

## **BIOLOGY**

# BOOKS - NEW JYOTHI BIOLOGY (TAMIL ENGLISH)

## REPRODUCTION IN ORGANISMS

## **Solutions To Ncert Exercises**

1. Why is reproduction essential for organisms?



**2.** Which is a better mode of reproduction: sexual or asexual? Why?



**3.** Why is the offspring formed by asexual reproduction referred to as clone?



**4.** How does the progeny formed from asexual reproduction differ from those formed by sexual reproduction?



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**5.** Distinguish between asexual and sexual reproduction. Why is vegetative re- production also considered as a type of asexual reproduction?



**6.** What is vegetative propagation? Give two suitable examples.



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- 7. Define a. Juvenile phase
- b. Reproductive phase
- c. Senescent phase



**8.** Explain why meiosis and gametogenesis are always interlinked?



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**9.** Identify each part in a flowering plant and write whether it is haploid (n) or diploid (2n)

Anther, ovary, egg, pollen, zygote, male gamete.



**10.** Define external fertilization. Mention its disadvantages



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**11.** Differentiate between a zoospore and a zygote.



**12.** Differentiate between gametogenesis from embryogenesis.



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**13.** Tabulate any 4 post fertilization changes in a flower.



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**14.** What is a bisexual flower?

## **New Evaluation Type Questions**

1. 1. Study the relation of the given pair and fill
up the blanks
a. Bud : Hydra : : : Penicillium
b. Algae : Zoospores :: Sponges :
c. Monoecius palm: Coconut :: Dioecious palm :
••••••
d. Primates : Menstrual cycle : : Non primates :

e. Unisexual male : Staminate : : Unisexual

female : .....



- 2. Find the odd one and give reason
- a. Rhizome, sucker, gemmule, offset.
- b. Zoospore, buds, conidia, tuber



**3.** In sexually reproducing organisms during reproduction, male gametes are produced in large numbers. Why?



- **4.** The cyclical changes in the ovaries of female placental mammals during the reproductive phase differs in primates and nonprimates.
- a. What is this cycle called in primates and nonprimates respectively?

b. Distinguish between seasonal breeders and continuous breeders.



- **5.** Harish observed two different types of papaya plants in his garden. One produced male flowers only and the other type produced female flowers as well as fruits.
- a. What are these type of plants called in which male and female flowers seen separately?

b. Name another plant with the same feature.

c. If both male and female flowers are seen separately in the same plant, what do you call them? Give examples.



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- **6.** In the animal world, some organisms have both male and female repro-ductive organs.
- a. What do you call such organisms?
- b. Give two examples.



**7.** Distinguish homogametes and heterogametes.



**8.** Syngamy is the fusion of gametes to produce zygotes. But in some organ-isms like rotifers, honey bees and even some lizards, syngamy doesn't occur. Then how do these organisms produce young ones? Name the phenomenon.

**9.** a. Differentiate oviparous and viviparous with examples.

b. In which of these two types, is the chances of survival of young ones, greater? Why?



**10.** Match the following asexual reproductive methods or structures with the respective

organisms.





## **Questions From Previous Hse**

- **1.** People prefer more seedless fruits than seeded ones.
- a. Name the process concerned with development of seedless fruits.

b. Suggest a method for production of such fruits artificially.



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**2.** Parthenogenesis is the development of the unfertilized female gamete into an embryo. If so what is parthenocarpy?

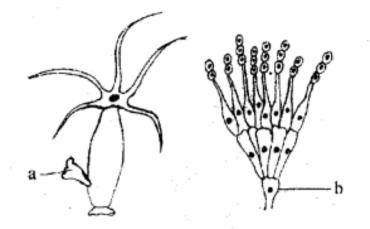


**3.** Give a common title to the following diagrams. Identify each and present the answer in the form of a list.





- **4.** Given below are three gametes a, b and c. a and b gametes undergo fusion.
- a. Identify the fusion.



b. Give the explanation for the identification.



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**5.** Farmers are propagating plants using vegetative structures. Can you mention the names of any two such structures ?



## **Previous Entrance Exam Corner**

1. Artificial induction of roots on stems before it is separated from the parent plant for propagation is called

- A. cutting
- B. grafting
- C. plant tissue culture
- D. layering

#### **Answer:**



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**2.** Assertion (A): In Bryophyllum, vegetative propagation, occurs through leaf.

Reason (R): Epiphyllous buds are noticed in Bryophyllum.

A. roots

B. leaves

C. rhizomes

D. stem

#### **Answer: B**



- **3.** Which of the following groups of plants are propagated through underground root?
  - A. Bryophyllum and kalanchoe
  - B. Ginger, potato, onion and zamikand
  - C. Pistia, chrysanthemum and pineapple

D. Sweet potato, asparagus, tapioca and dahlia

#### **Answer: D**



- **4.** Consider the following statements and choose the correct option.
- i. The genetic constitution of a plant is unaffected in vegetative propagation
- ii. Rhizome in ginger serves as an organ of

vegetative reproduction

iii. Totipotency of cells enables us to micropropagate plants

A. Statements (i) and (ii) alone are true

B. Statements (ii) and (iii) alone are true

C. Statement (ii) alone is true

D. All the three statements (i), (ii) and (iii)

are true

#### **Answer:**



## **5.** Match Column I with Column II and find the correct answer.

Column I	Column II
a. Monoploidy	i. 2n – 1
b. Monosomy	ii. 2n + 1
c. Nullisomy	iii. 2n + 2
d. Trisomy	iv. 2n – 2
e. Tetrasomy	v. n
	vi. 3n

#### **Answer: B**



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## **Cbse Corner**

**1.** Why do internodal segments of sugarcane fail to propagate vegetatively even when they are in contact with damp soil?



- **2.** Explain with a labelled diagram the asexual reproduction in the following .
- i. Budding in yeast
- ii. Binary fission in amoeba.



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3. What is a bulbil?

