INDIAN SCHOOL MUSCAT

SET C

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.	The cooker covered with glass plate. (1mark) Traps infrared radiations inside thereby increasing the temperature inside(1 mark) OR By anerobic fermentation of biomass (1 mark) No pollution, economical(any two points (1 mark)	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 geothermal energy (2) One limitation(1/2) One advantage (1/2)	3
7.	Ohms law statement (1m) Graph is straight line passing through origin (1m) Resistance (1m)	3

8. $h_o = 3$ cm 3

$u = -50$ cm

$f = +25$ cm

$1/u + 1/v = 1/f$ (½ m)

$1/v = 1/f - 1/u$

$V = 50/3 = 16.67$ cm (½)

$h_i/h_o = -v/u$ (½)

$h_i = 1$ cm (½)

nature : virtual ,erect and diminished (1m)

OR

$v = 15$ cm

$m = -3$ cm

$v/u = -3$

$u = -5$ cm

$1/v - 1/u = 1/f$

$1/f = 4/15$

$F = 3.75$ cm

9. Ray diagram object between $2F_1$ and F_1 of convex lens. (2m) 3

Real, beyond $2F_2$ (1m)

10. 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)

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 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) 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… . (1x3 = 3)

13. Structure and origin same ,function different – homologous(1/2)+(1/2) 3
Structure and origin different ,function same – analogous (1/2)+(1/2)
They are analogous(1/2)
Bat- skin fold –wing (1/2)

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

SECTION D

16. hyperopia (1) 5

Ray diagram showing defect of hypermetropia (2)

Causes of hypermetropia (½ + ½)

Convex lens (1)

OR

Atmospheric refraction- definition (1m)

Explanation for twinkling of star 2m

Explanation for advance sunrise 2m

17. Low resistivity , low heating effect (2 m) 5

Wire A (1m)

R ∝ L (1m)

¼ R (1m)

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

19. 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

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) 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. Brown colored residue/Tiny droplets of water seen inside the test tube/evolution of gases. (Any two) 2

OR

Use goggle and lab coat./ Hg thermometer should be handled with care./Hot beaker should not be touched with bare hands. (Any two)

25. CHE 2

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

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