



BIOLOGY

BOOKS - ARIHANT PRAKASHAN

IMPROVEMENT IN FOOD PRODUCTION

Topic 1 Practice Questions

1. Correct the statement of each bit, if necessary, by changing the underlined word

only:

In tissue culture, amorphous mass of thin-walled parenchymatous cells developing from proliferating cells is called explant.



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2. The process of physical removal of anthers is called



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3. The cross between two varieties of same crop is called hybridisation.

- A. intervarietal hybridisation
- B. intravarietal hybridisation
- C. intergeneric hybridisation
- D. intrageneric hybridisation

Answer:



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4. The plant part used for tissue culture is



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5. To produce haploid plants culture can be made.

(anther, embryo, endosperm, zygote)



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6. The autotroph is cultured to obtain single cell protein.

(Saccharomyces,

Pseudomonas,

Spirulina,Chaetomium)



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7. In tissue culture medium, the embryoids formed from pollen grains is due to

A. cellular totipotency

B. organogenesis

C. double-fertilisation

D. test-tube culture

Answer: A



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8. Single Cell Protein (SCP) is

A. protein obtained from a clone of cells

B. protein obtained from unicellular organisms

C. biomass obtained from microorganisms

D. proteins obtained from biomass of microorganisms

Answer: C



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9. Somatic hybridisation can be used for

A. gene transfer

B. transfer of cytoplasm

C.

D. All of the above

Answer: D



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10. What is the nutrient source not required for obtaining single cell protein from autotrophs?



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11. What is called to the amorphous mass of loosely arranged thin-walled parenchymatous cells developed in the process of tissue culture?



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12. What is called to the remaining part of plant cells when its wall is mechanically or enzymatically removed?



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13. What is called to the sum total of all the gene present in a particular species?



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14. When pollens from selected male parents are transferred to stigma, it is called natural pollination.



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15. For nuclear fusion, PEG is used.



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16. The cross between two varieties of same crop is called hybridisation.



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17. Write a short note on biofortification.



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18. Write short note on hybridisation with 2-3 important points.



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19. Write a short note on emasculation.



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20. Mention two ways of inducing artificial mutation in a crop field.



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21. List two steps that help in introducing the desired mutation into the crop



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22. Write note

Anther culture



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23. WRITE SHORT NOTES ON :

Micropropagation



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24. Differentiate between somatic embryogenesis and somatic hybridisation.



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25. Differentiate between explant and callus.





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26. Differentiate between

Cybrid and Hybrid.



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27. Differentiate between any one of the following with 2 to 3 important points.

Anther culture and Endosperm culture



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28. Differentiate between with 3 to 4 important points

Synthetic seeds and Embryo



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29. Describe the main steps of breeding to develop genetic variability in crop plants.



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30. Describe the techniques of hybridisation.



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Topic 1 Topic Test 1

1. The genetically superior individuals are called



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2. Tissue culture technique was first attempted by

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3. Name the hormones used in tissue culture.

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4. State the advantages of mutation breeding.

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5. Secondary metabolites



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6. Totipotency



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7. Emasculation (In plant breeding)



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8. Somaclonal variation



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9. Embryo rescue



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10. Elaborate the applications of plant tissue culture.



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Topic 2 Practice Questions

1. Fill in the blanks with correct answer(s): In honeybee, the process of development of male bee without fertilization is termed as swarming.



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2. Choose the correct answer from the choices given under each bit/ Give the answer in one word only :

Which species in honeybees is commercially cultivated ?

A. *Apis dorsata*

B. *Apis florea*

C. *Apis mellifera*

D. *Apis indica*

Answer: C



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3. Which is an exotic breed of cattle?

A. Jersey

B. Sahiwal

C. Gir

D. Red Sindhi

Answer: A



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4. Fill up the blanks with correct answer (s).

Correct the underlined portion of the sentence :

The giant honeybee, yielding maximum honey is Apis mellifera.



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5. The best milch breed in the world is :

A. Red Sindhi

B. Tharparkar

C. Frieswal

D. Sahiwal

Answer: C



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6. Which is an exotic breed of cattle?

A. Red Dane

B. Jersey

C. Karan Swiss

D. Rathi

Answer: D



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7. Sunandini, a cross breed cattle is produced by crossing

A. Brown-Swiss bull with Sahiwal cow

B. Jersey bull with Red Sindhi cow

C. Red Dane bull with Sahiwal cow

D. Holstein-Friesian bull with brown swiss

jersey cow

Answer: A



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8. Which of the following is a disease of poultry?

A. Ranikhet disease

B. Bacillary white diarrhoea

C. Marek.s disease

D. All of the above

Answer: D



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9. Milk yielding breed of cattle are called _____.



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10. Continued close inbreeding reduces fertility and productivity which is called



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11. Give one word The preservation of semen at ultra low temperature.



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12. The important monosaccharide present in honey.



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13. The repeated breeding between closely related individuals.



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14. Fill up the blanks

Breeding of unrelated animals is called as



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15. Write a short note on queen bee.



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16. What is beeswax?



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17. Write a short note on the social life of honeybees.





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18. What is meant by transgenic animal ?



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19. Why is inbreeding considered a harmful practice?



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20. Describe swarming.



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21. What is interspecific hybridisation? Explain briefly by taking an example of animal.



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22. Name five indigenous breeds of cattle.



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23. Name three exotic breeds of cattle



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24. Name three exotic breeds of cattle



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25. Enumerate the castes in honeybee?



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26. What do you mean by apiculture? How is it important to our lives?



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27. Differentiate between : Broilers and layers



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28. Differentiate between inbreeding and outbreeding.



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29. If your family owned a dairy farm, what measures would you undertake to improve the quality and quantity of milk production?



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1. Foot and mouth disease is common disease of



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2. The juvenile bees are reared in chamber of the honey comb.



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3. The substance the queen bee is fed with is

..... .



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4. Which one of the following is the indigenous breed of chicken ?

A. Nicobari

B. Rhode Island Red

C. Barred Plymouth Rock

D. New Hampshire

Answer: A



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5. Commercial poultry production is done under

A. free range system

B. intensive system

C. semi-intensive system

D. folding unit system

Answer: B



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6. List the important feed that must be given to form poultry.



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7. What is artificial insemination?



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8. Answer the following :

Write short notes on the following :

In vitro fertilisation



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9. Describe the two methods of bee-keeping.



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10. What are the different aspects of poultry farm management?



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Chpater Test

1. During hybridisation, emasculated buds need to be



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2. The characteristic flight of the queen bee during fertilisation is known as.....



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3. Technique for production of disease-free plants is.....



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4. Which organs develop during organogenesis in plants?



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5. Name any two poultry diseases.



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6. List any two economically important products for humans obtained from *Apis indica*.



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7. In bees, dance is meant for what purpose?



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8. What is in vitro fertilisation?



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9. Why are the plants raised through micropropagation termed as somaclone?

Mention two advantages of this technique





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10. List any four important components of poultry farm management.



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11. What are the main objectives of animal breeding?



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12. What is superovulation and embryo transfer? How are these related?



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13. Write a note on organic dairy farming.



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14. Differentiate between emasculation and bagging.



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15. Differentiate between transgenesis and artificial breeding.



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16. Differentiate between indigenous method and modern method of bee-keeping



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17. Give an account of techniques and steps of plant tissue culture?



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18. Mention the various parameters that are to be kept in mind for cattle management.



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19. Answer the following What are the modern methods of animal breeding?



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