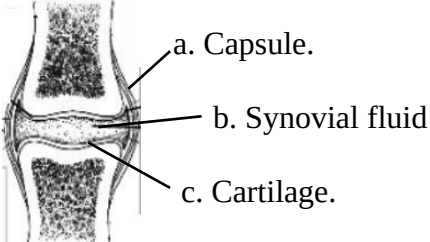


**Annual Evaluation March 2024 Class 9 - BIOLOGY**

Qn	Answer Key (English medium) Rasheed Odakkal	
1 4 6	1. Cilia.      2. Smooth /Non-striated muscle.      3. Prophase. 4. b). Both the statement and the reason are correct.      5. b). <u>Liver</u> . 6. i). 23    ii). 46	5x1
7 8 9 10 11 12 13	7. a). Metaphase. b) Chromosomes get arranged at the centre of the cell. Spindle fibres get attached to the centromeres of the chromosomes. 8. Gliding joint - Wrist,    Hinge joint – Elbow. 9. Statement of Child 1 is correct. Due to meiosis, the chromosome number of gametes reduces to half, which in turn become 46 during fertilization of gametes. 10. i). Tropic movement. Direction of movement towards the direction of stimulus. ii). Nastic movement. Direction of movement is not accordance with the direction of stimulus. 11. a). X = Grana.      b). Chlorophyll b, Carotene or Xanthophyll. (Any 2). 12. Decreased rate of cell division, energy production and efficiency of sense organs. Increased deterioration of cells or shrinking of muscles. (Any 2). (any 2 Positive attitudes also). 13. Muscular dystrophy - Degeneration of muscles due to various reason. Sprain - The stretching or breaking of ligaments. Rheumatic arthritis - Damage to cartilage. Dislocation - Displacement of bones in joints.	6x2
14 15 16 17 18 19 20	14. a). X= Flexor muscle, Y= Extensor muscle.    b). Tendon. c). When one of these muscles contracts, the other relaxes and vice versa. 15. a). Ultrafiltration of blood.    b). Glomerulus wall is very thin and porous. Difference in the diameter of afferent and efferent vessels increases the pressure there. c). No, most of the essential components are reabsorbed. 16. a). Muscle fatigue / spasm.    b). Formation of lactic acid due to anaerobic respiration. c). Lactic acid gradually removed from muscles. 17. - Nucleus divides.      - Small vesicles are formed between the daughter nuclei. - Small vesicles join to form a cell plate.    - Cell plate extends to both sides. - Extended cell plate joins with the plasma membrane.    - Daughter cells are formed. 18. a). Active transport.    b). Glucose, salts.    c). It is against the concentration gradient. 19. a). Transpiration pull, Root pressure, Cohesion and Adhesion forces. b). Tracheids and vessels of xylem are dead cells. Vessels look like long pipes. 20. a). i, ii, iii = Number of cell organelles increases, Quantity of cytoplasm increases, Duplication of genetic material.    iv. Cytokinesis. b). In animal cell, the plasma membrane invaginates at the centre, and it extends and joins to divide the cell. In plant cell, small vesicles are formed and they combine to form a cell plate.	5x3
21  22 23	<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  <p>a. Capsule. b. Synovial fluid c. Cartilage.</p> </div> <div style="text-align: right;"> <p>Prepared by <b>Rasheed Odakkal</b>, 9846626323 GVHSS Kondotty</p> </div> </div> <p>22. a). In meiosis II, no change in chromosome number of daughter cells, like mitosis.                      b). 2 daughter cells by mitosis, Up to 4 daughter cells by meiosis.                      c). The polar cells formed along with the ovum are sterile and they degenerate.</p> <p>23. a) X = Trachea, Y= Bronchiole.                      b) The exchange of respiratory gases takes place in these alveoli.                      c) The intercostal muscles and diaphragm relax to lower the ribs. Thus the volume of the thoracic cavity decreases.</p>	2x4
		<b>(40)</b>