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**INDIAN SCHOOL MUSCAT
MIDDLE SECTION
HALF YEARLY EXAMINATION 2019 – 20
SUBJECT – SCIENCE**



CLASS 7
18.09.2019

Code: MYSC10
Time Allotted: 2 ½ hrs
Max .Marks: 80

General Instructions.

- 1.The question paper comprises of three sections **A ,B& C**. You have to **attempt all** the sections.
- 2.All the questions are **compulsory**.
- 3.All the answers should be written in the **answer sheet** provided.

Q.NO1 Marks

SECTION ‘A’ – (‘1’ MARK EACH) – TOTAL – 20 MARKS

- (a) Presence of _____ in leaves indicates the occurrence of photosynthesis.
a)chlorophyll b)carbon dioxide c)starch d)oxygen 1

- The range of laboratory thermometer is : -10°C - 110° C :: the range of clinical thermometer is :
(b) a)35°C - 45°C b)35°C - 42°C c)35°C - 40°C d) -35°C - 42°C 1

- We get heat when we sit in front of room heater, because of which mode of heat transfer?
(c) a)conduction b)convection c)radiation d)none of these 1

- Liquid wastes of industries should be neutralized by adding _____ before disposal.
(d) a)slaked lime b)HCl c)milk of magnesia d)all of these 1

- When carbon dioxide is passed through lime water, it turns milky due to the formation of _____
(e) a) Calcium carbonate (CaCO₃) b) Water
c) Sodium hydrogen carbonate d) None of these 1

- Anaerobic bacteria digest animal waste and produce biogas (Change – A). The biogas is then burnt as fuel (Change – B). The following statements pertain to these changes. Choose the correct one.
(f) a) Process – B is a chemical change. b) Process – A is a chemical change. 1
c) Both processes A and B are chemical changes. d) None of these processes is a chemical change.

- Breathing is a process that
(i) provides O₂ to the body.
(ii) breaks down food to release energy.
(g) (iii) helps the body to get rid of CO₂. 1
(iv) produces water in the cells.
Which of the following gives the correct combination of functions of breathing?
a) (i) and (ii) b) (ii) and (iii) c) (i) and (iii) d) (ii) and (iv)

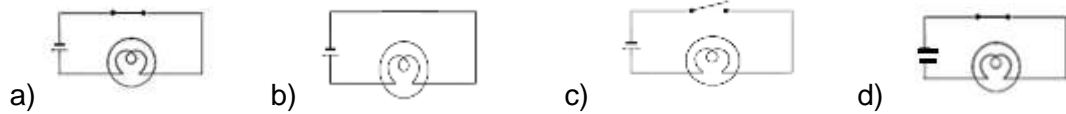
Tina makes a circuit for her project work as shown



(h)

1

Which of the following options represents the correct circuit diagram for this setup?



The maximum and minimum temperature displayed daily in the weather bulletin refer to the –

- (i) a) highest day temperature and lowest early morning temperature of the day. 1
- b) highest day temperature and highest night temperature of the month.
- c) temperature recorded at 12 noon and at mid night (00.00 hrs).
- d) average highest temperature of day and average lowest temperature of night.

- (j) The coldest region on earth is the – 1
- a) polar region b) tropical region c) temperate region d) coastal region

- (k) In this mode of nutrition simple molecules are used to synthesis complex chemical substances such as carbohydrates. Identify the mode of nutrition. 1

- (l) An iron rod at 50°C is dropped in a tub containing water at 50°C. In which direction the heat flows? 1

- (m) How can you construct houses that are not affected much by heat and cold outside? 1

- (n) What are alkalis? 1

- (o) Represent the process of rusting by an equation. 1

- (p) What kind of a change is cloud formation? 1

- (q) Vishal was participating in a race. His younger sister wondered why he breathes faster and deeper than usual after finishing the race. Can you reason why? 1

- (r) What are MCBs? 1

- (s) Define weather. 1

- (t) Name the instrument used to measure rainfall. 1

Q.NO SECTION 'B' – ('3' MARKS EACH) – TOTAL – 30 MARKS Marks

- (2) a) What is the role of stomata in plants? 3
- b) Write a word equation for photosynthesis?
- c) Why do we say that the bacterium *Rhizobium* has a symbiotic relationship with leguminous plants?

- (3) a) Ravi adds 10ml hydrochloric acid in a beaker and places a thermometer in it. The reading in the thermometer is 25°C. He then adds 10ml sodium hydroxide in the beaker. What change will you notice in the reading in the thermometer? 3
 b) Why the mixture obtained after mixing acid and base is neutral in nature?
 c) Why is indigestion treated with milk of magnesia?

a) Take lemon juice, distill water, and baking soda solution. Put a drop of these solutions on the red and blue litmus paper and write your observation tabular form.

(4)

Test solution	Effect on red litmus paper	Effect on blue litmus paper
lemon juice		
Washing Soda		

3

- b) Name the organic acid present in an ant's sting.
 c) Name the base in lime water.

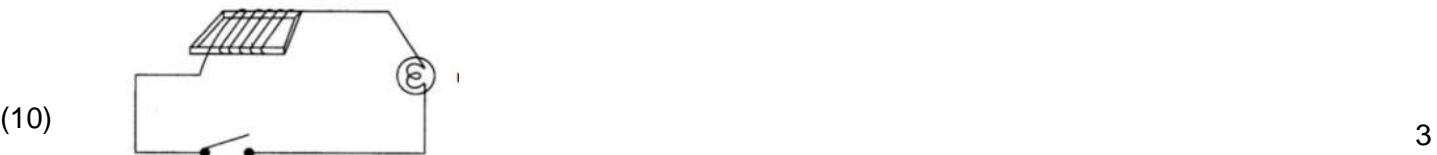
- (5) a) What is galvanization?
 b) How is stainless steel made?
 c) By which process do you obtain salt from sea water? Define the process. 3

- (6) a) Chemical changes are very important in our lives. What are the characteristics of Chemical changes? 3
 b) What is the evidence of chemical change in a rotten egg?
 c) What is the evidence of chemical change in burning a fire cracker?

- (7) a) Why do dolphins and whales often come up to the water surface? 3
 b) Name the organs of breathing in:
 i) fish ii) earthworm iii) lizards iv) grasshopper

- (8) a) Represent anaerobic respiration by word equation. 3
 b) What is the end product of anaerobic respiration in muscle cells?
 c) How can you get relief from a cramp?

- (9) a) What is a circuit diagram?
 b) What is an open circuit and a closed circuit? 3
 c) How does electric cell produce current?



- a) The above image is an example of which effect of electricity?
 b) The needle of a magnetic compass points in which direction?
 c) What is an electromagnet?
 d) Mention any two devices that uses electromagnets?

3

- (11) a) What causes changes in the weather?
 b) Name any three elements that determine the weather of a place.
 c) Name the thermometer used to record weather temperature?

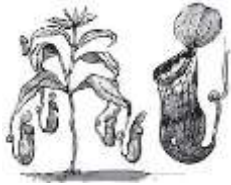
OR

Give the use of the following adaptations in each of the following animals:

- a) Tusks in elephants.
 b) Sticky pads on the feet of the red-eyed frog.
 c) Which animal is called the 'beard ape'? State one adaptive feature.

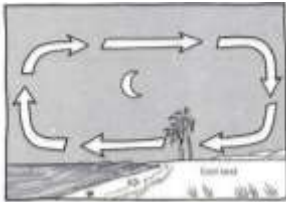
Q.NO **SECTION 'C' – ('5' MARKS EACH) – TOTAL – 30 MARKS** Marks

- a) Differentiate between a parasite and a saprotroph by giving an example.
 b) Why do plants need nitrogen?



(12) 5

- c) Identify the above plant and it's mode of nutrition.



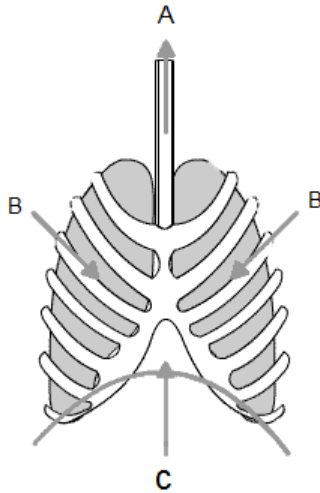
(13) a) What type of breeze does the picture represent, explain? 5

- b) Name a liquid which is a good conductor of heat.
 c) How does the trapped air in between wool fibres affect our body?
 d) Jimmy pours hot coffee in a cup. He notices that coffee cools down after sometime. How can this be explained?
 e) Two objects C and D are placed in an insulated box. Object C has a temperature of 20°C whereas object D has 40°C. What would you observe after two hours? Why?

a) What is the importance of indicators? 5

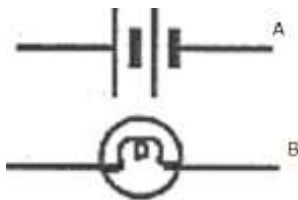
- b) Mention two natural indicators?
 c) An indicator X changes from yellow to red in the presence of a base. What would be the change in colour of the indicator X in the presence of the mixture of acid and base? Explain.
 d) Name a strong acid.
 e) How can you neutralize a bee sting?

(15)



5

- Label the following parts, A, B, C.
- Identify the process in this diagram.
- What is the percentage of oxygen and carbon dioxide in the exhaled air?
- Which type of respiration produces less energy?
- In which part of the lungs does exchange of gases take place in humans?
- Does yawning help us in anyway?



(16)

- Identify the symbols A and B.
- State two conditions under which a bulb will not glow in a circuit.
- Why does the electric cell get weak very quickly if you do not switch off the button of the torch after a few minutes?
- Name the material used as heating element in an electric heater.
- Represent components of electrical circuits using symbols of a switch in off position using symbols

5

OR

Raj took a wire of length 10 cm. Ravi took a wire of 5 cm of the same material and thickness. Both of them connected the wires. The current flowing in both the circuits is the same.

- Will the heat produced in both the cases be equal?
 - Will the heat produced be the same if the wires taken by them are of equal lengths but of different thickness? Explain.
 - What is the heating effect of electricity? Mention two devices that work on this principle.
 - Represent the following components of electrical circuits using symbols
 - Switch in on position
 - connecting wire
- (17)
- The tropical rainforest has a large population of animals. Explain why it is so.
 - Mention two animals living in tropical regions.
 - Name two states where tropical rainforest are found in India?

5

End of the question paper.