INDIAN SCHOOL MUSCAT

SET A

FINAL TERM EXAMINATION

NOVEMBER 2018

CLASS X

Marking Scheme – SCIENCE [THEORY]

	VALVUE POINTS	marks
	SECTION A	
1.	BIO	1
2.	Receptors (1/2) Sense organs (1/2)	1
	SECTION B	
3.	a) Calcium sulphate hemi hydrate….. 1M $CaSO_4.1/2H_2O$….. b) $CaSO_4$ .1/2 H_2O + 3/2 H_2O → $CaSO_4$. $2H_2O$ ….. 1M	2
4.	Cover with glass plate (1 mark) Replace plane mirror with concave mirror(1 mark) OR Two advantage of hydro energy (1mark) Two disadvantage (1mark)	2
5.	Evolution (1) , ear lobe , skin clour , or any (1)	2
	SECTION C	
6.	Method to harness ocean thermal energy. One limitation (1/2) One advantage (1 /2)	3
7.	Fuse is used to protect appliances due to short circuit or overloading. (2) When excess current flows through the circuit fuse wire gets heated up and melt. If a fuse is replaced by one with larger rating , the device may get damaged while protecting fuse doesn't burn off. (1)	3
8.	h_o = 4.5 cm	3

u = –12 cm

f = + 15 cm

1/u + 1/v = 1/f (½ m)

1/v = 1/f – 1/u

v = 60/9 = 6.7 cm (1)

m = -v/u (½ m)

= –6.7/-12= 0.558 (1m)

OR

$H_{0 =}$ 5 cm

F = -10 cm

u = -20 cm

1/f = 1/v -1/u (½)

V=-6.67 cm (½)

Virtual , erect

Diminished (1)

h_i/h_o = v/u (½)

$h_{i =}$ 1.67 cm (½)

9. Ray diagram object between F and P of concave mirror. (2m) 3
Virtual , Enlarged (1m)

10. a) 1st element has 1 valence electron and last element has 8 V.E. 3
b) Hydrogen resembles with both ; group 1 (alkali metals)and group 17 (Halogens).Therefore occupies a unique position. Or any other relevant answer.
c) Very inert , extremely low concentration… (3x1=3)

11. a)Electricity is carried through ions..Hydrogen ions in acids are produced only in presence of water. 3
b)HCl ionizes completely in water and produces large amount of H+ ions whereas NH_4OH ionizes partially in water producing less amount of OH^- ions.
c) Chlorine at anode…Hydrogen at cathode….NaOH near the cathode. (3x1=3)

OR

a) Acid is strong enough to attack the enamel of our teeth and corrode it. 1M
b) Correct definition… 1M

On heating, blue copper sulphate crystals turn white. ½ M
Tiny droplets of water are seen in the boiling tube…… ½ M

12. a)Electron dot structure…. ½ M, Ion formation …1/2 M 3
b) Oxides which react with acids as well as bases to form salts and water. Eg. Al_2O_3 , ZnO etc. ½ x 2 = 1M
c) Due to strong forces of attraction between ions. 1M

13. Xylem vessels and tracheids form a continuous channels(1/2) 3
Roots takes up ions actively (1/2)
Ionic difference between soil and water is compensated by absorption of water by roots (1)
Transpiration pull or suction force pull water from the xylem vessels (1)
OR
Transport of soluble product of photosynthesis through phloem(1/2)
It take place through sieve tube with the help of companion cells (1/2)
It take place upward and down ward direction (1/2)
Sucrose is transported into the phloem tissue utilizing energy from ATP (1/2)
As the osmotic pressure of phloem tissue increases which is compensated by the intake of more water (1/2)
This osmotic pressure permits movement of materials in the phloem from high pressure to low pressure (1/2)

14. a) Green (1) 3
b) 75% (1)
c) 3:1 (1)

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SECTION D

16. Myopia (1) 5

Ray diagram showing defect of myopia (2)

Causes of myopia (½ + ½)

Concave lens (1)

OR

Dispersion -defenition (1)

Violet, Red (1)

Cause of dispersion (1)

Ray diagram for dispersion(2)

17. Voltmeter (1m) 5

In parallel

Since high resistance device(1m)

Defenition of Volt (1 m)

Symbol of variable resisitor (1)

Symbol of plug key closed (1)

18. i) 2,8,2 ii) V.E= 2, Shells = 3 iii) H> G > F >E iv) Reactivity increases 5
v) A_2O (1x5=5)

19. (A) Cinnabar (1M) 5
(i) $2HgS + 3O_2 \xrightarrow{Heat} 2HgO + 2SO_2$
(ii) $2HgO \xrightarrow{Heat} 2Hg + O_2$ (2M)
(B) Electrolytic Reduction …. (1M)
(C) Lead and Tin……Low Melting Point (½ X2=1M)

20. a) Asexual – one organism involved ,No variation or any two 5
Sexual – two organisms involved , there is variation (any two points each 2 marks)
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)

21. a) Pepsin – gastric gland in the stomach , protein digestion 5
Amylase – salivary gland in the mouth or pancreas in the stomach , digestion of starch into maltose or sugar (2)
b) Largest part , villi , plenty of capillary system or any two(2)
c) Protect the inner wall of the stomach from the action of acid (1)
OR
a) Diagram (1) four labeling (2)
b) Function of the four parts (2)

SECTION E

22. PHY 2

23. PHY 2

24. A) Highly acidic – Red /Pink…….Highly alkaline – Deep blue /Violet 1M 2
B) Weekly acidic – Yellowish green….Weekly basic – Greenish blue 1M
OR
i) A = Acidic ,B = Basic 1M ii) greenish blue 1M

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

26. Budding (1) 2
Diagram in correct sequence (1)

27. a) Transpiration or respiration or any two (1 mark each) 2
OR
a) No respiration and no evolution of CO_2 (1)
b) Absorption of CO_2 (1)