

**RED ROSE SENIOR SECONDARY SCHOOL, GOMTI NAGAR**

**SUMMER HOLIDAY HOME WORK [2020-21]**

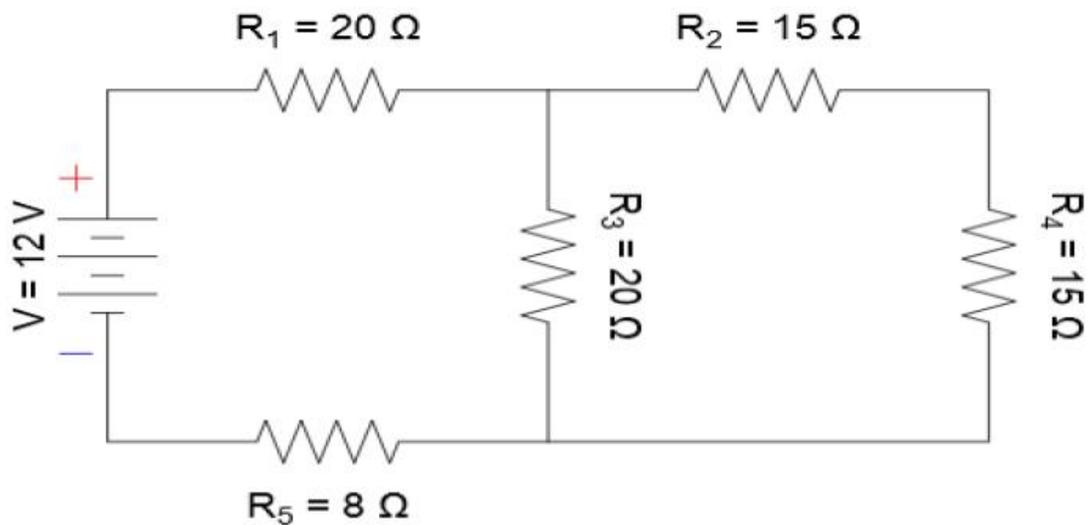
**CLASS-X**

**SUBJECT- SCIENCE**

**Instruction: Use a separate notebook of thin size for holiday homework (Do not use your classwork notebook).**

1. Differentiate between exothermic and endothermic reactions. Give examples from nature.
2. Name the five types of chemical reactions. Give two examples of each by writing balanced chemical equations.
3. What do you mean by precipitation reactions? Explain with the help of an example.
4. Why do we apply paint on iron articles?
5. Explain the following terms with one example each:  
a) Corrosion                      b) Rancidity
6. Why is silver chloride kept in coloured bottles?
7. Why photosynthesis is considered an endothermic reaction?
8. Translate the following statements into balanced chemical equations:  
a) Phosphorus burns in oxygen to give phosphorus pentoxide  
b) Carbon disulphide burns in air to give carbon dioxide and sulphur dioxide.
9. Give an example of a reaction which is a double displacement reaction as well as precipitation reaction.
10. A solution of a substance X is used for whitewashing.  
a) Name the substance X and write its formula  
b) Write the reaction of the substance X named in (a) above with water.

11. What is the difference between displacement and double displacement reaction? Give examples.
12. What are the different ways in which glucose is oxidized to provide energy in various organisms?
13. What is the role of saliva in the digestion of food?
14. What causes movement of food inside the alimentary canal?
15. Draw well labelled diagrams of the following:
  - a) Human alimentary canal
  - b) Human respiratory system
  - c) Human excretory system
  - d) Nephron
  - e) Double circulation
16. What are the differences between aerobic and anaerobic respiration?
17. Differentiate between arteries, veins and capillaries.
18. Explain how excretion occurs in plants?
19. In the circuit diagram shown below:

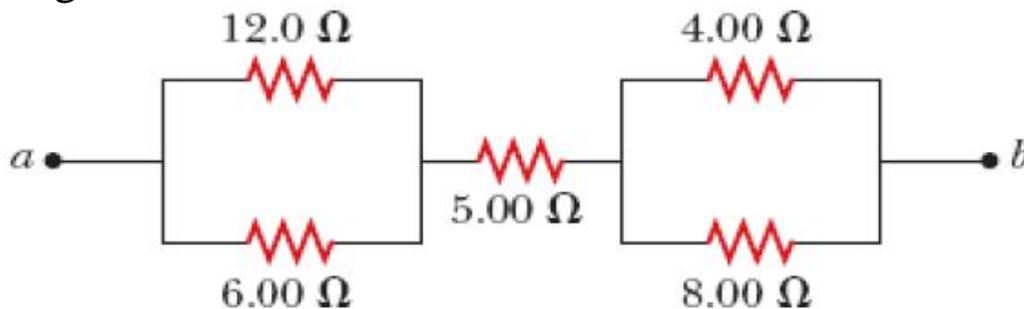


Determine:

- i) The equivalent resistance of the entire circuit

- ii) The current through each resistor
- iii) The total current from the power supply
- iv) The voltage drop across each resistor.

20. Calculate the net resistance between the points a and b in the circuit diagram shown-



21. An electric heater rated  $880\text{W}$  operates  $6\text{h/day}$ . Find the cost of energy to operate it for 30 days at Rs 3.00 per unit.

22. A torch bulb is rated  $5\text{V}$  and  $500\text{mA}$ . Calculate its (i) power, (ii) resistance, (iii) energy consumed when it is lighted for 4 hours.

23. Two identical resistors are first connected in series and then in parallel to a source of supply. Find the ratio of heat produced in two cases.

24. Two resistors with resistances  $5\ \Omega$  and  $10\ \Omega$  are to be connected to a battery of  $6\text{V}$  so as to obtain:

- (i) Minimum current
- (ii) Maximum current.

How will you connect the resistances in each case?

25. A wire of resistance  $10\ \Omega$  is bent in the form of a closed circle. What is the effective resistance between the two points at the ends of any diameter of the circle?