**MAKING SCHEME FORM 2 BOILOGY MJET TERM 2 2017**

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1. Concentrate light from the source to the specimen on the stage
2. An aperture that regulate amount of light passing the condenser

2. i) Golgi body

 ii) Ribosomes

3.

* Have biconcave disc shape which increase the surface area for gaseous
* Has haemoglobin which has high affinity for oxygen
* Lacks nucleus to provide room for packaging haemoglobin
* Has thin plasma membrane that allow faster/rapid diffusion of gases

4. i) hepatic portal vein

 ii) Pulmonary vein

5. a) A- Trachea

 B – Bronchus rej bronchi

 b) Secrete pleural fluid; that lubricate the lungs;

 c) - moist to dissolve respiratory gases

 - Thin membrane for faster diffusion of gases

 - Well supplied with blood capillaries.

 d) i) cell membrane

 ii) gill

6 a) - contain platelets whose role is blood clotting to prevent excessive loss of blood and entry of micro-organism

 - contain white blood cells which protect body against infections

 b) valves

 c) Oxyhaemoglobin

7. a) - Large vacuole with dissolved solute to increase osmotic pressure

 - Thin walled to allow faster diffusion of water and minerals

 - Finger –like / extension to increase surface area.

 b) i) Xylem

 ii) phloem

8. - Because recipient has antibody a which correspond to the donor antigen A

 9 a) E - Guard cell

 F - Stoma

 G - Epidermal cell

 b) - Presence of chloroplast to carry out photosynthesis

 - Inner wall is thicker than outer wall enabling it to open and close the stoma.

10. a) A - Trachea

 B - Rib cagé/ Thorax

 C - Lung

 D - Diaphragm

 b) - Bell jar (B) is static while thoracic cavity is movable

 - Rubber sheet (D) does not confirm to the dome shape of the diaphragm

C - Lungs inflate or expand

D - the volume of throracic cavity increase, pressure decrease and air moves into the ballons.

11. - Heterotrophism

 - Autotrophism

12. - Structural material/growth

 **Artery**  **Vein**

13. - Narrow lumen - wide Lumen

 - Thicker muscular walt - Thinner muscular wall

 - No valves along length - Have valves along length

 - More elastic - Less elastic

14. a) i) To expel all oxygen/air

 ii) To avoid killing yeast cells

 b) To prevent oxygen/air from entering to ensure anaerobic conditions.

 c) i) Effervescence/gas bubbles formed

 ii) Lime water become a white precipitate

d) - closed, in that blood is confined to blood vessels and double because blood passes twice through the heart for every complete circulation.

15. - cardiac muscle

16

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Blood group | A | B | AB | O |
| Antigen in redblood cell | A | B | A and B | None |
| Antibody in plasma | B | A | None | a and b |

17 a) - Anchorage

 - Absorption and transport of water and mineral salts.

 b) - Storage parts

 - Growing parts

 - Secretory organs

18 a) - Moist

 - Thin

 - Well supplied with blood capillaries/highly vascurised

 b) - Rib- cage moves upward and outward

 - Diagram muscle contract hence it flatten

 - Volume of thoracic cavity increase and pressure inside it decrease

c) - Burning charcoal produces carbon (II) oxide which combine with haemaoglobin to form carboxyhaemoglobin does not easily dissociate. This reduces the capacity of hemoglobin to carry oxygen, thereby causing death.

19 - Diffusion gradient

 - Size of molecules

 - Temperature

 - Thickness of membrane

 - Surface area to volume ratio

20. - cuticle

 - leaf size and shape

 - Stomata

 - Hairy leaves

21. - Transpiration pull

 - Cohesion and adhesion

 - Root pressure

 - Capillarity

22. - Transparent cuticle and epidermal layer to allow maximum light to penetrate and reach the palisade mesophyll where photosynthesis occurs.

 - Brood lamina to increase surface area for absorption of light and diffusion of carbon (iv) oxide

 - Thin to reduce the distance taken by the diffusing gases and penetration of light.

23. - Long to provide a large surface area for absorption

 - Highly coiled to slow down the speed of food to allow time for absorption.

 \_ Thin epithelial layer to increase the rate of diffusion of food

* Well supplied with blood capillaries for absorption of food.
* Have villi and micro-villi to increase surface are for absorption
* Villi have lacteals for absorption of fatty acids and glycerol. (2x5 =10mks)