

Chapter End Test

Date : _____ Duration: 45 Min. Max. Marks : 26	Biology Topic : Reproduction in Organisms	BATCH XII
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Disclaimer: This Chapter End Test is to be conducted after the chapter has been taught in a Studymate class. It has been designed to check whether a student has understood all concepts taught in class and memorised them, so the format of the paper and its questions may not reflect the same standard that appears in the actual board exam. It contains some easier questions that have a lesser chance of appearing on the board exam, but they form the foundation needed to answer difficult questions while one of its questions has appeared in NEET (UG) exam, as well. This test provides an early mid-course correction with an easier to medium difficulty level. on purpose.

General instruction:

1. This question paper consists of two sections.
2. Section A consists of 15 multiple choice questions.
3. The answer of MCQs has to done in separate OMR sheet.
4. Subjective section has 4 questions of 1, 2, 3 and 5 marks each.
5. Subjective questions have to be answered separately in answer sheets.
5. All questions are compulsory.

[Section – A]

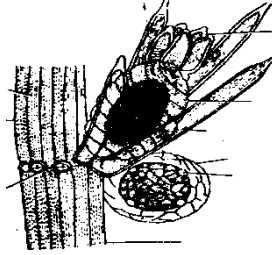
1. The development of zygote depends on the type of life cycle of the organism. In the organisms with haplonitic life cycle, meiosis occurs after:
(a) zygote formation (b) gamete formation
(c) thallus formation (d) cell formation
2. Meiosis takes place in:
(a) Meiocytes (b) Gemmules
(c) Megaspore (d) Conidia
3. Which of the following organisms breed only once in life time?
(a) Bamboo (b) Oyster
(c) Pelagic fishes (d) Birds
4. Which of the following statement is not correct?
(a) Offsprings produced by the asexual reproduction are called clone.
(b) Microscopic, motile asexual reproductive structures are called zoospores.
(c) In potato, banana and ginger, the plantlets arise from the internodes present in the modified stem.
(d) Water hyacinth, growing in the standing water, drains oxygen that leads to the death of fishes.
5. Vegetative propagation in mint occurs by
(a) Offset (b) Rhizome
(c) Sucker (d) Runner
6. Aquatic weed, which is popularly called terror of Bengal, is:
(a) *Erythroxylum* (b) *Eichhornia*
(c) *Echinus* (d) *Echidna*

7. Testa of a seed is produced from
(a) Ovary wall (b) Nucellus
(c) Outer integument (d) Hilum
8. Which one is not an artificial mode of asexual reproduction?
(a) Cutting (b) Layering
(c) Micropropagation (d) Bulbils
9. Find the correct statement.
(a) Cucurbits and coconut have male and female flowers on different plants.
(b) Papaya and date palm have male and female flowers on the same plant.
(c) Cucurbits plants are monoecious or unisexual.
(d) Date palms are unisexual or dioecious.
10. On the basis of development of zygote, animals are grouped into
(a) Oviparous, viviparous and ovoviviparous
(b) Primates and non-primates
(c) Chordates and non-chordates
(d) Clones
11. The development of an egg into a complete individual without fertilization by a sperm is known as:
(a) Oestrous cycle (b) Parthenogenesis
(c) Menstrual cycle (d) Parthenocarp
12. After pollination and fertilization, some changes takes place in the flowers. Select the correct option.
(a) The fertilized ovule matures and gets converted into fruit.
(b) The ripened ovary enclosing the seeds forms pericarp.
(c) The zygote is formed inside the ovule of the female sex organ.
(d) After dispersal the pollen germinate to form new plant.
13. The pre-fertilization event is
(a) Syngamy (b) Triple Fusion
(c) Gametogenesis (d) Strobilation
14. Find the correct statement:
(a) On the basis of life cycle, animals may be either seasonal breeders or continuous breeders.
(b) In algae, the two gametes are morphologically different, called heterogametes.
(c) The period of growth between birth upto maturities is called senescence.
(d) When the male and female gametes are morphologically distinct, they are called anisogametes.
15. Which of the following statement is true for yeast?
(a) The cell divides by binary fission. One of them develops into a bud.
(b) The cell divides unequally. The smaller cell develops into a bud.
(c) The cell produces conidia which develop into a bud.
(d) The cell produces spores which develop into a bud.

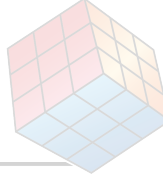
[Section – B]

1. Cut-pieces of a Bryophyllum leaf when put into wet soil produce new plants. How? [1]
2. What are meiocytes? If the chromosome number in the meiocytes of an angiosperm is 16, what will be the number of chromosomes in zygote and endosperm? [2]

3. The diagram given below, shows a plant Chara. Refer to the diagram and answer the questions that follow. **[3]**



- I. Which type of sexuality does this plant have?
 - II. Give one example of any other plant which has the same sexuality.
 - III. Fill in the blanks in the given statement:
 - (a) Flowers with stamen are called _____ flowers.
 - (b) Flowers with pistil are called _____ flowers.
4. Answer the following: **[1+2+2=5]**
- (a) Mention the site where syngamy occurs in amphibians and reptiles respectively.
 - (b) Why do algae and fungi shift to sexual mode of reproduction just before the onset of adverse conditions?
 - (c) Unicellular organisms are immortal, whereas multicellular organisms are not. Justify.

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Hints/Solutions to Chapter End Test

Date : _____ Duration: 1 Hr. Max. Marks : 26	Biology Topic : Reproduction in Organisms	BATCH XII
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[Section – A]

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|---------|---------|
| 1. (a) | 2. (a) |
| 3. (a) | 4. (c) |
| 5. (c) | 6. (b) |
| 7. (c) | 8. (d) |
| 9. (d) | 10. (a) |
| 11. (b) | 12. (c) |
| 13. (c) | 14. (d) |
| 15. (b) | |

SECTION – B

- Cut pieces of *Bryophyllum* leaf when put in wet soil produces new plant due to presence of adventitious buds. Buds present on the marginal notches of leaves of *Bryophyllum* help in vegetative propagation.
- Meiocytes are the germ cells that differentiate into gametes through a process of meiosis. The numbers of chromosomes in zygote (2n) will be 16 and in endosperm (3n) 24 chromosomes will be present.
- Plant is bisexual/ monoecious..
 - Cucurbits
 - (a) staminate flower (b) pistillate flower
- In amphibians, syngamy takes place outside the body of the organism in water and in reptiles syngamy takes place inside the body of female organism. Thus, in amphibians external fertilization takes place and in reptiles internal fertilization takes place
 - Organisms, such as algae and fungi, switch to sexual mode of reproduction just before the onset of adverse conditions because sexual reproduction brings variation into the individuals, some of which might help the individuals to adapt to the changed environmental conditions and survive. This ensures the continuity of species.
 - Most unicellular organisms especially those which undergo binary fission are immortal because they reproduce by cell division. The parent body as a whole constitutes the reproductive unit and disappears when its division into daughter individuals is completed. There is no remains of the parent body cell and thus, parents cannot be said to have died. Infact, after binary fission, the parent continues to live as two daughter individuals.
In multicellular organisms reproduction occurs in specialized organs involving specialized cells. The whole body of parent dies due to aging and senescence.

