



# MCQs Corner

Extracted from NCERT

Assessment is complementary part of the learning process. It gives you a total insight whether the learning outcomes have been achieved or not. After going through the corresponding NCERT Textbook chapter, attempt these questions in exam like environment. Give yourself four marks for correct answer and deduct one mark for wrong answer. A table is given at the end, that will help you plan your next step.

All the Best!

## Introduction

Single-celled animals are said to be immortal because

- (a) they grow indefinitely in size
- (b) they can tolerate any degree of change in temperature
- (c) they can reproduce throughout their lifespan
- (d) they continue to live as their daughter cells.

Which of the following statements is correct?

- (a) All the individuals of a species have exactly the same lifespan.
- (b) Smaller organisms always have shorter lifespan.
- (c) Lifespan of an organism is the time period from its birth to its natural death.
- (d) No organism may have a lifespan of several hundred years.

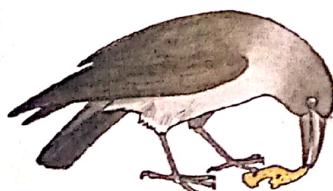
Which of the following has the longest lifespan?

- |                 |              |
|-----------------|--------------|
| (a) Banyan tree | (b) Tortoise |
| (c) Parrot      | (d) Elephant |

Select the option which arranges the given organisms in ascending order of their life span.

- (a) Parrot < Crow < Butterfly < Banyan tree
- (b) Butterfly < Crow < Parrot < Crocodile
- (c) Fruit fly < Crocodile < Parrot < Banyan tree
- (d) Parrot < Tortoise < Dog < Crow

Identify the given organism and find its maximum lifespan.



- (a) Sparrow, 25 years
- (b) Crow, 30 years
- (c) Crow, 15 years
- (d) Eagle, 40 years

\_\_\_\_\_ is a life process that is not essential for an individual's survival but for survival of the species.

- (a) Growth
- (b) Reproduction
- (c) Respiration
- (d) Nutrition

### 1.1 Asexual Reproduction

7. Asexual reproduction is the \_\_\_\_\_ method of reproduction in organisms that have a relatively simple organisation like \_\_\_\_\_ and \_\_\_\_\_.

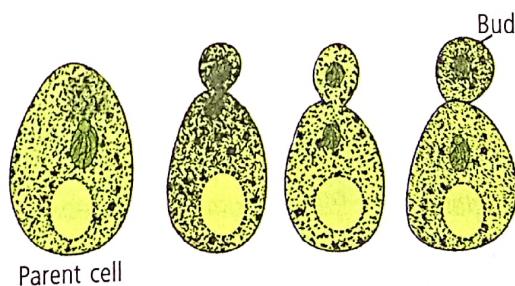
Fill in the blanks in the above statement.

- (a) rare, plant, bacteria
- (b) common, plant, bacteria
- (c) common, algae, fungi
- (d) rare, algae, fungi

8. Read the following statements about asexual reproduction and select the correct ones.

- (i) It involves a single parent.
  - (ii) It is slower than sexual reproduction.
  - (iii) It produces progeny that are genetically identical with the parent but not with one another.
  - (iv) The progeny of asexual reproduction can be termed as clones.
- |                  |                         |
|------------------|-------------------------|
| (a) (i) and (ii) | (b) (ii) and (iii)      |
| (c) (i) and (iv) | (d) (i), (iii) and (iv) |

9. Refer to the given figures and select the correct option.



- (a) It is a type of parthenogenesis.
- (b) It is a type of asexual reproduction.
- (c) The offspring produced can also be called clones.
- (d) Both (b) and (c)

10. 'Clones' are individuals that obtained through

- (a) asexual reproduction
- (b) vegetative reproduction
- (c) both of these
- (d) none of these.

11. Which one of the following processes results in the formation of clone of amoeba?

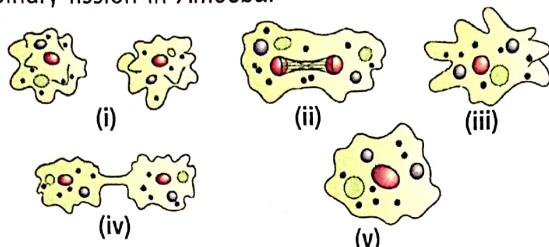
- (a) Regeneration
- (b) Budding
- (c) Binary fission
- (d) Fragmentation

10

12. Asexual reproduction is seen in members of Kingdom  
 (a) Monera (b) Plantae  
 (c) Animalia (d) all of these.

13. During binary fission in *Amoeba* which of the following organelles is duplicated?  
 (a) Plasma membrane (b) Nucleus  
 (c) Contractile vacuole (d) All of these

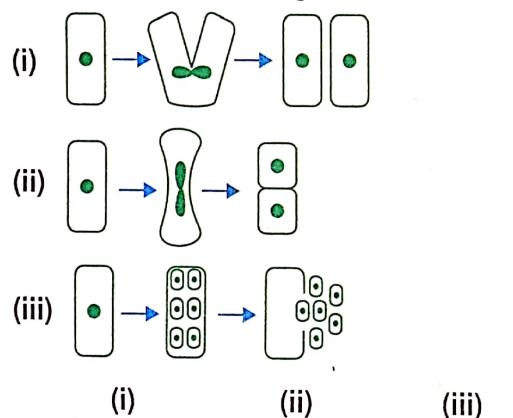
14. Study the given figures representing the process of binary fission in *Amoeba*.



Arrange the figures in the correct sequence and select the correct answer.

- (a) (iv) → (iii) → (i) → (ii) → (v)  
 (b) (iii) → (iv) → (i) → (ii) → (v)  
 (c) (iii) → (v) → (ii) → (iv) → (i)  
 (d) (iv) → (iii) → (ii) → (v) → (i)

15. Refer to the given figures which show three different types of fission. Select the option which correctly matches them with the organism in which they occur.

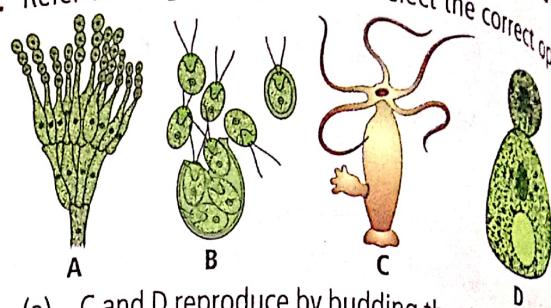


- (a) *Euglena* *Plasmodium*  
 (b) *Plasmodium* *Paramecium*  
 (c) *Euglena* *Paramecium*  
 (d) *Euglena* *Paramecium*

16. Select the incorrect statement.

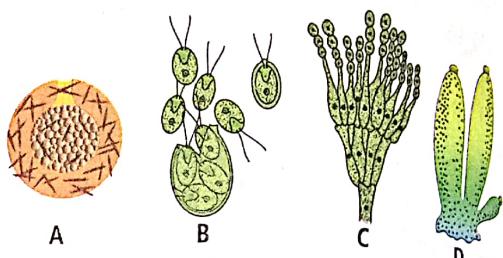
- (a) *Amoeba* and *Paramecium* reproduce by binary fission.  
 (b) Buds are produced due to unequal division in parent body.  
 (c) Encystation refers to the formation of two layered hard covering around *Amoeba* during unfavourable condition.  
 (d) Spores are formed due to multiple fission in sporulation.

17. Refer to the given figures and select the correct options.



- (a) C and D reproduce by budding that includes nuclear division only.  
 (b) All of these reproduce by the asexual mode of reproduction.  
 (c) B represents multiple fission in an alga.  
 (d) A shows spore formation in a moneran.

18. Study the following figures and select the correct statements regarding these.

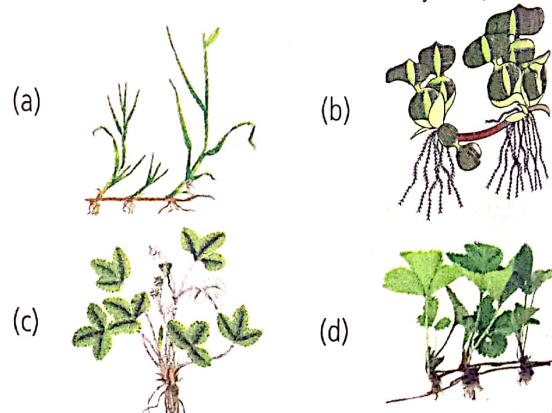


- (i) A shows mode of asexual reproduction in sponges through internal buds.  
 (ii) B shows sexual reproduction through zoospores in *Chlamydomonas*.  
 (iii) C shows asexual reproduction through fragmentation in *Penicillium*.  
 (iv) D shows external budding in *Sycon*.  
 (a) (i) and (ii) (b) (i) and (iii)  
 (c) (ii), (iii) and (iv) (d) (i) and (iv)

19. Which of the following is not used for vegetative propagation?

- (a) Bud (b) Bulbil  
 (c) Turion (d) Antherozoid

20. This plant was introduced in India because of its beautiful flowers and shape of leaves but it became a notorious weed in Indian water bodies. Identify this plant.



21. Read the following statements about 'Terror of Bengal' and select the correct ones.

- (i) 'Terror of Bengal' is the name given to water hyacinth (*Eichhornia*), an algae.



12

- 34.** Which of the following cannot serve as a vegetative propagule?
- A piece of potato tuber with eyes
  - A middle piece of sugarcane internode
  - A piece of ginger rhizome
  - A marginal piece of *Bryophyllum* leaf
- 35.** It is a common method of vegetative propagation in which 20 - 30 cm long pieces of one year old stems are cut, their lower ends are dipped in root promoting hormones and are then planted in the soil, which then develop adventitious roots. This method of vegetative propagation is performed in
- rose and sugarcane
  - lemon and orange
  - Begonia* and *Bryophyllum*
  - all of these.

- 36.** Which of the following options correctly identifies the artificial and natural methods of vegetative propagation?

Artificial method	Natural method
Grafting	Cutting
Layering	Bulbils
Offset	Tissue culture
Tubers	Rhizomes

- 37.** Match the organisms given in column I with their mode of reproduction in column II and select the correct answer from the given codes.

Column I	Column II
A. Potato	(i) Zoospores
B. <i>Spirogyra</i>	(ii) Stem cuttings
C. Rose	(iii) Conidiospores
D. <i>Penicillium</i>	(iv) Stem tubers

(a) A-(i), B-(iii), C-(ii), D-(iv)  
 (b) A-(iv), B-(i), C-(ii), D-(iii)  
 (c) A-(iv), B-(i), C-(iii), D-(ii)  
 (d) A-(ii), B-(i), C-(iv), D-(iii)

## 1.2 Sexual Reproduction

- 38.** Read the following statements about sexual reproduction and select the incorrect one.
- It is a biological process in which an organism gives rise to young ones.
  - It enables the continuity of the species.
  - It produces genetic variations in organisms.
  - It maintains populations of the young and adult persons only.
- 39.** The uniparental reproduction is called \_\_\_\_\_ reproduction while biparental reproduction is termed \_\_\_\_\_ reproduction. Higher organisms mostly show \_\_\_\_\_ reproduction.
- sexual, asexual, sexual
  - asexual, sexual, asexual
  - asexual, sexual, sexual
  - sexual, asexual, asexual

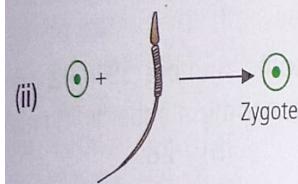
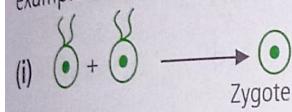
- 40.** Sexual reproduction is considered more beneficial than asexual reproduction because
- it is not affected by adverse environmental conditions
  - fertilisation is a chance factor
  - it rapidly multiplies the population
  - it assists in evolution by producing variations
- 41.** Sexual reproduction is also known as
- amphimixis
  - syngensis
  - amphigony
  - all of these
- 42.** The growth phase of an organism before attaining maturity is referred to as
- juvenile phase
  - vegetative phase
  - both (a) and (b)
  - none of these
- 43.** Select the monocarpic plant out of the following.
- Bamboo
  - Litchi
  - Mango
  - All of these
- 44.** Clear cut vegetative, reproductive and senescent phases cannot be observed in
- annual plants
  - perennial plants
  - biennial plants
  - ephemeral plants
- 45.** *Strobilanthes kunthiana* flowers once in
- 5 years
  - 12 years
  - 20 years
  - 50 years
- 46.** *Strobilanthes kunthiana* differs from bamboo in
- being monocarpic
  - length of juvenile phase
  - being polycarpic
  - none of these
- 47.** Oestrus cycle is reported in
- cows and sheep
  - humans and monkeys
  - chimpanzees and gorillas
  - none of these
- 48.** Which of the following animals show menstrual cycle?
- Gorillas and chimpanzees
  - Monkeys and humans
  - Orangutans and monkeys
  - All of these
- 49.** Read the following statements about the reproductive cycles in mammals and select the correct ones.
- Oestrus cycle occurs in primate mammals.
  - In species with oestrus cycle, females are generally sexually active during oestrus phase.
  - Oestrus and menstrual cycle show monthly recurrence.
  - (i) and (ii)
  - (ii) only
  - (i), (ii) and (iii)
  - (i), (ii), (iii) and (iv)
- 50.** Organisms reproducing throughout the year are called \_\_\_\_\_ breeders e.g., \_\_\_\_\_ and those who show recurring sexual activity are called \_\_\_\_\_ breeders e.g., \_\_\_\_\_.
- continuous, sparrow, seasonal, hen
  - seasonal, lizard, continuous, hen
  - continuous, man, seasonal, frog
  - seasonal, hen, continuous, frog

The senescent phase of an organism's lifespan can be recognised by  
 (a) slow metabolism  
 (b) cessation of reproduction  
 (c) decreased immunity  
 (d) all of these.

The events in sexual reproduction are  
 (i) pre-fertilisation  
 (ii) fertilisation  
 (iii) post-fertilisation

The sequential order of their occurrence is  
 (a) (ii) - (i) - (iii)      (b) (iii) - (ii) - (i)  
 (c) (i) - (ii) - (iii)      (d) (i) - (iii) - (ii).

Refer to the given diagrams showing different types of syngamy and select the option that gives correct example of each of these.



- (i) (a) *Fucus*      (ii) (a) *Chlamydomonas*  
 (b) *Homo sapiens*      (b) *Fucus*  
 (c) *Fucus*      (c) *Cladophora*  
 (d) *Cladophora*      (d) *Homo sapiens*

Read the following statements and select the incorrect one.

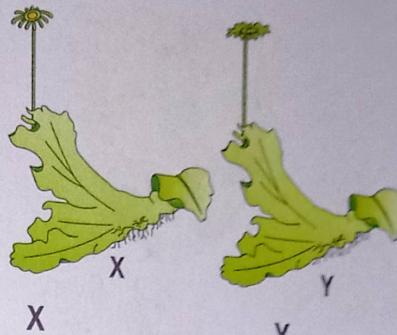
- (a) Cucurbits and coconuts are monoecious plants.  
 (b) Papayas and date palms are dioecious plants.  
 (c) Leeches and tapeworms are bisexual animals.  
 (d) Sponges and coelenterates are unisexual animals.

Select the incorrect statement about external fertilisation.

- (a) Organisms showing external fertilisation produce a large number of male gametes only.  
 (b) External fertilisation is very uncertain and requires synchrony between release of male and female gametes.  
 (c) It is replaced by internal fertilisation in higher organisms as it wastes energy and requires external medium like water.  
 (d) It occurs in most of the fishes and amphibians.

If a fungal thallus has both male and female reproductive structures, it will be called  
 (a) heterothallic      (b) homothallic  
 (c) dioecious      (d) monoecious.

57. Refer to the given figures of *Marchantia* and identify X and Y. 13



- X  
 (a) Male Thallus  
 (b) Female Thallus  
 (c) Oogonium  
 (d) Antheridium
- Y  
 (a) Male Thallus  
 (b) Antheridium  
 (c) Oogonium

58. Stamine flowers produce

- (a) eggs      (b) antherozoids  
 (c) fruits      (d) all of these.

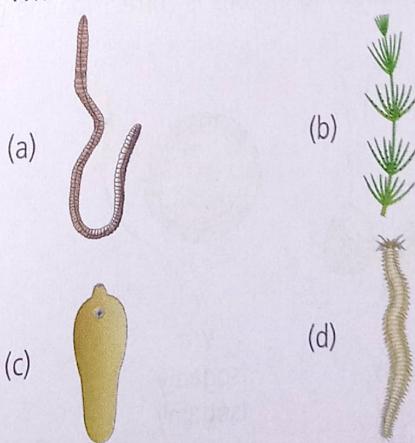
59. Read the following statements and select the correct option.

**Statement 1 :** Unisexual flowers are either staminate flowers or pistillate flowers.

**Statement 2 :** Both monoecious and dioecious plants have unisexual flowers.

- (a) Both statements 1 and 2 are correct.  
 (b) Statement 1 is correct but statement 2 is incorrect.  
 (c) Statement 1 is incorrect but statement 2 is correct.  
 (d) Both statements 1 and 2 are incorrect.

60. Which of the following is an unisexual organism?



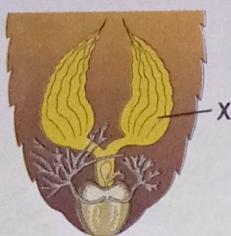
61. Which of the following groups is formed only of the hermaphrodite organisms?

- (a) Earthworm, tapeworm, housefly, frog  
 (b) Earthworm, tapeworm, sea horse, housefly  
 (c) Earthworm, leech, sponge, roundworm  
 (d) Earthworm, tapeworm, leech, sponge

62. Which of the following group contains bisexual animals only?

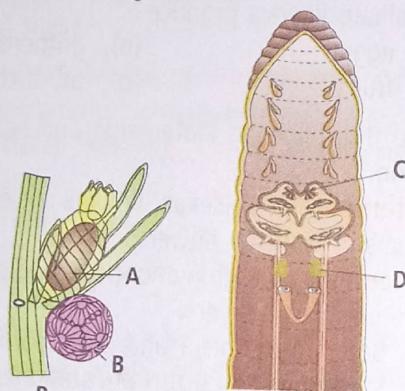
- (a) *Amoeba*, sponge, leech  
 (b) Sponge, cockroach, *Amoeba*  
 (c) Earthworm, sponge, leech  
 (d) Tapeworm, earthworm, honeybee

63. Refer to the given figure and identify structure X in cockroach.



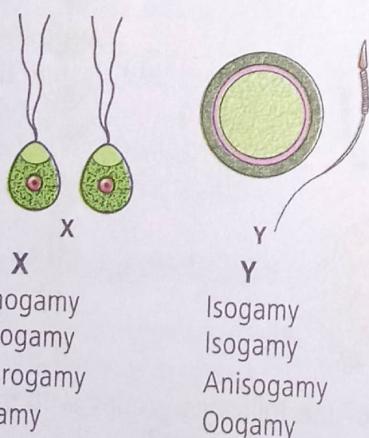


- 64.** Figure P and Q represents the reproductive organs of *Chara* plant and earthworm respectively. Select the option which correctly identifies male reproductive organs of the two organisms.





- 65.** Which of the following options is correct for the given figures?



- (a) Homogamy Isogamy
  - (b) Anisogamy Isogamy
  - (c) Heterogamy Anisogamy
  - (d) Isogamy Oogamy

- 66.** Meiosis does not occur in

  - (a) vegetatively reproducing diploid individuals
  - (b) sexually reproducing haploid individuals
  - (c) sexually reproducing diploid individuals
  - (d) all of these.

67. A diploid parent plant body produces \_\_\_\_\_ gametes and a haploid parent plant body produces \_\_\_\_\_.

- gametes.  
(a) diploid, haploid      (b) haploid, diploid  
(c) diploid, diploid      (d) haploid, haploid





- In maize, a meiocyte has 20 chromosomes. What will be the number of chromosomes in its somatic cell?  
(a) 40      (b) 30      (c) 20      (d) 10

- If a butterfly has chromosome number 380 in its meiocytes (2n). What will be the chromosome number in its gametes?  
(a) 360      (b) 190      (c) 95      (d) 760

71. Which of the following is an incorrect combination of organism with its chromosome number in meiocyte and in gamete?

Name of organism	Chromosome number in meiocyte	Chromosome number in gamete
(a) Onion	24	12
(b) <i>Ophioglossum</i>	1260	630
(c) Human beings	46	23
(d) Fruit fly	8	4



- 73.** Read the following statements and select the correct option

**Statement 1 :** In pea plant, transfer of pollen grains to the stigma is easy.

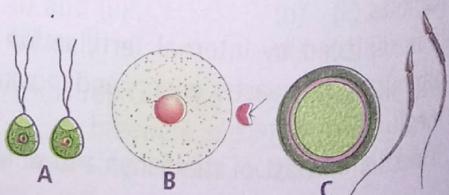
**Statement 2 :** In cross pollinating plants, pollination does not take place.

- (a) Both statements 1 and 2 are correct.
  - (b) Statement 1 is correct but statement 2 is incorrect.
  - (c) Statement 1 is incorrect but statement 2 is correct.
  - (d) Both statements 1 and 2 are incorrect.

- 74.** Development of new individual from female gamete without fertilisation is termed as \_\_\_\_\_

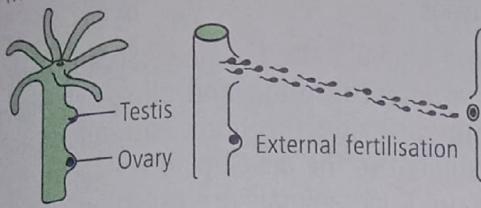


75. Refer the following figures and identify the type of gametes (A, B and C) respectively.



- (a) Heterogametes, isogametes, homogametes
  - (b) Isogametes, homogametes, heterogametes
  - (c) Homogametes, isogametes, heterogametes
  - (d) Isogametes, heterogametes, heterogametes

5. Given figure of *Hydra* shows its reproductive structures and manner of fertilisation.



What could be the reason it is not showing self-fertilisation?

- (a) Distance between testis and ovary is more.
- (b) Sperms do not swim downwards.
- (c) Ovary matures earlier than testis.
- (d) Testis matures earlier than ovary.

6. Which of the following statements is not correct regarding sexuality in organisms?

- (a) When both male and female flowers are present on the same plant, the condition is said to be monoecious and is present in cucurbits and coconuts.
- (b) When both male and female flowers are present on the separate plants, the condition is said to be dioecious and is present in papaya and date palms.
- (c) In earthworm, both male and female sex organs are present in the same individual and therefore, self-fertilisation occurs in them.
- (d) Cockroach is a unisexual animal and exhibit sexual dimorphism.

7. Which of the following statements is incorrect?

- (a) Earthworms and leeches are hermaphrodite animals.
- (b) Young ones of animals showing external fertilisation receive little or no parental care.
- (c) If the egg is not fertilised, it is thrown out of the body along with the lining of the uterus as menstrual flow.
- (d) Sex organs in human beings are formed at puberty.

Select the incorrect difference between self-fertilisation and cross-fertilisation.

Self-fertilisation	Cross-fertilisation
(a) It is uniparental.	It is biparental.
(b) It involves the fusion of male and female gametes of the same parent.	It involves the fusion of two gametes produced by different parents.
(c) Examples: <i>Pheretima</i> , <i>Periplaneta</i>	Examples : <i>Taenia</i> , <i>Rana tigrina</i>
(d) None of these	

In organisms showing internal fertilisation, female gamete is non-motile. Lack of motility is advantageous because it

- (a) facilitates less expenditure of energy
- (b) assists in rapid division of female gamete
- (c) helps the cell to store extra nutrients for rapid embryo development
- (d) both (a) and (c).

81. Fertilisation cannot occur in absence of surface water in
- (a) *Fucus*
  - (b) *Funaria*
  - (c) *Marsilea*
  - (d) all of these.

82. *Spirogyra* is a sexually reproducing alga in which vegetative thallus is haploid. In *Spirogyra*, meiosis
- (a) never occurs
  - (b) occurs at time of gamete production
  - (c) occurs after fertilisation
  - (d) occurs during vegetative growth.

83. Match the column I with column II and select the correct option.

	Column I	Column II
P.	External fertilisation	(i) Earthworm
Q.	Internal fertilisation	(ii) Cockroach
R.	Bisexual	(iii) Frogs and fishes
S.	Unisexual	(iv) Birds and mammals

- (a) P-(iv), Q-(iii), R-(i), S-(ii)
- (b) P-(iv), Q-(iii), R-(ii), S-(i)
- (c) P-(iii), Q-(iv), R-(ii), S-(i)
- (d) P-(iii), Q-(iv), R-(i), S-(ii)

84. Zygote of an organism developed after syngamy undergoes meiosis to form haploid spores, which divide mitotically and form the gametophyte. The organism must have \_\_\_\_\_ life cycle.

- (a) haplontic
- (b) diplontic
- (c) haplodiplontic
- (d) either (a) or (c)

85. Read the following statements and select the correct option.

**Statement 1 :** Zygote is the vital link between two generations.

**Statement 2 :** Zygote is formed due to fusion of two haploid gametes.

- (a) Both statements 1 and 2 are correct.
- (b) Statement 1 is correct but statement 2 is incorrect.
- (c) Statement 1 is incorrect but statement 2 is correct.
- (d) Both statements 1 and 2 are incorrect.

86. Life begin in all sexually reproducing organisms as a

- (a) single-celled zygote
- (b) double-celled zygote
- (c) haploid zygote
- (d) haploid gametes.

87. Read the following statements about embryogenesis and select the incorrect option.

- (a) It is the process of development of embryo from zygote.
- (b) During this process, zygote undergoes cell division and cell differentiation.
- (c) Cell divisions decrease the number of cells in developing embryo.
- (d) Cell differentiation helps groups of cells to undergo certain modification to form specialised tissues and organs.

88. Which of the following is not correct regarding sexual reproduction?

- (a) It is usually biparental.
- (b) Gametes are always formed.
- (c) It is a slow process.
- (d) It involves only mitosis.

- 89.** Offspring of oviparous animals are at greater risk of survival as compared to those of viviparous animals because

  - proper embryonic care and protection is absent
  - embryo does not develop completely
  - progenies are of smaller size
  - genetic variations do not occur.

**90.** Which of the following statements is not correct regarding oviparous animals?

  - Females lay fertilised/unfertilised eggs at a safe place.
  - Development of zygote takes place outside the female's body.
  - Examples of oviparous animals are all birds, most reptiles and egg-laying mammals.
  - None of these

**91.** Deposition of calcareous shell around zygote occurs in

  - birds and reptiles
  - birds and mammals
  - mammals and reptiles
  - all of these.

**92.** Read the following statements and select the correct option.

**Statement 1 :** Viviparous animals give better protection to their offspring.

**Statement 2 :** In viviparous animals, young ones, after attaining a certain stage of growth, are delivered out of the body of female organism.

  - Both statements 1 and 2 are correct.
  - Statement 1 is correct but statement 2 is incorrect.
  - Statement 1 is incorrect but statement 2 is correct.
  - Both statements 1 and 2 are incorrect.

**93.** Select the option which shows viviparous animals only.

  - Lizard, Turtle
  - Platypus, Crocodile
  - Cow, Crocodile
  - Whale, Mouse

**94.** Which of the following animals give birth to young ones?

  - Ornithorhynchus* and *Echidna*
  - Macropus* and *Pteropus*
  - Balaenoptera* and *Homo sapiens*
  - Both (b) and (c)



**Check your score! If you score . . .**

> 90%

### **Example**

00-0124

• 10 •

80-71%

Very Good  
Food

1

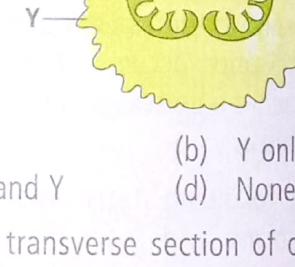
MEDIOCRE!  
NOT SATISFACTORY

- 95.** Viviparity is found in  
 (a) bats (b) lizards  
 (c) frogs (d) birds.

**96.** In these animals, the female retain the eggs inside its body after fertilisation and allows the development of embryo inside the body without providing extra nourishment to the developing embryo as the placenta is absent. Such animals are called as  
 (a) oviparous animals  
 (b) viviparous animals  
 (c) ovoviviparous animals  
 (d) none of these.

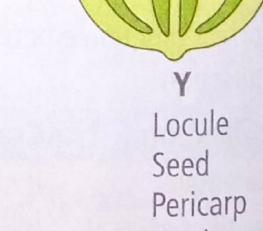
**97.** In which of the following plants, sepals do not fall off after fertilisation and remain attached to the fruit?  
 (a) Brinjal (b) Cucumber  
 (c) Papaya (d) Bitter gourd

**98.** Which of the labelled parts in the transverse section of tomato fruit, is/are diploid ?



(a) X only (b) Y only  
 (c) Both X and Y (d) None of these

**99.** Refer to the transverse section of ovary of mustard plant. Identify X and Y in it.



<b>X</b> (a) Seed (b) Pericarp (c) Seed (d) Placenta	<b>Y</b> Locule Seed Pericarp Seed
--	--

**100.** The wall of the ovary forms  
 (a) pericarp (b) endosperm  
 (c) fruit (d) both (a) and (b).

- Move on to the next chapter. You mastered this chapter. Concepts are on your fingers!

- Move on to the next chapter. You have a good command over this chapter.

- Move on to the next chapter. But don't forget to revise again after 10 days.  
extract more from this chapter.

- Still a wide scope to gain more from this chapter. Revise again!