

NAAHAR PUBLIC SCHOOL(CBSE) SENIOR SECONDARY,
Ayyur Agaram, Villupuram

A.Y. 2022-2023, Micro-Revision Test-6, Answer key

CLASS: X,
Sub: BIOLOGY
Tr. Initial: MHR / ATCHAYA

Time :60 minutes
Max. Marks :30
Date: 19.11.2022

SECTION – A (11 marks)

I. Choose the best answer and write it on your answer paper: (8 x ½ = 4)

1. Blood consist of what fluid medium?

- (a) Lymph (b) Platelets (c) **Plasma** (d) All of these

2. In which part of the alimentary canal food is finally digested?

- (a) Stomach (b) Mouth cavity (c) Large intestine (d) **Small intestine**

3. Choose the correct path of urine in our body.

- (a) Kidney →ureter →urethra →urinary bladder
(b) Kidney →urinary bladder →urethra →ureter
(c) **Kidney →ureter →urinary bladder →urethra**
(d) Urinary bladder →kidney →ureter →urethra

4. The opening and closing of the stomatal pore depends upon

- (a) oxygen (b) temperature (c) **water in guard cells** (d) concentration of CO₂ in stomata

5. Along the path of the vas-deferens the secretions of which gland provide nutrition to the sperms?

- (a) **Prostate glands** (b) **Seminal vesicles** (c) Scrotum (d) Urinary bladder

6. In human beings, the fertilization occurs in the

- (a) uterus (b) ovaries (c) **fallopian tubes** (d) vagina

7. The process of release of eggs from the ovary is called

- (a) menstruation (b) reproduction (c) insemination (d) **ovulation**

8. Plants like banana, rose, jasmine, orange have lost the capacity to produce

- (a) **seeds** (b) buds (c) flower (d) roots

II. Fill up the blanks (6 x ½ =3)

9. **Energy** is needed to maintain a state of order in our body.

10. Pulmonary aorta arise from **Right ventricle**.

11. The circulation of blood between lungs and heart is called **Pulmonary circulation**.

12. After fertilisation, the zygote divides several times to form an **embryo** within ovule.

13. **Fallopian tube** part of the female reproductive system remains blocked after tubectomy?

14. In **Fragmentation** process an organism simply breaks up into smaller pieces upon maturation.

III. Give very brief answers to the following (4 x 1 = 4)

15. why and when does menstruation occurs?

Ans: Menstruation occurs due to the rupture or removal of the inner, thick, and soft lining of the uterus when fertilization does not take place.

Menstruation occurs once in every 28 days.

16. Write two differences between binary fission and multiple fission in a tabular form.

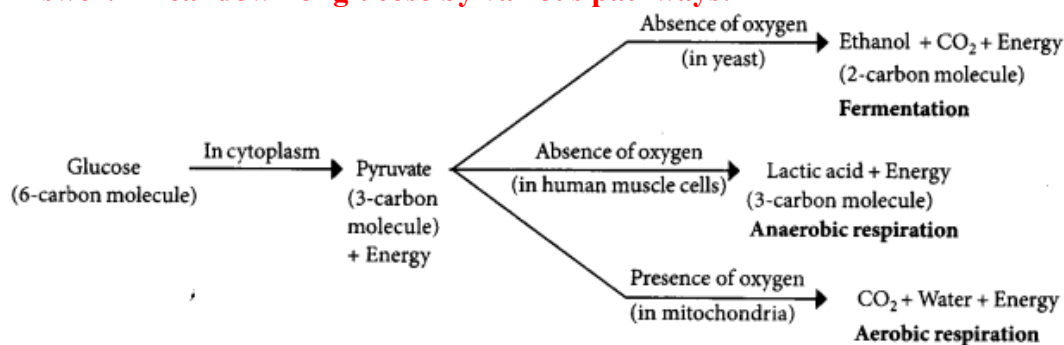
Answer:

Differences between binary fission and multiple fission are as follows:

Binary fission	Multiple fission
(i) The parent organism, splits to form two new organisms, e.g., Amoeba, Paramecium.	The parent organism splits to form many new organisms at the same time, e.g., Plasmodium.
(ii) The nucleus of the parent body divides only once to produce two nuclei.	The nucleus of the parent body divides repeatedly to produce many nuclei.

17. Draw a flow chart to show the breakdown of glucose by various pathways.

Answer: Breakdown of glucose by various pathways:



18. Write two types of blood vessels. Give one important feature of each. (Delhi 2019)

Answer:

The three types of blood vessels in human body are: (i) arteries, (ii) veins and (iii) capillaries.

(i) Arteries are the blood vessels which carry blood from heart to various parts of the body. The walls of arteries are thick, elastic and muscular that enables them to dilate but not rupture when the heart contracts and forces blood into them.

(ii) Veins are thin walled blood vessels which bring blood from the body back to the heart. They are larger and hold more blood than the arteries. The lumen of veins are provided with valves to prevent the backflow of blood.

SECTION – B (19 marks)

IV. Give brief answers to the following (5 x 2 = 10)

19. How do Plasmodium and Leishmania reproduce? Write one difference in their mode of reproduction.

Answer:

Plasmodium and Leishmania reproduce by the process of fission which is an asexual mode of reproduction. Plasmodium reproduces by multiple fission. About 1000 daughter cells are produced by the multiple fission of a Plasmodium. Leishmania reproduces by the process of binary fission. In Leishmania, the splitting of parent cell takes place in a definite plane (longitudinally) with respect to flagellum at its end to produce two daughter cells.

20. (a) What provides nutrition to human sperms? State the genetic constitution of a sperm.

Answer:

(a) The secretions of seminal vesicles and prostate gland provides nutrition to the human sperms and also make their further transport easier. The genetic constitution of a sperm can be 50% have X chromosome and 50% have Y chromosome.

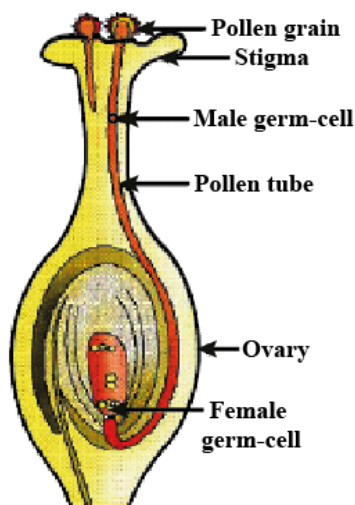
(b) What is variation? Mention any two of its importance.

Answer:

Variations refer to the changes that are seen in the case of the genetic makeup of an organism. Variations in organisms arise due to the sexual reproduction and ensure the natural selection of the individual and in turn make the organism better adapted to the environment.

Importance: It helps a species to survive, it also helps us to determine who is who, it helps organisms to adapt to their environment as well as to changes which do occur in the environment, however it also helps a species to emerge strong if favoured by natural selection.

21. Depict the Germination of pollen on stigma in flowering plants with neat labelled diagram.



22. (a) What is peristaltic movement?

(a) The relaxation of gut muscles to move the partially digested food downwards throughout the alimentary canal is called peristaltic movement.

(b) 'Stomata remain closed in desert plants during daytime'. How do they do photosynthesis? (Board Term I, 2013)

Answer:

(b) In desert plants, stomata open at night and take in carbon dioxide (CO₂). Stomata remain closed during daytime to prevent the loss of water by transpiration. They store the CO₂ in their cells until the sun comes out so that they can carry on with photosynthesis during the daytime.

23. (a) In the process of respiration, state the function of alveoli.

(a) Functions of alveoli are :

(i) They increase the surface area for exchange of gases.

(ii) The thin walls of alveoli facilitate rapid exchange of oxygen and carbon dioxide between alveolar air and blood.

(b) Rate of breathing in aquatic organisms is much faster than that in terrestrial organisms. Give reasons

(b) Aquatic animals like fishes obtain oxygen from water present in the dissolved form through their gills. The amount of dissolved oxygen is quite small as compared to the amount of oxygen in the air.

Therefore, to obtain required oxygen from water, aquatic animals have to breathe much faster than the terrestrial organisms.

V. Give long answers to the following (3 x 3 = 9)

24. Describe about Female reproductive system with the help of a labelled diagram.

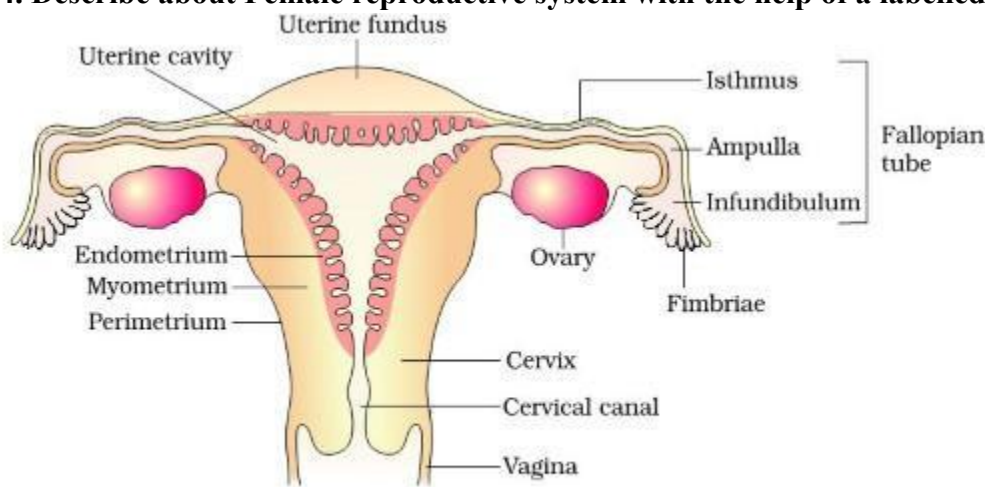
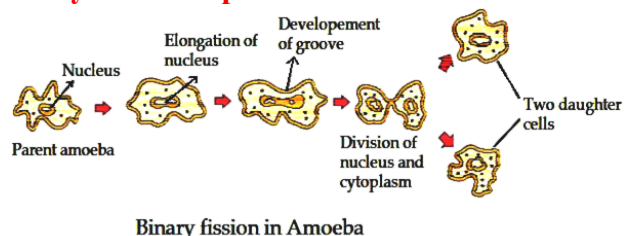


Figure 3.3 (b) Diagrammatic sectional view of the female reproductive system

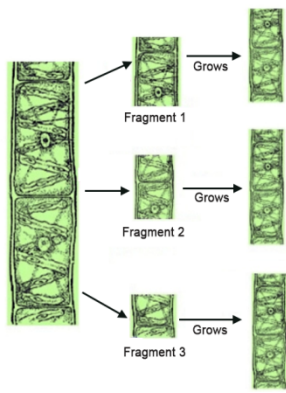
A female's internal reproductive organs are the vagina, uterus, fallopian tubes, and ovaries. The vagina is a muscular, hollow tube that extends from the vaginal opening to the uterus. Because it has muscular walls, the vagina can expand and contract.

25. Explain any 3 modes of reproduction used by single organisms with respective diagrams. (any 3)

i) **Fission:** For unicellular organisms, cell division, or fission, leads to the creation of new individuals. Many different patterns of fission have been observed.



ii) **Fragmentation:** An organism simply breaks up into smaller pieces upon maturation. These pieces or fragments grow into new individuals.



iii) Regeneration: Many fully differentiated organisms have the ability to give rise to new individual organisms from their body parts. That is, if the individual is somehow cut or broken up into many pieces, many of these pieces grow into separate individuals.

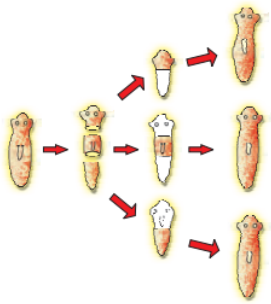


Figure 8.3 Regeneration in Planaria

iv) Budding : A bud develops as an outgrowth due to repeated cell division at one specific site. These buds develop into tiny individuals and when fully mature, detach from the parent body and become new independent individuals

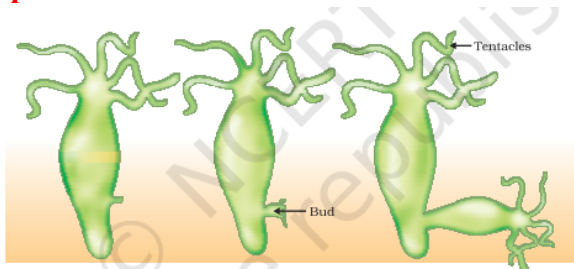


Figure 8.4 Budding in Hydra

v) Vegetative propagation: There are many plants in which parts like the root, stem and leaves develop into new plants under appropriate conditions. Unlike in most animals, plants can indeed use such a mode for reproduction.



Figure 8.5
Leaf of Bryophyllum
with buds

vi) Spore formation: Even in many simple multi-cellular organisms, specific reproductive parts can be identified. The blobs are sporangia, which contain cells, or spores, that can eventually develop into new Rhizopus individuals.

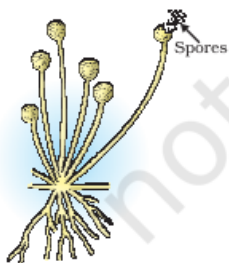


Figure 8.6
Spore formation in Rhizopus

26. Explain double circulation and give a neat labelled diagram of heart.

Answer:

Double circulation: A mechanism in which blood circulates twice through the heart in one complete cycle is known as double circulation. Systemic circulation and pulmonary circulation are two pathways in which the blood flows in double circulation. Double circulation is present in birds and mammals.

