Science Practice Paper 2020-21

Practice Paper 2020-21
Class 10th
Science Theory

Time 3 hour M.M- 80

General instructions:

.Question paper comprises of 4 sections A,B,C and D. All questions are compulsory.
.Section A question number 1 to 20 comprise of one marks question.
.Section B from 21 to 26 short answer type carrying two marks each
.Section C from 27 to 33 are short answer type carrying 3 marks each.
.Section D some question 34 to 36 are long answer type questions carrying 5 marks each.

Section-A(1 Marks Each)

Q1. List any two changes happen when ferrous sulphate is heated in a dry test tube?
Q2. Name the precipitate formed when Barium Chloride is treated with sodium sulphate?
Q3. You have two solutions A and B, the pH of solution A is 6 while of B it is 8 ;which solution has more hydrogen ion concentration and which will be more basic?
Q4. Veins are thin walled and have valves. Why?
Q5. Write the chemical formula and one use of bleaching powder.
Q6. How the wall of small intestine adapted for performing the function of absorption of food?
Q7. State any two role of pancreas in digestion of food?
Q8. Name non metal which is lustrous in nature?
Q9. Which of the following is not observed in a homologous series-
a) change in chemical properties
b) change in physical properties
c) difference of CH_2 group
d) same functional group
Q10. Identify the alkane in it?
C_2H_2 , C_4H_{10} , C_2H_4 , C_3H_4
Q11. Define the power of a lens? Give the formula.
Q12. Give the reason why the colour of the sky appears blue?
Q13. Write the SI unit of Resistivity?

Question number 14, 15 and 16 are Assertion-Reason types. Read the assertion(A) and its reason(R) and select the correct option from these-
a) both A and R true and R is correct explanation.
b) both A and R are true but R is not the correct explanation.
c) A is true and R is false

d) A is false and R is true

Q14. A- man is an omnivore
R- man eats food product obtained from both plants and animals.
select the correct option from these-
a) both A and R true and R is correct explanation.
b) both A and R are true but R is not the correct explanation.
c) A is true and R is false
d) A is false and R is true

Q15. A- bile is essential for the digestion of lipids
R- bile juice contains enzymes.
select the correct option from these-
a) both A and R true and R is correct explanation.
b) both A and R are true but R is not the correct explanation.
c) A is true and R is false
d) A is false and R is true

Q16. A- carbon is versatile in nature
R- atom is tetravalent and small in size.
select the correct option from these-
a) both A and R true and R is correct explanation.
b) both A and R are true but R is not the correct explanation.
c) A is true and R is false
d) A is false and R is true.

Question number 17 to 20 contains 5 subparts each.You have to attempt ANY FOUR sub part in this questions, carrying one marks each.

Q17. Read the following statements and answer any questions -

" all living cells require energy for various activities. energy is available by the breakdown of simple carbohydrates.They may be with oxygen or without any oxygen."

Q(i)- Energy in the case of higher plants and animals is obtained by -
a)Breathing b) Cellular respiration c)organ respiration d)digestion of food.

Q(ii)Lactic acid production has occurred in the athlete while running 400m race. which processes involved?
a) aerobic respiration b) anaerobic respiration c) fermentation d) breathing.

Q(iii)Feature of anaerobic respiration is-
a) presence of oxygen
b) absence of oxygen
c) no release of energy
d)none

Q(iv)Highest energy is released in?
a) aerobic respiration
b) anaerobic respiration
c) fermentation
d) none

Q(v) Kreb's cycle occurs in-
a) aerobic respiration
b) fermentation
c) anaerobic respiration
d) none.

Q18- "Carbon occurs almost everywhere in this universe,in land, water or air,it is everywhere. Even the parts of body in plants animals are also made up of carbon only."

Q(i) Tetravalency is present in-
a) oxygen b) carbon c) nitrogen d) phosphorus.
Q(ii) Carbon is known to form which type of Bond-
a) ionic bond b) covalent bond c) co-ordinate Bond d)none
Q(iii) which of the following not important for the versatile nature of Carbon -
a) small size b) tetravalency c)covalent bonding d)ionic bonding
Q(iv) compounds of carbon which are only made by hydrogen and carbon known to be -
a)acids b)alcohol c)carbonyl d)hydrocarbon
Q(v) covalent bonds are formed by-
a) sharing of electrons
b) transfer of electron
c) reduction of electrons
d) none.

Q19. Flow of charge is actually the electric current, it is measured in different ways. Application and uses of electricity is also based on the same concept.

Q(i)Unit of electric current is-
a)Ampere b)Volt c)Ohm d)Rho
Q(ii)Resistivity depends following factor?
a) length of wire
b) cross sectional area of wire
c) material of the wire
d)none
Q(iii)Rheostat is used to-
a) control the resistance
b) control the current
c) measure the voltage
d) all of the above.
Q(iv)Unit of resistance is-

a)Rho b)Ohm c) Coulomb d)Ampere
Q(v)Which equation denotes series arrangement of resistance?
a) 1/R= R1+ R2...
b)R=R1+ R2...
c) 1/R= 1/R1+ 1/R2...
d)None.

Q20. Brine solution is the basis of Chlor-Alkali process.It is the one of the most vital Chemical synthesis of sodium hydroxide. Sodium Hydroxide is further used everywhere in the synthesis and preparation of variety of chemicals.

Q(i) Brine solution contains-
a) NaCl b)NaOH c) $CaCl_2$ d)CO_2

Q(ii)By product of Chlor-alkali process-
a)O_2 b)N_2 c)Cl_2 d)All above

Q(iii)Chemical formula of baking powder is-
a) $NaHCO_3$ b)Na_2CO_3 c)NaCl d)HCl

Q(iv)Chemical representation of Bleaching powder-
a) $CaCl_2$ b)$CaOCl_3$ c)$CaOCl_2$ d)$CaSO_4$

Q(v)Gypsum is the derivative of-
a)plaster of Paris
b)bleaching powder
c)NaOH
d) None

Section-B(2 marks each)

Q21. Why do stars Twinkle in nights? give reason.
Q22. The number of carbon compound is more than those formed by all other elements together justify the statement with two reasons?.
Q23. Which of the following Metal can displace Zn. Give reason of your answer.
Copper, Lead, Magnesium, Silver
Q24. Answer the following-
(i) State the colour of phenolphthalein in soap solution.
(ii)Name the by product of chlor alkali process which is used for the manufacture of bleaching powder.
Q25. What happens when NaCl solution reacts with $AgNO_3$ solution. Name the type of reaction.Give the chemical equation.
Q26.Calculate the equivalent resistance of the circuit in which two , 20 ohm resistances are connected in parallel.

Section-C(3 marks each)

Q27. Name the type of chemical reaction represented by -
a)$CaO+H_2O$--->$Ca(OH)_2$
b)$3BaSO_4+ Al_2(SO_4)_3$--->$3BaSO_4+2AlCl_3$
c)$2FeSO_4$---Δ-->$Fe_2O_3+SO_2+ SO_3$

Q28. What is 'P.O.P.' chemically? How it is prepared?two important uses of it.
Q29. Define following properties with one example each-
(i) Malleability
(ii) Ductility
(iii) Sonority
Q30. Explain Hydrocarbons? Select Saturated hydrocarbons from the following -
C_3H_6, C_5H_{10}, C_4H_{10}, C_6H_{14}, C_2H_4

Q31. Explain double circulation in human beings? also draw schematic representation of transport and exchange of Oxygen and CO_2 in human body.
Q32 Draw a labelled ray diagram for each of the following cases to show the position, nature and size of the image formed by a convex lens when the object is placed -
(i) between optical centre(O) and Principal Focus(F)
(ii) between F and 2F

Q33. An electric lamp of resistance 20 ohm and a conductor of resistance 4 ohm are connected to a 6 volt battery in a series arrangement. calculate following-
(i) total resistance of the circuit
(ii) the current throughout the circuit
(iii) potential difference across the electric lamp.

Section-D(5 marks each)

Q34. Draw labelled diagram of vertical section of human heart, showing Valves veins and arteries.
State the function of following-
(i) pulmonary artery
(ii) semilunar valve

Q35. (i)Define Covalent bonding in carbon compounds. Write their types.
(ii)Give a short note on homologous series.give one example.

Q36. Derive following equations for the series and parallel arrangement of resistances.
(i) $R=R1+R2+R3$
(ii)$1/R=1/R1+ 1/R2+1/R3$

-------End---------