CBSE Test Paper-02

Chapter 08 How Do Organisms Reproduce

1. Which of the following plant is unisexual? **(1)**

   a. Mustard
   b. Hibiscus
   c. All of these
   d. water melon

2. Parthenogenesis is common in **(1)**

   a. dogs
   b. bees
   c. frogs
   d. Lizard

3. A slide showing several Amoeba was given to a student and was asked to focus the Amoeba undergoing binary fission. What will the student look for to correctly focus on a dividing Amoeba? **(1)**

   a. An Amoeba covered by a cyst and many nuclei
   b. An Amoeba with elongated nucleus and a constriction in the middle
   c. An Amoeba with many pseudopodia and a small nucleus
   d. A rounded Amoeba with rounded nucleus

4. Which organ enables the developing foetus to obtain nourishment from the mother's blood **(1)**

   a. fallopian tube
   b. placenta
   c. Graffian follicles
   d. Leydig cells

5. How many male gametes are released into the embryo sac? **(1)**

a. 2.0
b. 1.0
c. 4.0
d. 3.0

6. Where is the zygote located in the flower after fertilization? **(1)**

7. When does binary fission and multiple fission in amoeba take place? **(1)**

8. Which hormone accomplish the menstrual cycle in human females? **(1)**

9. Why are testis located outside the abdominal cavity? **(1)**

10. Draw well labelled diagram of V.S of mature ovule of Angiosperms. **(3)**

11. Differentiate between Sperm and Ovum. **(3)**

12. What are the similar changes observed in boys and girls at puberty? **(3)**

13. Draw diagram to show the path of pollen tube into pistil during fertilization. **(3)**

14. How are spores produced in sporangium of Rhizopus? **(5)**

15. What is the need of population control? **(5)**

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Answers

1. d. water melon

   Explanation: The flowers in which either male or female reproductive organs are present.These flowers are called incomplete flowers

2. b. bees

   Explanation: In the honey bee, fertilized eggs (diploid zygotes) regularly develop into females, and unfertilized eggs (haploid gametes) develop into males by types of reproduction known as zygogenesis and generative or haploid Parthenogenesis, respectively.

3. b. An Amoeba with elongated nucleus and a constriction in the middle

   Explanation: The body of Amoeba is elongated and has a constriction in the middle. Hence the given slide is the one that shows the asexual reproduction process of binary fission in Amoeba.

4. b. placenta

   Explanation: Placenta connects the fetus to the uterine wall to uptake nutrients.

5. a. 2.0

   Explanation: Pollen tube release 2 male gametes in the embryo sac. Out of thes 2 gametes 1 gamete gets fused with the egg and the other one gets fused with the polar nuclei.

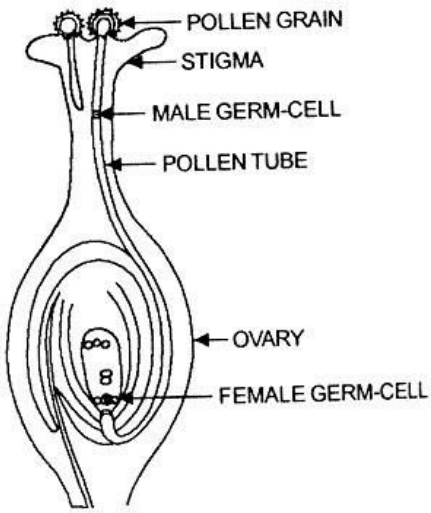
6. Zygote is located inside the ovule which is present in the ovary.

7. Binary fission takes place during favourable period and multiple fission occurs during unfavourable period in amoeba.
8. Progesterone and oestrogen.

9. Testes are located outside the abdominal cavity within a pouch called scrotum. The function of testes is to produce sperms and sperm formation requires 2 to 2.5^{o}C lower

temperature than the normal body temperature. Therefore, they are protected inside the scrotum.

10. Mature ovule

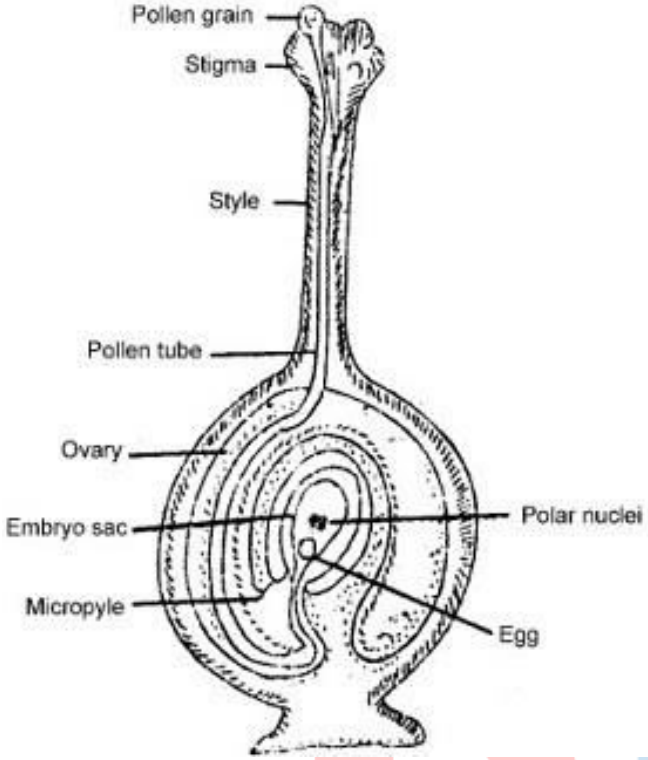


11. Differences between Sperm and Ovum

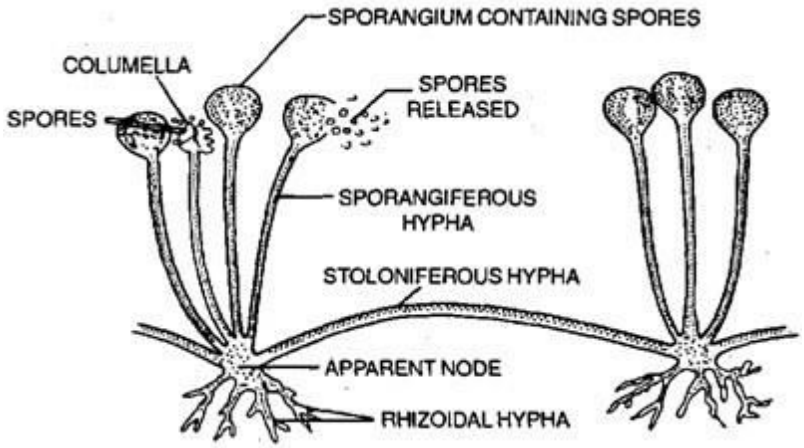
Sperm	Ovum
1) The sperm is active	1) The ovum is inactive
2) The sperm is capable of movement	2) The ovum is stationary
3) It has a locomotory organ (tail)	3) It has no locomotory organ
4) It is smaller in size.	4) It is bigger in size due to presence of yolk.
5) Sperm is the gamete that is produced in the testis of a male.	5) Ovum is the gamete that is produced in the ovary of a female.
6) Millions of cells are released during a single ejaculation.	6) Only a single ovum is produced during once menstruation cycle.

12. i. Hair-Growth of hair in arm pits and genital area between the thighs.
    ii. Genital area- Becomes darker.
    iii. Body hair-Thinner hair on legs, arms and face.
    iv. Skin-Becomes oily, appearance of pimples mainly on face.
    v. Awareness of body- Children become conscious and aware of their own bodies as well as those of others.

13. Path of pollen tube into pistil during fertilization



14. a. A spore is a small microscopic structure with a thick wall.
    b. Spores are generally formed in a structure called sporangium which reassembles formed in a structure called sporangium which resemble blob on - a - stick.
    c. Sporangia are formed at the tip of erect fungal hypha.
    d. In each sporangium, a nucleus divides several times producing a large number of nuclei. Nuclei get surrounded by a little cytoplasm and develop into thick - walled cells or spores.
    e. The wall of sporangium breaks to release the spores in air.
    f. On germination in the presence of moist surface, each spore gives rise to a new organism.



15. Overpopulation leads to a number of problems like-

    a. Unemployment- More number of people means more jobs and if sufficient numbers of jobs are not available, it leads to unemployment.
    b. Poverty- If there are more persons and the income is less, it becomes poorer with the addition of every child.
    c. Food supply- If the population increases and the food production does not increase; this will lead to shortage of food supply.
    d. Hygienic condition- more people in small area generally make the condition unhygienic for survival
    e. Educational problem- It becomes difficult for the government to provide education to all
    f. Housing problem- It also creates housing problem.
    g. Pollution- More pollution with increasing population.
    h. Decrease in natural resources- More people will decrease the natural resources quickly.