**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)