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PRACTICE PAPER 2019-20

MARKING SCHEME SCIENCE (086)

CLASS X

Q.NO.	ANSWERS	MARKS
	SECTION A	
1.	Hydrogen gas is released and metal salt is produced. Equation	½ +1/2
2.	The property of element is the periodic function of its atomic number.	1
3.	a. Thyroid gland b. endocrine gland c. Thyroxin d. Goitre	1 1 1 1
4.	a. A is conductor and B is insulator b. 49×10^{-6} ohm m c. resistivity increases with increase in temperature. d. silver	1 1 1 1
5.	a. anode impure silver and cathode pure silver	1
6.	D retina	1
7.	A 50hz and 220 v	1
8.	D displacement reaction	1
9.	c. ketone	1
10.	B. self pollination	1
11.	D. refraction, internal reflection, refraction dispersion	1
12.	D. orange colour at ph 3	1
13.	A. both A and R true and it is correct explanation of A.	1
14.	C. A is true but R is false	1
	SECTION B	
15.	(i.) Atm No. 10 Neon 20 Calcium 7 nitrogen 14 silicon	¼ each =1

	(ii) neon gp 18 pd 2 Calcium gp 2 pd 4 Nitrogen gp 15 pd 2 Silicon gp 14 pd 3 (iii) valency neon 0, calcium 2, nitrogen 3, silicon 4	¼ each = 1 1
16.	Three pathways – (i) glucose to pyruvic acid to carbon dioxide, water and energy (word equation form) (ii) glucose to pyruvic acid to ethyl alcohol, carbon dioxide and energy. (iii) glucose to pyruvic acid to lactic acid and energy OR a). events responsible: food → nose → message to brain by sensory nerve → activation of salivary gland → salivation b). Medulla of hind brain	3 OR 2 + 1
17.	Sex determination explanation with diagram. OR a) This is because removal of tail is a physical change which could not make a change in gene responsible for that character. Such traits are called acquired traits. b) sources of variation may be error in DNA copying, sexual reproduction, natural selection or genetic drift (any two)	2+1 OR 2 1
18.	a) Rusting or corrosion b) equation of rusting of copper equation of tarnishing of silver	1 1+ 1
19.	a) concave mirror f = 15 cm b) ray becomes parallel to principal axis. OR Candle should be placed at 50 cm in front of lens. Focal length = 25 cm and Power = 4D	1+ 1 1 OR 1 1+1
20.	a) formula of silver bromide b) $2\text{AgBr} \rightarrow 2\text{Ag} + \text{Br}_2$ c) solid solid gas	1 1 1
21.	V = IR V = 6 v; R = 2+2 = 4 ohm I = 1.5 A	3
22.	Hypermetropia, corrected by convex lens Ray diagram	1 2
23.	Diagram Strength depends on number of turns, its length and current flowing through it (any two) OR Principle, diagram and working of electric motor	1 2 OR 1+1+1
24.	a) Decomposers are which break down the dead remains and waste product of the organisms.	1 +

	In their absence soil will not be replenished and all the waste and dead plants and animals will accumulate in the ecosystem. b) any 2 advantages of cloth bag	1 $\frac{1}{2}+1/2$
	SECTION C	
25.	a) Hydrocarbon is a compound whose structure includes only hydrogen and carbon atoms. Eg. CH ₄ , C ₂ H ₆ . b) C ₄ H ₁₀ and C ₆ H ₁₄ c) alcohol and aldehyde C ₄ H ₉ OH and C ₅ H ₁₁ CHO d) coal gets oxidized and carbon dioxide gas is produced. C + O ₂ → CO ₂	1 $\frac{1}{2}+1/2$ 1+1 $\frac{1}{2}$ $\frac{1}{2}$
26.	a) Removal of harmful nitrogenous waste from body. Diagram Nephron b) plants use different strategies like excess water by transpiration, shed their leaves, stored as resins gums etc.(any 2 methods)	1 1 1 2
27.	a)i. concave mirror ii. magnification = -4 iii. image from object is 48-12= 36cm and ray diagram b) $n = c/v$ $v = 2 \times 10^8 \text{ m/s}$ OR All Ray diagram	1 1 $\frac{1}{2}+1/2$ 2 OR 1 for each=5
28.	a) 5.5 ohm b) ohms law i. resistance is also reduced by half ii. resistance is also reduced by half OR a) 1kWh = 3.6 x 10 ⁶ joules b) i. $P = V^2/R$; R = 484 ohm ii. energy = P x T = 0.5 kWh	2 1+ 1+ 1 OR 2 1.5+ 1.5
29.	a) Hydrogen gas- in fuels and for making fertilizers Chlorine gas -sterilization of drinking water and making bleach b) Acids and bases react together to neutralize each other and produces salt and water.eg. During acidity antacids are advised to be taken; to reduce the effect of bee-sting rubbing of a base gets relief. c) equation	1+ 1 1+ $\frac{1}{2}+1/2$ 1
30.	a) 24 chromosomes in female gametes 48 chromosomes in zygote b) diagram of female reproductive system and explanation OR a) any 2 methods of asexual reproduction with diagram b) flower diagram	$\frac{1}{2}+$ $\frac{1}{2}$ 2 + 2 OR 1.5+1.5 2