbers of bulbs in his experiment



Which statement is correct?

- A Water molecules move into the root hair by osmosis.
- B Water molecules move out of the root hair by osmosis.
- C Water molecules move into the root hair by diffusion.
- D Water molecules move out of the root hair by diffusion.



ANSWERS

1. (c) Fertilisers, cattle dung and compost add nutrients to soil and improve its quality.

Nitrogen fixing leguminous crops also help in soil improvement.

2. (b) Since, both the bicycles are approaching with same speed. So, they both will cover same distance before hitting each other.

$$\Rightarrow \text{Distance covered} = \frac{60}{2} = 30 \text{ km}$$

$$\text{Speed} = 15 \text{ km/h}$$

$$\text{Time taken} = \frac{\text{Distance}}{\text{Speed}} = \frac{30}{15} = 2 \text{ h}$$

3. (a) Colour of turmeric is yellow in acidic medium and red in basic medium.
4. (c) The blood brings wastes to the kidney through the renal artery. Nephrons purify the blood and clean blood flows out of the kidneys through the renal vein.

5. (d) According to second law of reflection, angle of incidence is always equal to the angle of reflection.

$$\text{Here, } \angle I = 70^\circ$$

$$\text{So, } \angle R = 70^\circ$$

6. (a) Chemical change involves change in chemical composition which remain unaffected in case of physical change. Thus, beating of aluminium foil and cutting of wood log are the examples of physical changes while remaining two are the chemical changes.

7. (d) Wasp sting inject some base, which can be neutralised by some acid.

Appearance of green colour shows the neutral nature of a solution.

Salts of nitric acid are called nitrates, e.g. NaNO_3 (sodium nitrate).

8. (b) Time taken = 15 min = 15 · 60 s

$$\text{Speed} = 70 \text{ km/h}$$

$$= 70 \cdot \frac{5}{18} \text{ ms}^{-1}$$

$$\text{Distance} = \text{Speed} \times \text{time}$$

$$= 70 \cdot \frac{5}{18} \cdot 15 \cdot 60 = 17500 \text{ m}$$

$$= 17.5 \text{ km}$$

9. (b) Time taken = 10 min = 10 · 60 s = 600 s

$$\text{Distance} = 17500 \text{ m}$$

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \frac{17500}{600} \cdot \frac{18}{5} \text{ km/h} = 105 \text{ km/h}$$

10. (c) Distance = 17500 m = 17.5 km

$$\text{Speed} = 50 \text{ km/h}$$

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} = \frac{17.5}{50} = 0.35 \text{ h}$$

$$= 0.35 \cdot 60 \text{ min} = 21 \text{ min } 8$$

$$: 15 \text{ am} - 21 \text{ min}$$

$$= 7 : 54 \text{ am}$$

11. (c) Ceramic and glass are insulators whereas copper and graphite are conductors. In case of option (c), circuit is complete with the bulb even if insulators are connected.

12. (d) The image formed by a converging lens can be real and inverted for, e.g. in camera or virtual and erect e.g. in magnifying lens depending upon the distance between the object and surface of lens.

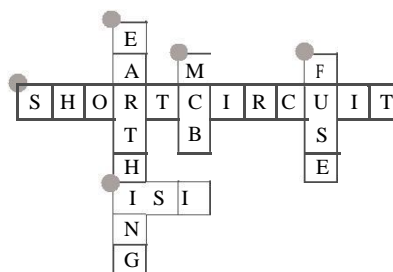
13. (d) During a chemical change, a new substance is formed. Since, Z is quite different from X and Y, so it is a chemical change.

14. (a) Current in PR will be RS - QR = 5 A - 2 A = 3 A

15. (a) Blood contains RBCs, which has haemoglobin protein that gives blood its red colour.

16. (b) In case of beaker Y, heat energy will be more.

17.



18. (b) Combustion, curd formation and digestion all involve change in chemical composition, so these are the examples of chemical changes. All these are irreversible processes.

Crystallisation is a reversible process but no new substance is formed during this process.

19. (c) 20. (a)

$$21. \text{ (b) Resistance, } R = \frac{V}{I} = \frac{12}{6}$$

$$R = 2 \Omega$$

22. (a)

23. (a) Litmus paper is blue when pH is more than 7. Thus, at point A.

24. (b) 20 mL of Y neutralises the liquid X.

25. (b) It shows excess of Y after neutralisation of X completely.

26. (c)

27. (a) M → Canines
N → Incisors
Q → Premolars
P → Molars

28. (c) The temperature of ice = 0°C

Obtained reading = 2°C

So, error in thermometer = 2°C

Hence, actual temperature of glass of water at room temperature = Obtained reading - error

$$= 30^\circ\text{C} - 2^\circ\text{C} = 28^\circ\text{C}$$

29. (b) pH of distilled water is 7. So, P remains colourless, Q becomes yellow, R remains blue and S also remains blue.

30. (a)