

Biology class-X Answers

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Class 10 (Subject- Biology)

1. Define reflex action and give examples.

Ans- Reflex action is defined as spontaneous automatic and mechanical response to a stimulus example withdrawal of hand after touching hot object, closing of Eyes on seeing white bright light.

2. Write functions of medulla and cerebellum.

Ans- Medulla controls involuntary actions like blood pressure, vomiting, salivation.
Cerebellum controls posture and equilibrium of the body.

3. Difference between tropic and Nastic movements.

Ans- Tropic Movements	Nastic Movements
1. Growth dependent	Growth independent
2. Directional	Non directional
3. eg. Growth of root away From sunlight	eg. Curling of leaves of touch me not plant.

4. write one function each of auxin, gibberellin, cytokinin and abscisic acid

Auxin- growth of stem

Gibberellin- growth of stem

cytokinin- promote cell division

Abscisic acid- inhibits growth.

5. Write sources, function and deficiency disorders of :

i) thyroxine.

Source- thyroid gland

function- it controls oxidation of Carbohydrates fats proteins

Deficiency disorder- Goitre

ii) insulin

source - pancreas

function -decreases blood sugar level

deficiency disease -diabetes

iii) growth hormone

source- pituitary gland

function -growth of body

deficiency disease- dwarfism

6. Define vegetative propagation and give example

Ans- It is a process of growing plants from vegetative parts of the plant. example Rose Jasmine

7. Write various methods of vegetative propagation.

Ans- Grafting, layering and cutting

8. Write functions of prostate gland and seminal vesicle.

Ans- It provides fluid medium and nutrition to the sperms.

9. What are STDs? give example of two bacterial and two viral STDs.

Ans- STDs are sexually transmitted diseases. bacterial STD is Gonorrhoea, syphilis. viral STDs are AIDS, warts, warts.

10. Write phenotype and genotype ratio of monohybrid cross.

Ans- Phenotype ratio is- 3:1 and genotype ratio is 1:2:1

11. write phenotype ratio of dihybrid cross

Ans- 9:3:3:1.

12. Write three factors to preserve and conserve our environment.

Ans- 3 factors are 3 Rs- reduce, reuse, recycle.

Reuse is better than recycle because in recycling energy is required for production of new object

13. Write three problems associated with construction of dams.

- Ans- • economical problem
 • social problem
 • environmental problem

14. what are the advantages of groundwater.

- Ans- • It remains safe from contamination.
 • it does not evaporate
 • It does not provide a breeding ground for mosquitoes.

15. Why iodine is advisable in our diet?

Ans- Iodine helps in the proper functioning of thyroid gland which produces thyroxine for oxidation of fats proteins and carbohydrates in the body.

16. How does our body respond in emergency situation?

Ans- In emergency situation our body produces adrenaline hormone through adrenal gland. As a result heart beat faster to supply more oxygen to our muscles. The blood from digestive system and skin is reduced, the breathing rate increases to supply more oxygen to blood; all these responses together help the organism to face the emergency situation.

17. What are home logous and analogous organs? give examples.

Ans- Homologous organs the organs which have same structure but perform different function example fore Limbs of frog, lizard, bird and humans. Analogous organs the organs which have different structure but same function example Wings of bat and Wings of bird.

18. What are fossils? what are the different methods to detect the age of fossils? what is the advantage of fossil?

- Ans- Fossil means dead remains of plants and animals.
 • The methods to check the age of fossil are -
 • first relative
 • second dating the fossil
 • Advantages:
 • fossils help in determining evolutionary relationship between organisms.
 • They help in establishing the time occurrence of past organism.

19. In a flowering plant summarise the events that takes place after fertilization.

- Ans- Fertilization- zygote
 zygote- embryo
 ovule - seed
 ovary- fruit
 stamen- style
 and stigma fall off.

20. How are lungs designed in humans to maximise the area of exchange of gases.

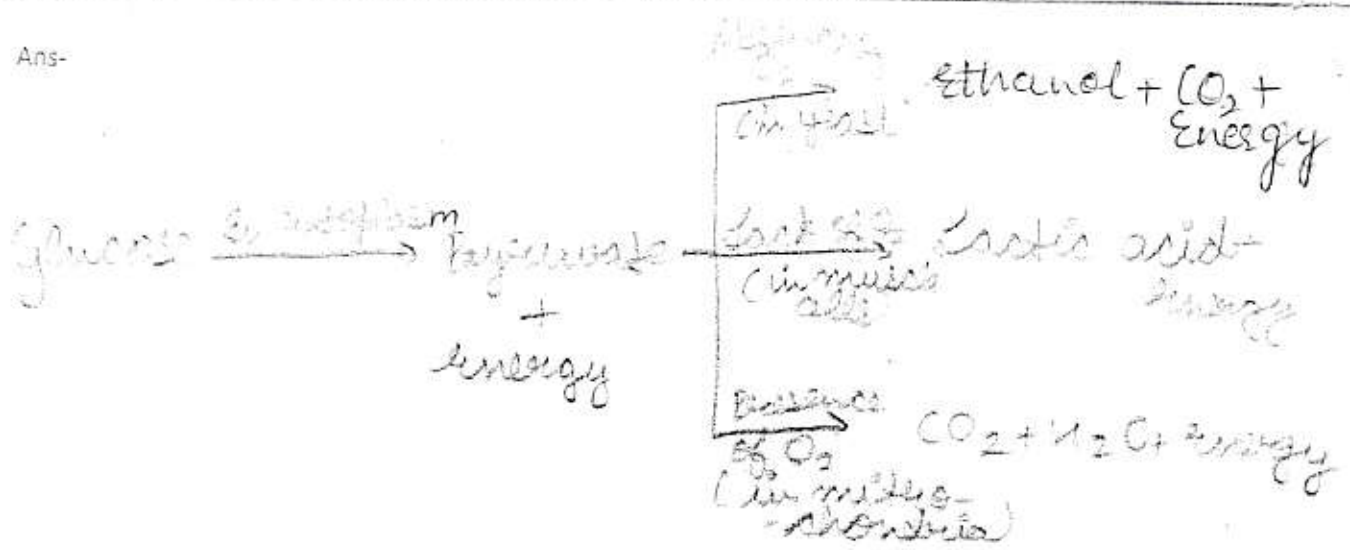
Ans- presence of alveoli.

21. What advantage over an aquatic organisms have over a Terrestrial organism have with regard to obtaining oxygen for respiration?

Ans- Aquatic organisms have to take oxygen from water which is present in less concentration so aquatic animals have to breed at faster rate. Terrestrial organisms take oxygen from air where it is present in comparatively more concentration so they have to breath at a lower rate.

22. What are different ways in which glucose is oxidised to provide energy in various organisms?

Ans-



23. Why is it necessary to separate oxygenated and deoxygenated blood in mammals and birds?
 Ans- To get sufficient energy to maintain their body temperature

24. A certain tissue in a green plant got blocked and the leaves wilted what was the tissue which got blocked?
 Ans- xylem tissue.

25. what are the substances which are reabsorbed in nephron?
 Ans- sodium salts, amino acids, glucose and water

26. What is the role of following in human digestive system:
 • HCL - it makes the food acidic, activates pepsin, kills m.o.
 • trypsin- digestion of proteins.
 • Pepsin- digestion of proteins.
 • Bile- emulsification of fat.

27. What are the various events taking place during photosynthesis?
 Ans- • Absorption of light energy by chlorophyll
 • conversion of light energy to chemical energy and splitting of water molecules into hydrogen and oxygen
 • reduction of carbon dioxide to carbohydrates

28. Name the basic filtration unit in kidney
 Ans- Nephron.

29. Name the respiratory pigment in blood.
 Ans- Hemoglobin.

30. Define reflex arc. Draw diagram.
 Ans- The path followed by reflex action is called reflex arc.

31. Difference between unisexual and bisexual flowers.

Ans- Unisexual Flowers
 1. They have either pistil or stamen
 2. Eg- papaya, watermelon

Bisexual Flowers
 They have both pistil and stamen.
 Eg- Hibiscus, mustard.

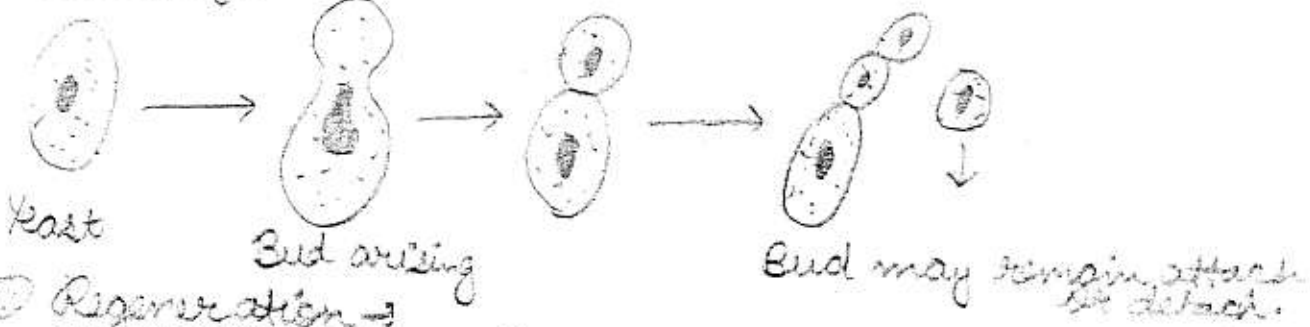
32. Difference between artery and vein.

Ans- Artery
 1. They carry blood away from heart
 2. They have thick and elastic walls
 3. Pressure of blood is high in arteries

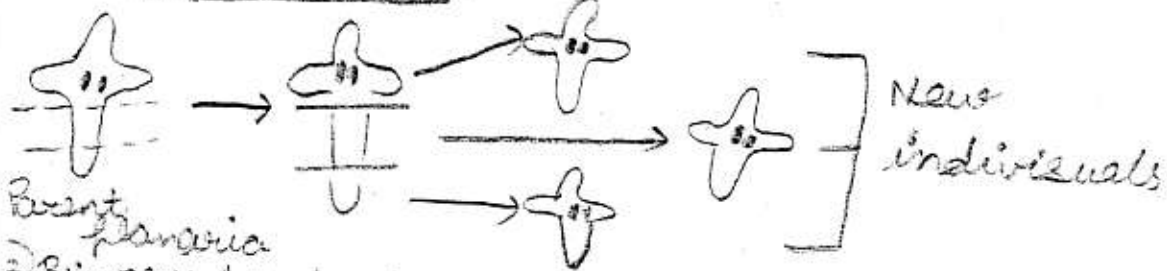
Vein
 They carry blood towards heart.
 They have thin walls
 Pressure of blood is not high in veins

33. Draw diagram of budding regeneration and binary fission

Budding

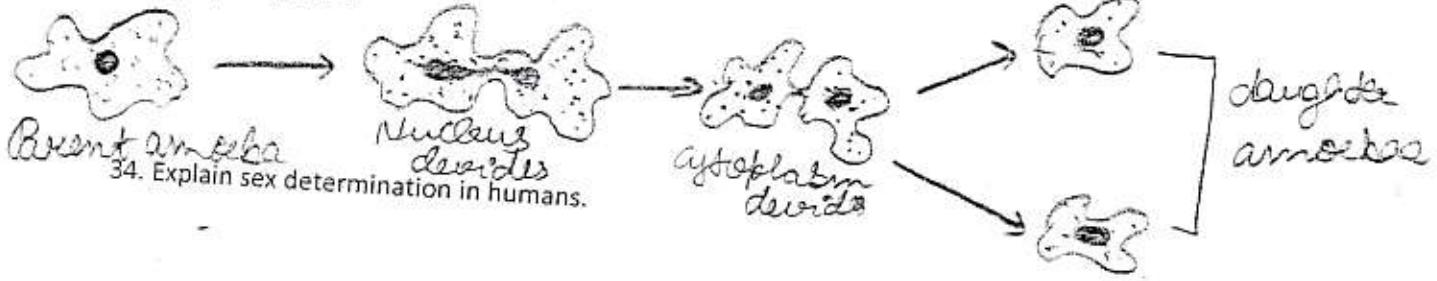


Regeneration



Parent Planaria

Binary fission



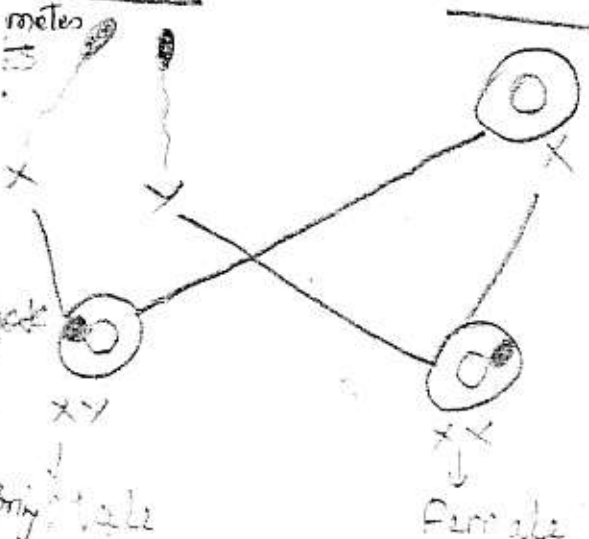
Parent amoeba

34. Explain sex determination in humans.



Male

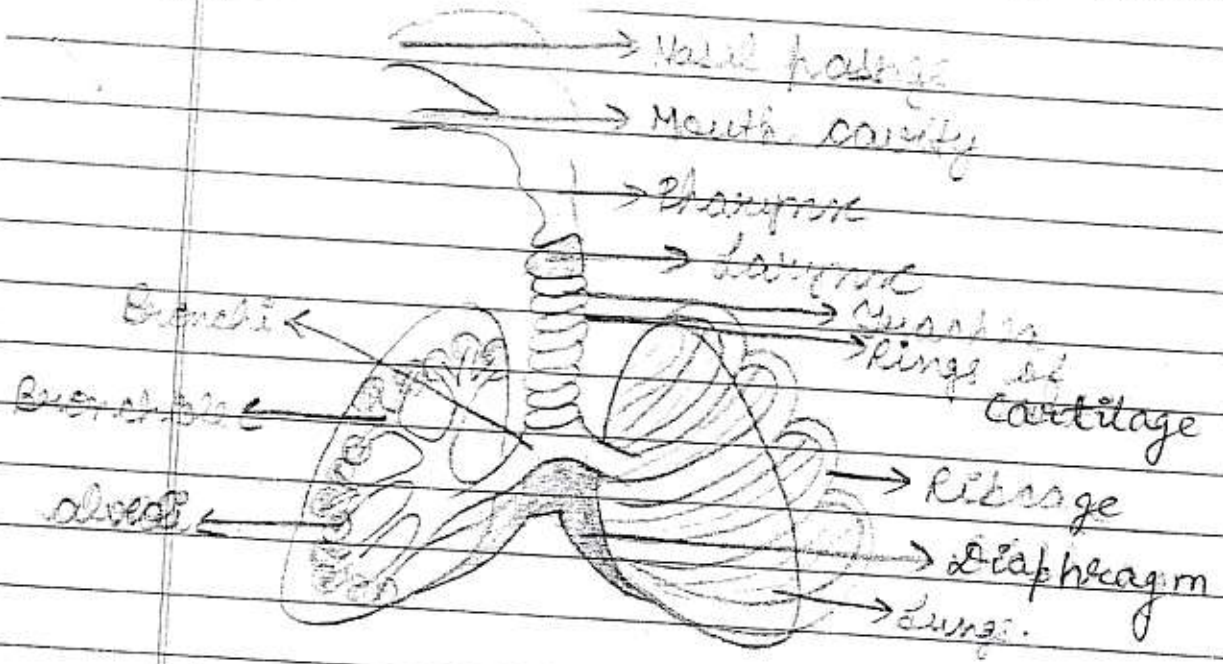
Female



male

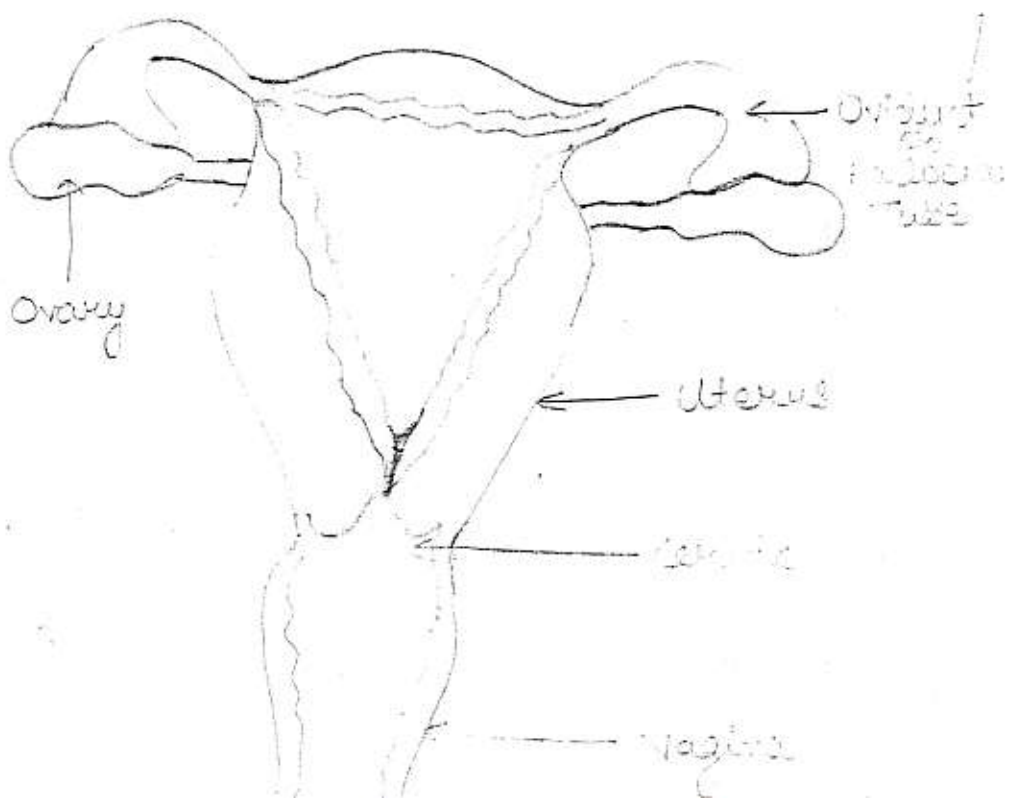
Female

35. Draw diagram of human respiratory system and label the following parts: diaphragm, alveoli, trachea, bronchus.

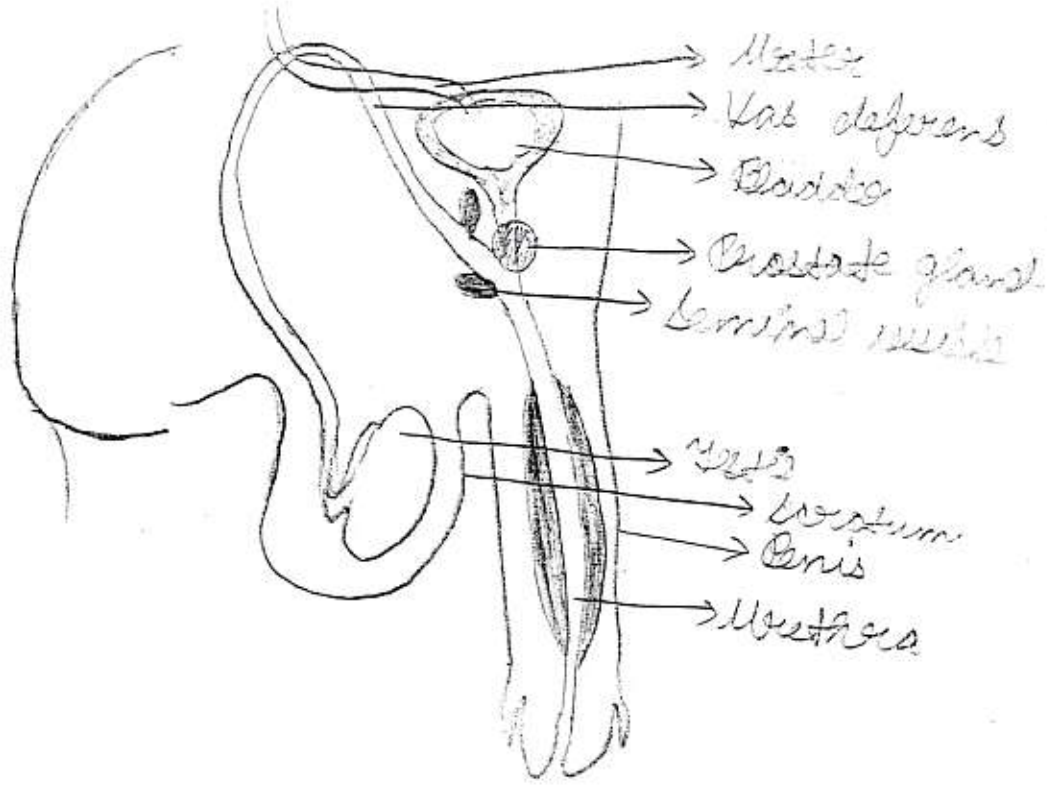


Respiratory System

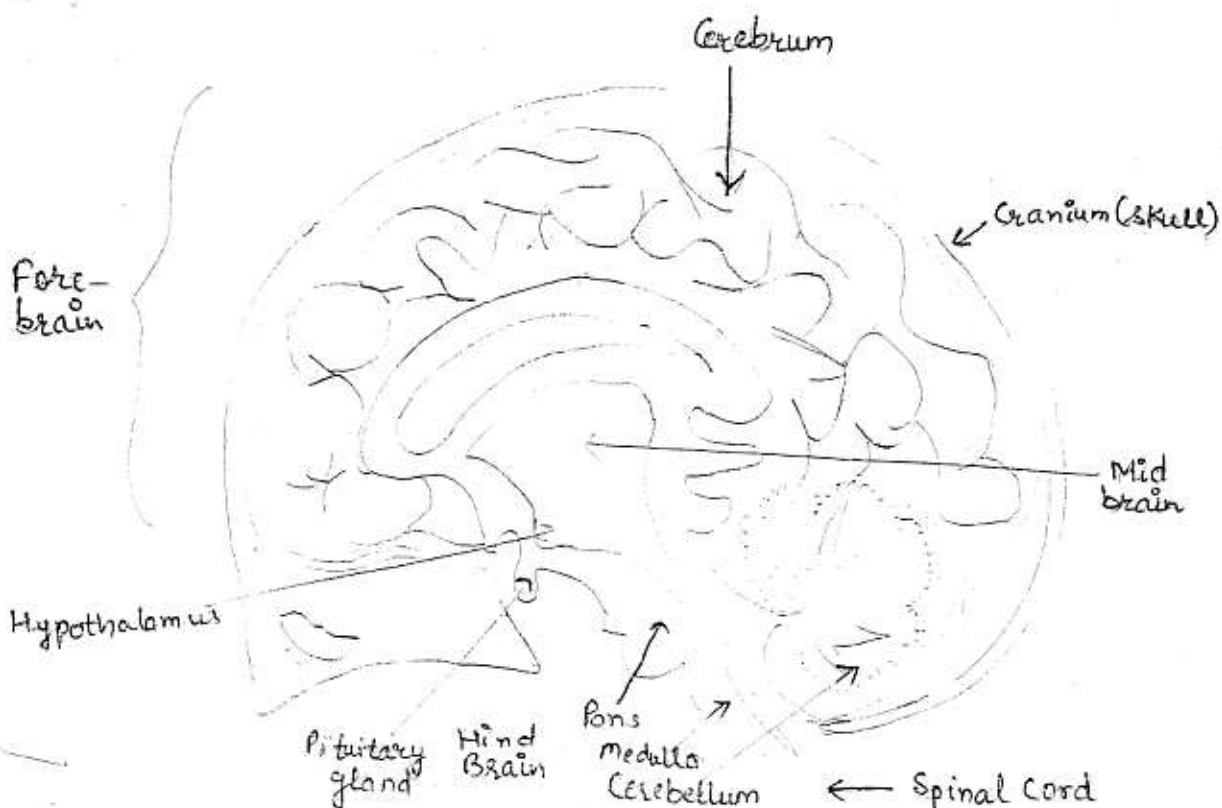
36. Draw a well labelled diagram of female reproductive system.



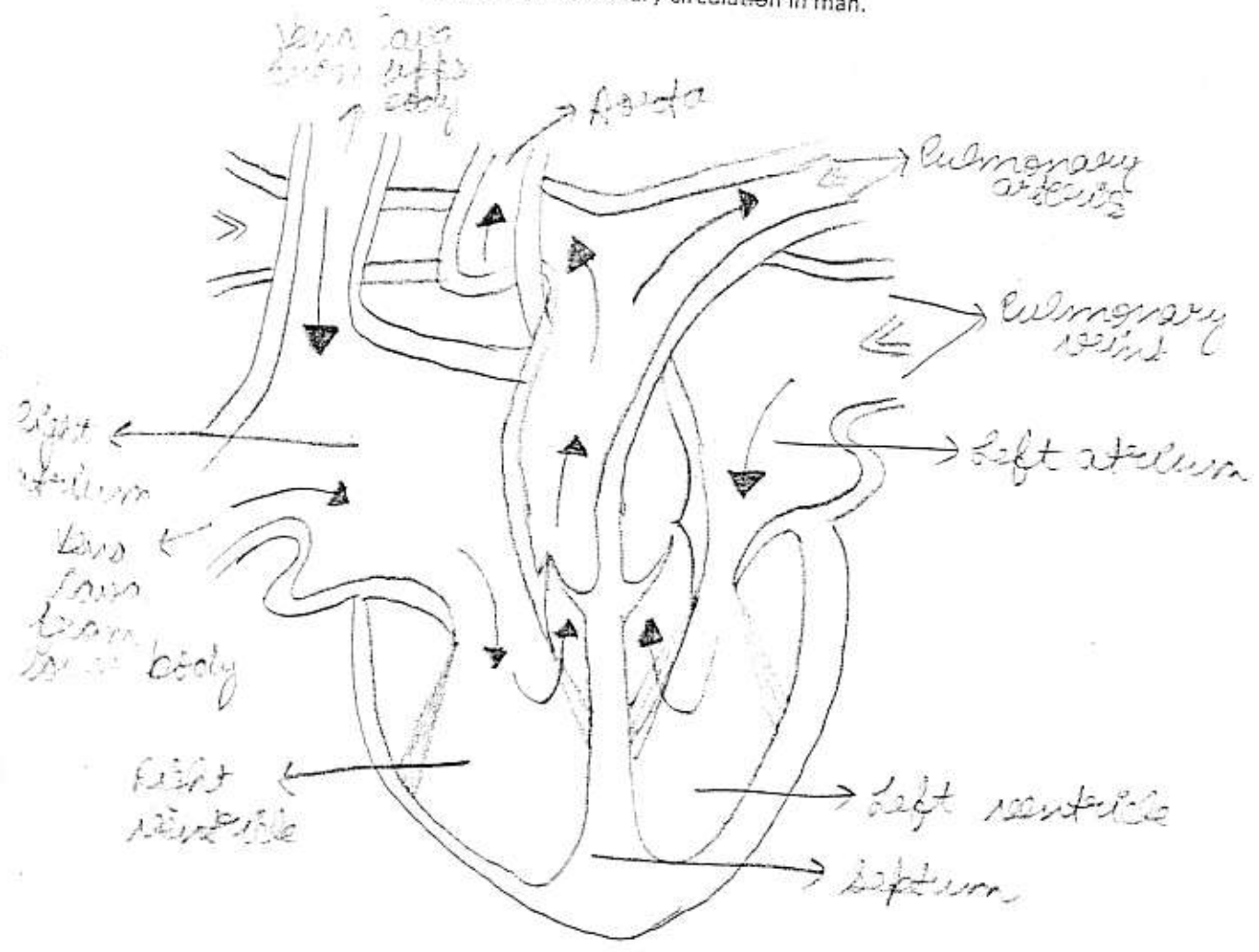
37. Draw a well labelled diagram of male reproductive system



38. Draw a well labelled diagram of human brain.



Human Heart
39. Draw well labelled diagram of Pulmonary circulation in man.



40. Draw well labelled diagram of human excretory system.

