INDIAN SCHOOL MUSCAT

SET B

FINAL TERM EXAMINATION

NOVEMBER 2018

CLASS X

Marking Scheme – SCIENCE [THEORY]

	VALVUE POINTS	marks
	SECTION A	
1.	BIO	1
2.	a) Phloem (1/2) b) Xylem (1/2)	1
	SECTION B	
3.	'X'= NaOH ½ M , Neutralization Reaction ½ M $NaOH + HCl \rightarrow NaCl + H_2O$ 1M	2
4.	Two advantage of solar energy (1mark) Two disadvantage (1mark) OR Conventional sources -sources of energy which have been in use for a long time. coal, petroleum, natural gas etc. Non-conventional sources – sources of energy which are yet in the process of development. They are renewable and ecologically safe. solar energy, tidal energy	2
5.	a) Character present in the parental generation and not appearing in the F1 generation but reappears in the F2 (1) b) 1:2:1 (1)	2
	SECTION C	
6.	Method to harness tidal energy(2) One limitation(1/2) One advantage (1/2)	3
7.	Any three disadvantages of series arrangement for domestic circuit(1+1+1)	3

8. h_o = 6 cm 3

u = –10 cm

f = -5 cm

1/v - 1/u = 1/f (½ m)

V =-10/3 = -3.33 cm (½ m)

h_i/h_o = v/u (½

h_i = 2 cm (½)

nature : virtual ,erect and diminished (1m)

OR

F= R/2 = -12 cm ½

u = –20 cm

1/u + 1/v = 1/f (½ m)

1/v = 1/f – 1/u

v =- 30 cm 1m

real , inverted 1m

9. labeled ray diagram (2m) 3
defn lateral displacement (1m)

10. 1) Position of isotopes and inverted order of atomic masses of some elements. 3
1+ 1 = 2M
2) Modern Periodic Table is based on atomic number instead of atomic mass. 1M

11. a) Aluminium or Al ½ M Thermite Reaction ½ M 3
b) $2Al + Fe_2O_3 \rightarrow Al_2O_3 + 2Fe$ 1M
c) i) Magnesium ,Calcium etc. ½ x2=1M
ii) Aluminium

OR

a) 'X' being low reactive, metal oxide can be reduced to metal 'X' by heating alone .
b) 'Y' can be obtained by using carbon , carbon monoxide or highly reactive metals like aluminium as reducing agents.
c) ' Z' can be obtained by electrolytic reduction. (1x3 = 3)

12. A) It is a salt of sodium hydroxide(strong base) and carbonic acid (weak acid). 1M 3
B) i) Lime water will turn milky due to the formation of calcium carbonate.
ii) $Ca(OH)_2 + CO_2 \rightarrow CaCO_3 + H_2O$ (2x1=2)

13. a) STDS (1/2) , Virus (1/2) 3
b) Contagious nature of the disease or avoid sexual relationship with unknown person or

any (2)

14. Roots of a plant grows towards gravity.(1) 3
Diagram with both the labeling (2)
OR
Trait acquired during the life time (1)
It is not inherited as it produce no changes in the DNA or germ cells or its explanation (2)

15. Left auricle (1) 3
Left auricle to left ventricle – Aorta to various parts of the body (2) or its explanation

SECTION D

16. Dispersion -definition (1) 5

Cause of dispersion (1)

Rainbow formation- refraction ,dispersion, reflected internally and refracts again. (1 ½)

Figure (1 ½)

Or

Spectrum -definition (1)

By allowing the light to pass through an identical but inverted prism. (1)

ray diagram (3)

17. Joules law –statement(1) 5

High resistivity, do not get oxidized (2)

$H= I^2 R t$

$= (0.5)^2 200. 600= 30000J$ (2)

18. A) Any two differences.. 2M 5
B) Two correct definitions.. 2M
C) Cathode- Thin strip of pure metal.
Anode – Impure metal
Electrolyte – Salt solution of metal. 1M

19. i) 2,8,2 ii) V.E= 2, Shells = 3 iii) H> G > F >E 5
iv) Reactivity increases v) A_2O (1x 5=5)

20. a) Any two difference (2) 5
b) Accumulation of lactic acid in the muscles (1)
c) Oxygen taken by the nostrils , exchanged in the alveoli of the lungs with blood , link with Hemoglobin of RBC , carried by the blood , exchanged with cells where concentration of CO_2 is more (2) any four points

21. a) Transference of pollen grains from anther to the stigma. (1). Self-pollination and cross pollination(1) 5
b) Diagram
Three labeling (1 ½) + (1 ½)

OR

a) Fast and easy. genetically similar ,only method for plants without viable seeds (2) any two

i) Each pieces grow into new organism-Regeneration(1)

ii) Roots and shoots develop from each notches of the leaf –Vegetative reproduction (1)

iii) Large number of spores are released – Multiple reproduction (1)

SECTION E

22. PHY 2

23. PHY 2

24. Double displacement 1M…. $BaSO_4$ 1M 2

OR

i) A = Acidic ,B = Basic 1M ii) greenish blue 1M

25. A) Highly acidic – Red /Pink…….Highly alkaline – Deep blue /Violet 1M 2

B) Weekly acidic – Yellowish green….Weekly basic – Greenish blue 1M

26. Diagram with labeling (1) sequence (1) 2

27. Epidermal cells and guard cells (1) 2

Guard cells kidney shaped and scattered (1/2)

Epidermal cells rectangular or polygonal or any (1/2)

OR

Absorbed by KOH (1)

Create a vacuum or low pressure (1) or any