BIOLOGY

BOOKS - MODERN PUBLISHERS

BIOLOGY (HINGLISH)

STRATEGIES FOR ENHANCEMENT IN FOOD PRODUCTION

Practice Problems

1. What is meant by 'livestock'?

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2. Give two uses of draught cattle.

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3. Differentiate milch breeds and draught breeds of cattle.

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4. Name two high milk yielding cross breeds of cows.

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5. Name two exotic breeds of cows.

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6. What are the two main components of cattle feed?

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7. What is artificial breeding?

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8. Name the branch of biology dealing with all the aspects of domesticated animals.

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9. Give the full form of NDDB.

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10. Who is regarded as 'Father of white Revolution' ?

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11. What is white revolution ?

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12. Where is IVRI located?

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13. Give one term for the science dealing with rearing of birds.

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14. Name two indigeous breeds of fowls.

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15. Name two exotic breeds of fowls.

Watch Video Solution

16. Give two advantages of exotic breeds over the indigenous breeds of fowls.

Watch Video Solution

17. Name to high yielding cross breeds of fowls.

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18. What is importance of a good feed in the poultry?

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19. Name one viral and one bacterial disease of poultry.

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20. Name the main food components found in egg white.

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21. Where is Central Aviann Research Institute (CARI) located?

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22. What is laying period?

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23. Define pisciculture.

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24. Give one term for composite fish farming.

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25. Name two by products of fishery.

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26. Name to vitamins found in liver oil of certain fishes.

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27. What are the cat fishes? Name two cat fishes used in fishery.

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28. Name two carps used as food fishes

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29. What is fish meal?

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30. Define inland fisheries

Watch Video Solution

31. Give the term for the newly hatched youngs of fishes.

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32. Define fingerlings.

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33. Give the term for the rearing of honey bee for increased product of honey and beeswax.

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34. What products are obtained from bee-keeping ?

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35. Name the most suitable species of honey bee for apiculture.

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36. Define apiary.

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37. What do you mean by pasturage?

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38. Define honey flow period.

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39. What do you understand by crop improvement?

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40. List the various methods used for crop improvement.

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41. How are androgenic haploids useful in plant breeding?

42. How is polyploid breeding useful in crop improvement?

43. What characteris should be present in improvement seeds?

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44. Mutation breeding.

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45. Explain in brief the role of animal husbandry in human welfare.

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46. 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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47. What is meant by the term ‘breed’? What are the objectives of animal breeding?

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48. Name the methods employed in animal breeding. According to you which one of the methods is best? Why?

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49. What is apiculture? How is it important in our lives?

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50. Discuss the role of fishery in enhancement of food production.

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51. Briefly describe various steps involved in plant breeding.

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52. Explain what is meant by biofortification.

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53. Which part of the plant is best suited for making virus-free plants and why?

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54. What is the major advantage of producing plants by micropropagation ?

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55. Find out the various components of the medium used for propagation of an explants in vitro are ?

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56. Name any five hybrid varieties of crop plants which have been developed in India.

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Ncert Exemplar Problems Mcq

1. The changes contracting bird flu from a properly cooked (above $100^{\circ}C$) chicken and egg are

A. Very high

B. High

C. Moderate

D. None

Answer: D

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2. A group of animals which are related by descent and share many similarities are referred to as

A. Breed

B. Race

C. Variety

D. Species

Answer: A

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3. Inbreeding is carried out in animal husbandry because it

A. Increases vigour

B. Improves the breed

C. Increases heterozygosity

D. Increases homozygosity

Answer: D

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4. Sonalika and Kalyan Sona are varieties of

A. Wheat

B. Rice

C. Millet

D. Tobacco

Answer: A

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5. Which one of the following is not a fungal disease

A. Rust of wheat

B. Smut of bajra

C. Black rot of crucifers

D. Red rot of sugarca

Answer: C

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6. In virus-infected plants the meristematic tissues in both apical and axillary buds are free of virus because

A. The dividing cells are virus resistant

B. Meristems have anti viral compounds

C. The cell division of meristems are faster than the rate of viral multiplication

D. Viruses cannot multiply within meristem cell (s)

Answer: C

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7. Several South Indian states raise 2-3 crops of rice annually. The agronomic feature that makes this possible is because of

A. Shorter rice plant

B. Better irrigation facilities

C. Early yielding rice variety.

D. Disease resistant rice variety

Answer: C

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8. Which one of the following combination would a sugarcane farmer look for in the sugarcane crop

A. Thick stem, long internodes, high sugar content and disease resistant

B. Thick stem, high sugar content and profuse flowering

C. Thick stem, short intermode, high sugar content, disease ressitant

D. Thick stem, low sugar content, disease resistant

Answer: A

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9. Fungicides and antibiotics are chemicals that

A. Enhance yield and disease resistance

B. Kill pathogenic fungi and bacteria, respectively

C. Kill all pathogenic microbes

D. Kill pathogenic bacteria and fungi respectively.

Answer: B

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10. Use of certain chemicals and radiation to change the base sequences of genes of crop plants is termed

A. Recombinant DNA technology

B. Transgenic mechanism

C. Mutation breeding

D. Gene therapy

Answer: C

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11. The scientific process by which crop plants are enriched with certain desirable nutrients is called

A. Crop protection

B. Breeding

C. Biofortification

D. Bio-remediation

Answer: C

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12. The term 'totipotency' refers to the capacity of a

A. Cell to generate whole palnt

B. Bud to generate whole plant

C. Seed to germinate

D. Cell to enlarge in size

Answer: A

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13. Given below are a few statements regarding somatic hybridisation. Choose the correct statements.

(i) Protoplasts of different cells of the same plant are fused.

(ii) Protoplasts from cells of different species can fused.

(iii) Treatment of cell with cellulase and pectinase mandatory.

(iv) The hybrid protoplast contains characters of only one parent protoplast.

A. (ii) and (iii)

B. (i) and (ii)

C. (iii) and (ii)

D. (ii) and (iii)

Answer: D

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14. An explantis

A. Dead plant

B. Part of the plant

C. Part of the plant used in tissue culture

D. Part of the plant that expresses a specific gene

Answer: C

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15. The biggest constraint of plant breeding is

A. Availability of desirable gene in the crop and its wild relatives

B. Infractructure

C. Trained manpower

D. Transfer of genes from unrelated sources

Answer: D

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16. Lysine and tryptophan are

A. Proteins

B. Non essential amino acids

C. Essential amino acids

D. Aromatic and no acid.

Answer: C

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17. Micro-propagation is

A. Propagation of microbes in vitro

B. Propagation of plants in vitro

C. Propagation of cells in vitro

D. Growing plants on smaller scale

Answer: B

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18. Protoplast is

A. Another name for protoplasm

B. An animal cell

C. A plant cell without a cell wall

D. A plant cell

Answer: C

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19. To isolate protoplast, one needs

A. Pectinase

B. Cellulase

C. Both pectinase and cellulase

D. Chitinase

Answer: C

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20. Which one of the following is a marine fish ?

A. Rohu

B. Hilsa

C. Catla

D. Common carp

Answer: B

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21. Which one of the following products of apiculture is used in cosmetics and polishes?

A. Honey

B. Oil

C. Wax

D. Royal jelly

Answer: C

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22. More than 70 per cent of livestock population is in

A. Denmark

B. India

C. China

D. India and China

Answer: D

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23. The agriculture sector of India employs:

A. 60 per cent of the population

B. 70 per cent of the population

C. 30 per cent of the population

D. 62 per cent of the population

Answer: D

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24. 33 percent of India's (Gross Domestics Product) comes from

A. Industry

B. Agriculture

C. Export

D. Small scale cottage industries

Answer: B

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25. A collection of all the alleles of all the genes of a crop plant is called

A. Germplasm collection

B. Protoplams collection

C. Herbarium

D. Somaclonal collection

Answer: A

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Ncert Exemplar Problems Very Short Answer Type Questions

1. Millions of chicken were killed in west Bengal , Assom , odisha and maharashtra recently ,what was the reason ?

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2. Can gamma rays used for crop improvement programmes prove to be harmful for health ?

Discuss.

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3. In animal husbandry if two closely related animals are mated for a few generations , it results in loss of ferillity and vigour why is this SO ?

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4. in the area of plant breeding it is important not only to preerve all its wild relatives ,Explain with a suitable example .

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5. Name a man -made cereal , trace , trace how it was developed and where is it used?

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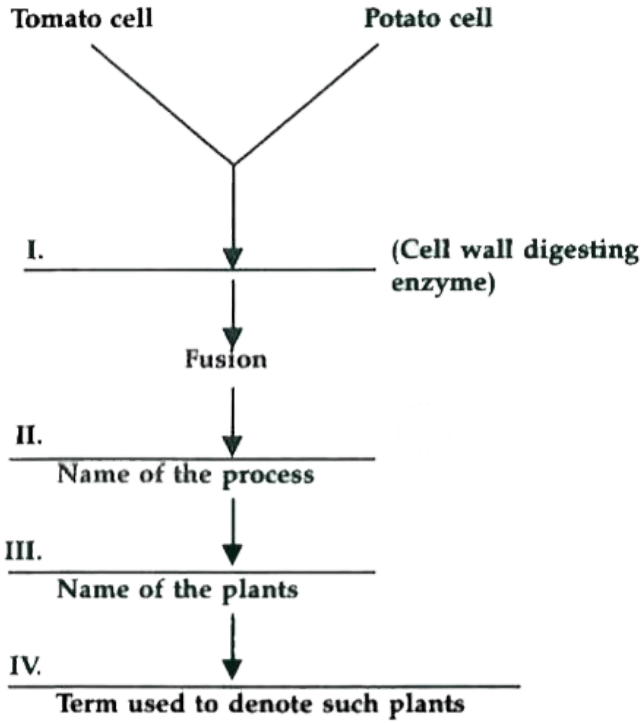
6. Fill in the blanks:



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7. A few statements are given below followed by set of terms in a box , pick the correct term and write it against the appropriate satement

(a)	Mating of closely related individuals within the same breed.	(i)	Cross breeding
(b)	Mating of animals of same breed but having no common ancestors on either side for 4-6 generations.	(ii)	Inter-specific hybridisation
(c)	Mating of animals of two different species.	(iii)	Outbreeding
(d)	Breeding of animals belonging to different breeds.	(iv)	Outcrossing
		(v)	Inbreeding

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8. what is meant by ' hidden hunger?

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9. Why are plants obtained by protoplast culture called somatic hybrids?

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10. what is protoplast fusion ?

Watch Video Solution

11. why is it easier to culture meristems compared to permanent tissues?

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12. Why are proteins synthesised by Spirulina called single cell proteins ?

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13. A person who allergic to pulses was advised to take a capsule of spirulina daily . Give the Reasons for the advise.

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14. what is aquaculture ? Give example of an animal that can be multiplied by aquaculture .

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15. what are the duties of a veterinary doctor in management of a poultry farm ?

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16. Would it be wrong to call plants obtained through micro - propagation as ' clones ? Comment /

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17. How is a somatic hybrid different from a hybrid ?

Watch Video Solution

18. what is emasculation ? Why and when is it done ?

Watch Video Solution

19. Discuss the two main limitations of plant hybridisation programme .

Watch Video Solution

20. Inter-specific crosses are rare in nature and inter-generic crosses almost unknown .why?

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21. Differentiate between pisciculture and aquaculture.

Watch Video Solution

22. Give two important contribution of DR. MS Swaminathan .

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23. The term ' desirable trait ' can mean different things for different plants. Justify the statement with suitable examples.

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Ncert Exemplar Problems Short Answer Type Questions

1. you are planning to set up a dairy farm. Describe the various aspects you would consider before you start the venture .

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2. It is said , that diseases are spreading faster due to globalistion and increased movement

of people .Justify the statement taking the example Of H_5N_1 virus .

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3. Explain the concept of the blue revolution .

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4. A farmer was facing problem of low yield from farm ,He was advised to keep a beehive in

the vicnity . Why ? How the beehive help in enhancing yield?

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5. Life style diseases are increasing alarmingly in India .we are also dealing with large scale malnutrition in the population Is there any method by which we can address both of these problems together ?

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6. How can we improve the success rate of fertilization artificial insemination in animal husbandry programmers?

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7. What is meant by germplasm collection what are its benefits ?

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8. Name the improved characteristics of wheat that helped india to achieve green revolution .

Watch Video Solution

9. Suggest some of the features of plants that will prevent insect and pest infestation.

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10. it is Easier to culture the plant cells in vitro as compared to animals cells why ?

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11. The culture medium (nutrient medium) can be refferred to as a highly enriched laborator y soil. Justify the statement.

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12. is there any relationship between dedifferention and the higher degree of success achieved in plant tissure experiments ?

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13. Give me a living cell of any plant and I will give you a thousand plants of the same type" , Is this only a slogan or is it scientifically possibel ?

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14. what is the difference between a breed and a species ? Give an example for each category.

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15. Plants rised though tissue cultures are clones of the parent plant. Discuss the utility of these plants.

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16. Discuss the improtance of testing of new plant varieties in a geographically vast country like india.

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17. Define the term stress for plants .Discuss briefly the two types of stress encountered by plants .

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18. Discuss natural selection and artificial selection. What are the implications of the latter on the process of evolution?

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19. Discuss Briefly how pure lines are created in animal husbandry.

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20. what are the physical barriers of a cell in the protoplast fusion experiment ? How are the barriers overcome ?

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21. Give few examples of bofortified crops . What benefits do they offer to the society?

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Ncert Exemplar Problems Long Answer Type Questions

1. You are a botanist working in the area of plant breeding. Describe the various steps that you will undertake to release a new variety.

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2. (a) the shift from grain to meat diets creates more demands for cereals . Why ?

(b) A 250 kg Cow produces 200 g of protein per day but 250 g of Methylophillus methylotrophus can produce of protein ,Name this emerging area of research .Explain its benefits.

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3. what are the advantages of tissue culture methods over conventional programmes ?

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4. Modern methods of breeding animals and plants can alleviate the global food shortage '. Comment on the statement and give suitable examples.

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5. Does apiculture offer multiple advantages to farmers? List its advantages if it is located near a place of commercial flower cultivation.

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6. Discuss how the property of plant cell totipotency has been utillised for plant propagation and improvement .

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7. What are three options to increase food producation ? Discuss each giving the salient features , merits and demerits.

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Hots Very Short Answer Questions

1. What is the scientific name of cow?

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2. How does roughage differ from concentrates with reference to cattle feed ?

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3. What is hypophysation?

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4. Why Italian bee (Apis mellifera) is preferred for apiculture than the India bees?

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5. In cattle farming, which method of breeding is more advantageous?

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6. Write an alternate source of protein for animal and human nutrition.

Watch Video Solution

7. For which amino acids maize is fortified?

Watch Video Solution

8. What is the major advantage of producing plants by micropropagation ?

Watch Video Solution

9. what is meant by ' hidden hunger?

Watch Video Solution

Hots Short Answer Questions

1. Which method is commonly used for improving cattle breeds and why ?

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2. What are the advantages of composite fish culture ?

Watch Video Solution

3. What is advantage of induced breeding in pisciculture?

Watch Video Solution

4. What is poultry? Name one improved breed of poultry.

Watch Video Solution

5. Give the economy of honey bees.

Watch Video Solution

6. Write any two advantages of tissue culture.

Watch Video Solution

7. Give the objectives of plant breeding.

Watch Video Solution

8. Mutation breeding.

Watch Video Solution

9. Explain the process of heterosis. How is it different from inbreeding depression?

Watch Video Solution

10. How is artificial breeding more advantages than natural breeding?

Watch Video Solution

11. How do you diferentiae between capture fisheries, inland fisheries and aquaculture?

Watch Video Solution

12. What is inbreeding depression? How is it caused inorganisms? Write any two advantages of inbreeding.

Watch Video Solution

13. What is mutation breeding? Write down some examples of it.

Watch Video Solution

14. Why are beehives kept in crop field during flowering period? Name any two crop fields where this is practiced.

Watch Video Solution

15. Write a note on mutational breeding.

Watch Video Solution

Hots Long Answer Question

1. Explain the economic importance of pisculture.

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2. Discuss various management measures to get higher yield of honey from honey bees.

 Watch Video Solution

3. What are the main steps in breeding a new genetic variety of a crop ?

 Watch Video Solution

4. What is the role of tissue culture, somaclones and somatic hybridisation for improvement of crops.

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Momery Test True Or False

1. One of the objectives of plant breeding is to develop disease, insect and pest resistant varieties.


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2. Plant breeding is both art and science.


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3. In mass selection, crop produced is only of one genotype.


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4. During emasculation process, stigma of flower is removed.

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5. Most of the mutations are lethal ad may lead to death of organism.

Watch Video Solution

6. Exotic breed which is very popular for egg laying but is not ideal for meat purposes is White Leghorn.

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7. Young fishes formed from the hatchings are called fingerlings.

Watch Video Solution

8. FSH and LH are pituitary hormones and are used to induce spawning in the fish.

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9. Roughage is rich in nutients,while concentrate is rich in fibres.

Watch Video Solution

10. Most important breeding method is inbreeding.

Watch Video Solution

11. The common and fatal disease of poultry is Ranikhet.

Watch Video Solution

12. Maintenance of hives of honey bees for production of honey is called molecular farming.

Watch Video Solution

13. In cryopreservation, the temperature is kept is 106°

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Momery Test Complete The Missing Links

1. Best egg-layer laying large sized whitish egg is _____.

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2. _____is the indigenous breed of cattle, while_____is high milk yielding cross breed of cattle.

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3. Roughage of cattle feed mainly contains_____while_____of cattle feed is rich in nutrients.

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4. The latest techniques of improvement of cattle is _____.

Watch Video Solution

5. Anthraxs is a _____disease, while cowpox is a _____disease.

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6. _____is located at Izatagar (U.P).

Watch Video Solution

7. _____are the birds grown for providing meat.

Watch Video Solution

8. Bee forage or pasturage determines the _____and _____of honey.

Watch Video Solution

9. Stimulation of a good female animal to release more eggs is called_____.

Watch Video Solution

10. _____breeds of animals are introduced in an area from an outside country.

Watch Video Solution

11. Milk yielding breeds of cattle are called_____.

Watch Video Solution

12. _____is a semidwarf wheat variety introduced from Mexico.

Watch Video Solution

13. _____is always the main objective of plant breeding.

Watch Video Solution

14. The phenomenon of cross pollination is also called as_____.

Watch Video Solution

15. _____proposed the concept of centres of origin.

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16. The headquarter of NBPGR is situated at_____.

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17. Pure line selection is used in _____

Watch Video Solution

18. Te crossing of F_1 hybrid with either of the parents is known as_____.

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19. Variation is appearing during tissue culture are called_____.

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20. An unorganised mass of parenchymatous cells, produced in a culture is called_____.

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21. The primary food plant of silk worm is _____.

Watch Video Solution

22. Breeding crops with the objective of increased nutritioal quality is called_____.

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Momery Test Choose The Correct Alternative

1. Crossbreeds/indigenous breed of animals are more advantages.

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2. Murrah is a high milk yielding breed of cow/buffalo of Haryana/ Gujarat.

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3. Inbreeding depression can be overcome by outcrossing/crossbreeding/both out crossing and crossbreeding.

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4. White leghorn fowl is a Mediterranean/American breed.

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5. Exotic and high yielding breed of honey bee is Apis florae/Apis mellifera.

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6. Plant breeding for disease resistance enchance the produceion of food by

reducing/increasing losses due to diseases.

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7. One of the alternate source of carbohydrate/proteins for animal and human nutrition is SCP.

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8. A meristem/fruit is free of viruses.

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9. Pusa gaurave is a resistant variety of bhindi/rapeseed mustard.

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Revision Exercises Mcqs

1. What made Dr.M.S. Swaminathan famous?

A. He Is a horiculturist

B. Geneticist

C. Plant breeder

D. All of these

Answer: C

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2. What are transgenic plants?

A. Plants which are pure breeding.

B. Plants containing specially introduced genes and hence showing tolerance to select herbicides.

C. A crop plant which is not destroyed by herbicides.

D. A plant resistant to insect pests.

Answer: B

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3. Process of bringing wild species of palnts under cultivation of suit human needs is called.

A. Domestication

B. Selection

C. Cultivation

D. Hybridization

Answer: A

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4. Heterosis is

A. Hybrid vigour

B. Pollen pistil incompatibility

C. Pollen Sterility

D. Hybrid compatibility

Answer: A

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5. Which of the following crops was subjected most to continuous selection and domestication by man:

A. Rice

B. Wheat

C. Maize

D. Sugarcane

Answer: C

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6. Hybrid vigour is due to

A. Homozygosity

B. Linkage

C. Emasculation

D. Heterozygosity

Answer: D

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7. The pathogen free plants are obtained from:

A. Seeds

B. Shoot meristem culture

C. Root culture

D. Embryo cuture

Answer: B

Watch Video Solution

8. Emasculation is required for:

A. Selective hybridisation

B. Pure lines

C. Self pollination

D. Natural hybridization

Answer: A

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9. Genetic variability can be created by:

A. Clone selection

B. Mass selection

C. Mutation

D. Hybridization

Answer: C

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10. The first domesticated animals by primitive man was

A. cow

B. Dog

C. Horse

D. Cat

Answer: B

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11. Which of the following is given to cow to yield milk ?

A. Sorbitol

B. Prolactin

C. Gonadotrophin

D. Stilbestrol

Answer: D

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12. Identify the edible frehwater teleosts:

A. Sharks

B. Catla catla

C. Rays and skates

D. Hilsa hilsa

Answer: B

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13. This one is a viral disease in silkworm:

A. Flacerie

B. Pebrine disease

C. Muscardine

D. Maggot disease

Answer: B

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14. MOET is method of:

A. Fish cultivation

B. Cloning in sheep

C. Hybridisation in cattle

D. Birth control in humans

Answer: C

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15. Which one of the following combination is generally recommended for composite fish farming in india

A. Catla, labeo and Cirrhinus

B. Catla, Cyprinus and Clarius

C. Clarius, Channa and Cyprinus

D. Cirrhinus, Cyprinus and Channa

Answer: A

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16. MOET (Multiple Ovulation Embryo Transfer) is a method of

A. Fish cultivation

B. Prawn cultivation

C. Cloning monkeys

D. Hybridisation in cattle

Answer: D

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17. Which one of the following food fishes of U.P. is a carp, which is cultivated in U.P. but is not a native of India?

A. Labeo rohita

B. Clarius betrachus

C. Channa punchatatus

D. Hypophthalmichthys molitrix

Answer: D

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18. Among the India major carps the fastest rate of growth is observes in:

A. Labeo bata

B. Catla catla

C. Labeo rohita

D. Labeo calbasu

Answer: C

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19. The drug used for deworming in poultry:

A. Antihistamine

B. Antiviral

C. Antihelminthic

D. Antibiotic

Answer: C

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20. Bombay duck is:

A. Hilsa hilsa

B. Wharpadon neherius

C. Pediceps ruficolis

D. Coreochromis mossambicus

Answer: B

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21. In which country, the 'DOGS' were once worshipped as 'GODS' ?

A. Italy

B. Egypt

C. Greece

D. Mongolia

Answer: B

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22. The Mediterranean type of popular fowls are called:

A. White Leghorn

B. New Hamshire

C. Plymouth rock

D. Rhodesian Red

Answer: A

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23. The production of new characteristics by introducing new genes and altering the genome is called:

A. Splicing

B. Genetics

C. Gene manipulation

D. Totipotency

Answer: C

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24. Plants raised through tissue culture technique are

(i) Genetically uniform (ii) Used as inoculum (iii) Genetically similar (iv) Called clones:

A. (i),(ii) and (iii) are correct

B. (i) and (iv) are correct

C. (ii) and (iii) are correct

D. (iii) and (iv) are correct

Answer: B

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25. Cultivation of Bt cotton has been much in the news. The prefix "Bt" means

A. Barium treated cotton seeds

B. Bigger thread variety of cotton with better tensile strength

C. Produced by Biotechnology using restriction enzymes.

D. Carryihng an endotoxin gene from Bacillus thuringiensis

Answer: D

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Revision Exercises Questions From State Board Examination

1. Vidya got a plant which was affected with a viral disease. Her objective is to raise a disease

free plant from this infected plant through tissue culture.

(a) Which part of the plant should be selected as the expalnt?

(b) State the reason for the selection of this part as the explant.

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2. Name the following :

(a) The semi-dwarf variety of wheat which is

high-yielding and disease-resistant.

(b) Any one inter-specific hybrid mammal.

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3. Scientific name of oak silkworm is

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4. Define biofortification.

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5. Write about multiple ovulation embryo transfer technology.

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6. Silkworms belong to Order.

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7. what is meant by ' hidden hunger?

Watch Video Solution

8. Define hybrid vigour.

Watch Video Solution

9. What do you mean by breed?

Watch Video Solution

10. What is meant by 'livestock'?

Watch Video Solution

11. Biofortification.

Watch Video Solution

12. Explant.

Watch Video Solution

13. Define heterosis.

Watch Video Solution

14. Which is most common species of honey bee?

Watch Video Solution

15. Write the full form of MOET.

Watch Video Solution

16. What is Pomato?

Watch Video Solution

17. Write the full form of IRRI.

Watch Video Solution

18. Write the full form of IARI.

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19. What is biofortification ?

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20. Name any two disease the 'Himgiri' variety of wheat is resistant to.

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21. Write the full form of SCP.

Watch Video Solution

22. Continuous breeding leads to inbreeding depressioin. If so define the following

(i) Outcrossing (ii) Crossbreeding.

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23. An objective of plant breeding is

Watch Video Solution

24. Explain what do you mean by suspension culture.

Watch Video Solution

25. Define the following terms:

(a) Apiculture (b) Biofortification (c) Pisciculture.

Watch Video Solution

26. Define the following terms:

(a) Single cell protein (b) Micropropagation (c) Inbreeding.

Watch Video Solution

27. what is emasculation ? Why and when is it done ?

Watch Video Solution

28. Write two advantages of disease resistant varieties in plant breeding.

Watch Video Solution

29. What are the merits of interspecific hybridiazation?

Watch Video Solution

30. Write the names of two primary and two secondary host plants of muga silkworm?

Watch Video Solution

31. What is meant by biofortification ?

Watch Video Solution

32. Define emasculation. How is it done?

Watch Video Solution

33. Golden Rice

Watch Video Solution

34. Define apiary. Name most preferred species of honey bees for apiculture.

Watch Video Solution

35. What is Single Cell Protein (SCP)? Write its advantages.

Watch Video Solution

36. Write two significances of single cell protein.

Watch Video Solution

37. Define artifical insemination. Write down two advantages of it.

Watch Video Solution

38. What is biofortification? What are objectives of it?

Watch Video Solution

39. What is selection ? Name the two methods of selection.

Watch Video Solution

40. Name the disease of silkworm caused by protozoan parasite. Mention the preventive measures against this disease.

Watch Video Solution

41. Which part of the plant is best suited for making virus-free plants and why?

Watch Video Solution

42. What are Cry proteins? Name an organism that produces it. How has man exploited this protein to his benefit?

Watch Video Solution

43. What is apiculture? How is it important in our lives?

Watch Video Solution

44. Why are the plants raised through micropropagation termed somaclones ?

(b) Mention two advantage of this technique .

Watch Video Solution

45. What is advantage is inbreeding in cattle? How does continued inbreeding affect the cattle population?

Watch Video Solution

46. Why does the yeild of both crop and honey increase when the beehives are kept in mustard crop fields during flowering season? Explain

Watch Video Solution

47. State the disadvantage of inbreeding among cattle. How it can be overcome?

Watch Video Solution

48. Define biocontrol. Which fungus is used for the treatment of plant diseases?

Watch Video Solution

49. Explain the meaning of the folowing with reference to human welfare.

a. Embryo culture b. Somatic hybridisation.

Watch Video Solution

50. Briefly describe the role of plant breeding to improve food production.

Watch Video Solution

51. What are advantages of biofertilizers over chemical fertilizers. Give an example of biofertilizer.

Watch Video Solution

52. What is single cell protein? Give two examples.

Watch Video Solution

53. What is cryopreservation ?

Watch Video Solution

54. Enumerate ate four objectives for improving the nutritional quality of different crops for the health benefits of the human population by the-process of "Biofortification".

Watch Video Solution

55. What is Single Cell Protein (SCP)? Name two algae used to produce SCP.

Watch Video Solution

56. What is biofortification ?

Watch Video Solution

57. Biofortification.

Watch Video Solution

58. What is biofortification ?

Watch Video Solution

59. Name the methods used in plant breeding.

Which is the oldest method?

Watch Video Solution

60. Define hybridization method of plant breeding.

Watch Video Solution

61. Which are the important components of poultry farm managements ?

(i) Selection of disease free and suitable breeds

(ii) Proper and safe farm condition

(iii) Proper feed and water

(iv) Hygiene and health care

Watch Video Solution

62. What do you mean by SCP? Give example.

Watch Video Solution

63. Biofortification is a practical approach to improve the public health. Name any four such crops released by IARI.

Watch Video Solution

64. Genetically modified plants have been used in many ways. Give any four advantages of such plants.

Watch Video Solution

65. What are transgenic animals. Give an example.

Watch Video Solution

66. What is interspecific hybridization ? Write one example of it.

Watch Video Solution

67. Write any three points that are important for successful bee-keeping.

Watch Video Solution

68. Write about multiple ovulation embryo transfer technology.

Watch Video Solution

69. Outcrossing.

Watch Video Solution

70. SCP.

Watch Video Solution

71. What is apiculture? How is it important in our lives?

Watch Video Solution

72. Mention the four traits for which plant breeding is done.

Watch Video Solution

73. What do you mean by Single Cell Protein? Give example. What is the Biofortification?

Watch Video Solution

74. Write the scientific names and their families of three important timber yielding plants of Assam?

Watch Video Solution

75. What do you understand by fishery? State its importance.

Watch Video Solution

76. Define apiculture . Name the products obtained from it .

Watch Video Solution

77. Resistance is the ability of prevent the pathogen from causing disease.

(a) Elucidate the steps in breeding for disease resistance.

(b) Cite two examples for virus resistant plants.

Watch Video Solution

78. Tissue culture is an achievement of plant breeding. What is a somaclone? Describe the

production of somatic hybrid.

Watch Video Solution

79. What is composite fish culture? Name the species involved in this culture.

Watch Video Solution

80. What is bee keeping? What are advantages of bee keeping on commercial basis?

Watch Video Solution

81. Write briefly the importance of bee keeping.

Watch Video Solution

82. What is single cell protein? Write any two uses of SCP.

Watch Video Solution

83. Name one exotic carp. What is hypophysation?

Watch Video Solution

84. What are Cry proteins? Name an organism that produces it. How has man exploited this protein to his benefit?

Watch Video Solution

85. Explain briefly:

(i) Vaccination (ii) Inbreeding depression

Watch Video Solution

86. Briefly explain:

(a) Somatic hybridisation (b) Importance of bee keeping.

Watch Video Solution

87. Briefly explain

(a) Mutation breeding in plants (b) Importance of poultry.

Watch Video Solution

88. Write a short note on diary farming.

Watch Video Solution

89. Enlist the applications of tissue culture.

Watch Video Solution

90. What is MOET? Describe is process in detail.

Watch Video Solution

91. What do genetically modified organisms (GMOs) do the food? How do they useful to use?

Watch Video Solution

92. Define the following terms:

Callus, Embryoid, Pisciculture, Explant, Germplasm

Watch Video Solution

93. What is SCP? Also write its significance.

Watch Video Solution

94. Name one bacterial disease of poultry birds,. What do you mean by poultry farm management?

Watch Video Solution

95. Write the technique of plant tissue culture.

Watch Video Solution

96. What is the culture? Write the advantages of tissue culture.

Watch Video Solution

97. What is mean by single cell protein? Mention the advantages of using microrganisms for SCP production.

Watch Video Solution

98. What is meant by the term 'breed'? What are the objectives of animal breeding?

Watch Video Solution

99. Describe the plant tissue culture process in brief.

Watch Video Solution

Revision Exercises Questions From Cbse Examinations

1. Give an example for an inter specific hybrid animal.

Watch Video Solution

2. Name the following :

(a) The semi-dwarf variety of wheat which is high-yielding and disease-resistant.

(b) Any one inter-specific hybrid mammal.

Watch Video Solution

3. Write the names of two semi-dwarf and high yielding rice varieties developed in India after 1966.

Watch Video Solution

4. Write the importance of MOET.

Watch Video Solution

5. How many chromosomes do drones of honeybee possess ? Name the type of cell division involved in the production of sperm by them.

Watch Video Solution

6. Which is the best breeding method for animals that are below average is production ?

A. interspecific hybridization

B. cross breeding

C. out breeding

D. out crossing

Answer:

Watch Video Solution

7. Mention the role of 'genetic mother' in MOET.

Watch Video Solution

8. A herd of cattle is showing reduced fertility and productivity . Provide one reason and one suggestion to overcome this problem.

Watch Video Solution

9. What are Cry genes ? In which organism are they present?

Watch Video Solution

10. Name the specific type of gene that is incorporated in a cotton plant to protect the plant against cotton boll worm infestation.

Watch Video Solution

11. Bt toxins are released as inactive crystals in the bacterial body what happens to it in the cotton boll workx body that it kills the boll worm?

Watch Video Solution

12. Select two disease resistant crop varieties from the list of crop varieties given below:

Himigiri, Pusa Gaurav, Pusa Komal, Pusa A-4

Watch Video Solution

13. Suggest a method to overcome excessive inbreeding depression.

Watch Video Solution

Revision Exercises Questions From Cbse Board Examination

1. Keeping beehives in crop fields during flowering period increases

Watch Video Solution

2. Following are the steps in MOET programme for herd improvement in which a cow has been administered hormones with FSH like activity. Arrange steps A to D in their correct sequence

in MOET

A. Transferred to surrogate mothers

B. It produces 6-8 eggs instead of one egg which they normally yield per cycle

C. It is artificially inseminated or mated with an elite bull

D. Fertilised eggs at 32 celled stage are recovered non-surgically

 Watch Video Solution

3. Expand MOET. Explain the procedure of this technology in cattle improvement.

Watch Video Solution

4. What is advantage of inbreeding in cattle? How does continued inbreeding affect the cattle population?

Watch Video Solution

5. MOET programme has helped in increasing the herd size of the desired variety of cattle. List the steps involved in conducting programme.

Watch Video Solution

6. State the disadvantage of inbreeding among cattle. How it can be overcome?

Watch Video Solution

7. Why are the plants raised through micropropagation termed somaclones ?

(b) Mention two advantage of this technique .

Watch Video Solution

8. Identify A,B,C and D in the given table:

Crop	Variety	Resistance to disease
A	Himgiri	Leaf rust
Cauliflower	Pusa Shubhra	B
Brassica	Pusa Swarnim	C
Cowpea	D	Bacterial blight

Watch Video Solution

9. Suggest four important steps to produce a disease resistant plant through conventional plant breeding technology.

Watch Video Solution

10. Large scale cultivation of Spirulina is highly advantageous to human population. Explain giving two reasons.

Watch Video Solution

11. In an agricultural field there is a prevalance of the following organisms and crop diseases which are affecting the crop yield badly:

a) White rust

b) Leaf and strips rust

dc) Black rot

d) Jassids

Recommend the varieties of crops the farmers should grow to get rid of te existing problem and thus improve the crop yeild

Watch Video Solution

12. By taking two examples how has bio-fortification helped in improving food quality.

Watch Video Solution

13. Growing Spirullina on a large scale is beneficial environmental and nutritionally for humans. Justify.

Watch Video Solution

14. How is somatic hybridisation carreied out? Mention one example of a somatic hybrid.

Watch Video Solution

15. Name the technology and write the procedure that can help a scientist to recover virus free sugarcane plants from diseased canes for his crop breeding experiments

Watch Video Solution

16. What is inbreeding depression? How is it caused inorganisms? Write any two advantages of inbreeding.

Watch Video Solution

17. How can crop varieties be made disease resistant to overcome food crisis in India? Explain. Name one disease resistant variety in India of:

(a) Wheat to leaf and stripe rust.

(b) Brassica to white rust.

Watch Video Solution

18. Enlist the steps involved in inbreeding of cattle. Suggest two disadvantages of this practice.

Watch Video Solution

19. Describe any three potential applications of genetically modified plants .

Watch Video Solution

20. Enumerate any six essentials of good ,effective Dairy Farm Management Practices.

Watch Video Solution

21. Plant breeding technique has helped sugar industry in North india Explain how.

Watch Video Solution

22. (a)Name any two fowls other than chickens reared in a poultry farm.

(b) Enlist four important components of poultry farm management.

Watch Video Solution

23. (a) Write the two limitations of traditional breeding technique that led to promotion of micro propagation.

(b) Mention of micro propagation.

(c) Give two examples where it is commercially adopted.

Watch Video Solution

24. a) What is inbreeding depression?

b) Explain the importance of "selection" during inbreeding in cattle.

Watch Video Solution

25. (a) Write the desirsble characters a farmer looks for in his sugarcane crop.

(b) How did plant breeding techniques help north Indian farmers to develop cane with desired characters ?

Watch Video Solution

26. Explain out-breeding out crossing and cross-breeding practices in animal husbandry.

Watch Video Solution

27. Differentiate between inbreeding and outbreeding in cattle. State one advantage and one disadvantage for each one of them.

Watch Video Solution

28. How did the plant breeders produce suitable varieties of sugarcane for cultivation in North India? Why did they do it?

Watch Video Solution

29. (a) What is inbreeding?

(b) Inbreeding of cattle is carried with as purpose, but is not continued for many generations. Do you agree? Give reasons in support of your answer.

Watch Video Solution

30. How is inbreeding advantageous as well as disadvantageous in cattle breeding

programme? (Mention any two advantages and two disadvantages)

Watch Video Solution

Revision Exercises Questions From State Board Examinations

1. Briefly describe various steps involved in plant breeding.

Watch Video Solution

2. What is tissue culture? How has it helped us in crop improvement?

3. What is Bee keeping? Write any four points for successful Bee keeping.

4. Discuss the role of microbes in production of household products.

Watch Video Solution

5. Microbes can be used to decrease the use of chemical fertilisers and pesticides. Explain how this can be accomplished.

Watch Video Solution

6. (a) What is heterosis? What role has it played in crop productivity?

(b) What are advantages of inter cropping and crop rotation.

Watch Video Solution

7. Define conventional method of plant breeding in five steps.

Watch Video Solution

8. Name a technology that has successfully increased herd size of cattle in a short time.

Watch Video Solution

Revision Exercises Questions From Cbse Board Examinations

1. (a) What is plant breeding? List the two steps the classical plant breeding involves.

(b) How has the mutation breeding helped in improving crop varieties? Give one example

where this technique has helped.

(c) How has the breeding programme helped in improving the public nutritional health? State two examples in support of your answer.

Watch Video Solution

2. a) Name the technology that has helped the scientists to propogate on large scale the desired crops in short duration, List the steps carried out to propogate the crops by the said

technique.

b) How are somatic hybrids obtained?

Watch Video Solution

3. With advancements in genetics, molecular biology and tissue culture, new traits have been incorporated into crop plants.

Explain the main steps in breeding a new genetic variety of a crop.

Watch Video Solution

4. (a) State the objective of animals breeding.

(b) List the impotance and limitations of inbreeding. How can the limitation be overcome ?

(c) Give example of a new breed each of cattle and poultry .

Watch Video Solution

5. (a) What is mutation breeding? Give an example of a crop and disease to which resistance was induced by this method.

(b) Differentiate between pisci-culture and aquaculture.

Watch Video Solution

Competition File Objective Type Questions

1. In the hexaploid wheat, the haploid (n) and basic (x) numbers of chromosomes are

A. n=21 and x=21

B. n=21 and x=14

C. n=21 and x=7

D. n=7 and x=21

Answer: C

 Watch Video Solution

2. A high density of elephant population in an area can result in

A. Intraspecific competition

B. Interspecific competition

C. Predation on one another

D. Mutualism

Answer: A

Watch Video Solution

3. India's wheat yield revolution of 1960 s was possible primarily due to

A. Hybrid seeds

B. Increased chlorophyll content

C. Mutations resulting in plant height reduction

D. Quantitative trait mutation

Answer: C

Watch Video Solution

4. The most likely reason for the development of resistance against pesticides in insect damaging a crop is

A. Random mutations

B. Genetic recombinaton

C. Directed mutations

D. Acquired heritable changes

Answer: A

Watch Video Solution

5. Emasculation is connected with:

A. Hybridization

B. Clonal selection

C. Mass selection

D. Pure line selection

Answer: A

Watch Video Solution

6. In maize, hybrid vigour is exploited by:

A. Bombarding the protoplast with DNA

B. Crossing two inbreed parental lines

C. Harvesting seeds from the most productive plants

D. Inducing mutations

Answer: B

Watch Video Solution

7. The new varieties of plants are produced by

A. Selection and hybridisation

B. Mutation and selection

C. Introduction and mutation

D. Selection and intorduction

Answer: A

Watch Video Solution

8. Blindness prevented by use of which crop in poor country?

A. Golden rice

B. Wheat

C. Maize

D. Oat

Answer: A

Watch Video Solution

9. Farmers in a particlular region were concerned that pre mature yellowing of leaves of a pulses crop might cause decrease in the yield. Which treatment could be most beneficial to obtain maximum seed yield?

A. Frequent irrigation of the crop

B. Treatment of the plants with cytokinin alongwith a small dose of nitrogen fertilizer

C. Removal of all yellow leaves and spray the remaining green leaves with 2,5-trichlorophenoxy acetic acid

D. Application or iron and magnesium promote synthesis of chlorophyll

Answer: D

Watch Video Solution

10. Which is linked to discovery of Bordeaux mixture as fungicide ?

A. Loose smut of wheat

B. Black rust of wheat

C. Bacterial leaf blight of rice

D. Downy mildew of grapes

Answer: D

Watch Video Solution

11. A transgenic food crop which may help in solving the problem of night blindness in developing countries is

A. Bt. Soyabean

B. Golden rice

C. Flavrsavr tomatoes

D. Starling maize

Answer: B

Watch Video Solution

12. Trichoderma-harzianum has proved a useful microorganism for :

A. Gene transfer in higher plants

B. Biological control of soil borne plant pathogens

C. Bioremediation of contaminated soils

D. Reclamation of waste lands

Answer: B

Watch Video Solution

13. Which proves to be effective biological control for nematodal pathogens of plants?

A. Gliocadium virens

B. Paecilomyces lilacinus

C. Pisolithus tinctorius

D. Pseudomonas cepacia

Answer: B

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14. Which is correctly matched?

A. Apiculture, Honey bee

B. Pisciculture, Silk moth

C. Sericulture: Fish

D. Aquaculture: Mosquitoes

Answer: A

Watch Video Solution

15. Name on disease of mulbery silkworm caused by a protozoan:

A. Pebrine

B. Graseri

C. Flacheri

D. Muscardine

Answer: A

 Watch Video Solution

16. The bacterium Bacillus thuringiensis is widely used in contemporary biology as

A. Indicator of water pollution

B. Insecticide

C. Agent for production of dairy products

D. Source of industrial enzyme

Answer: B

 Watch Video Solution

17. निम्न में से कौन एक जैव-कीटनाशक के रूप में प्रयुक्त नहीं होता है

A. Bacillus thuringiensis

B. Trichoderma harzianum

C. Nuclear Polyhedrosis Virus (NPV)

D. Xanthomonas campestris

Answer: D

Watch Video Solution

18. Which of the following is correctly matched?

A. Central Rice Research Institute-Shimla

B. National Botanical Research Institute-Delhi

C. Central Drug Research Institute-Cuttack

D. Central Food Technology Research Institute-Mysore

Answer: D

Watch Video Solution

19. Wonder wheat is a new wheat variety developed by

A. Mexico's International Wheat and Maize Improvement Centre

B. Indian National Botanical Research Institute

C. Australian Crop Improvement Centre

D. African Crop Improvement Centre

Answer: A

Watch Video Solution

20. Heating of milk of ant other liquid at 63° C and sudden cooling is known as :

A. Sterilization

B. Preservation

C. Pasteurization

D. Fermentation

Answer: C

 Watch Video Solution

21. Embryo developed from the somatic cells are called

A. Cybrid

B. Embryoid

C. Callus

D. Hybrid

Answer: B

Watch Video Solution

22. The most commenly maintained species of bee by bee keepers is

A. Apis mellifera

B. Apis dorasta

C. Apis indica

D. Apis florea

Answer: A

Watch Video Solution

23. Who was first to develop artificial skin by tissue culture?

A. Harrison

B. Carrel

C. Maximov

D. Eugene Bell

Answer: D

Watch Video Solution

24. "Jaya" and "Ratna" developed for green revolution in India are the varieties of :-

A. Maize

B. Rice

C. Wheat

D. Bajra

Answer: B

Watch Video Solution

25. Himgiri developed by hybridization and selection for disease resistance against rust pathogens is a variety of

A. Chilli

B. Maize

C. Sugarcane

D. Wheat

Answer: D

Watch Video Solution

26. When two unrelated individuals or lines are crossed, the performance of F_1 hybrid is often superior to both its parents. This phenomenon is called:

A. Heterosis

B. Transformation

C. Splicing

D. Metamorphosis

Answer: A

Watch Video Solution

27. Holstein-Friesian, Brown Swiss and Jersey are all well known

A. Exotic breeds of cow

B. Exotic breeds of goat

C. Exotic breeds of poultry

D. Animal husbandry scientists

Answer: A

Watch Video Solution

28. Which one of the following has maximum genetic diversity in India

A. Rice

B. Maize

C. Mango

D. Groundnut

Answer: A

 Watch Video Solution

29. A collection of plants and seeds having diverse alleles of all the genes of a crop is called :

A. Germplasm

B. Gene library

C. Genome

D. Herbarium

Answer: A

Watch Video Solution

30. Powdery mildew of wheat is caused by

A. Pucinia

B. Erysiphe

C. Ustilago

D. Albugo

Answer: B

Watch Video Solution

31. Consumption of which one of the following foods can prevent the kind of blindness associated with vitamin 'A' deficiency ?

A. Flavr Savr tomato

B. Canolla

C. Golden rice

D. Bt. Brinjal

Answer: C

Watch Video Solution

32. Apiculture is associated with which of the following groups of plants

A. Grapes, maize, potato

B. Sugarcane, paddy, banana

C. Guava, sunflower, strawberry

D. Pineapple, sugarcane, strawberry

Answer: C

Watch Video Solution

33. Dust, oolong and brick are varieties of :

A. Coffee

B. Pepper

C. Tea

D. Laung

Answer: C

Watch Video Solution

34. Pebrine disease in silkworm is caused by

A. Dugesia

B. Moncystis

C. Nosema

D. Plasmodium

Answer: C

Watch Video Solution

35. Which one of the following species of bees is used for the commercial production of honey?

A. Apis dorsata

B. Apis indica

C. Apis flora

D. Apis mellifera

Answer: C

Watch Video Solution

36. Which one of the following is a breed of cattle ?

A. Ayrshire

B. Ghagus

C. Kadakanati

D. Scamp

Answer: A

Watch Video Solution

37. Triticale is developed through intergeneric hybridisation of:

A. Wheat and rye

B. Maize and rice

C. Wheat and rice

D. Wheat and barley

Answer: A

Watch Video Solution

38. Which of the statement about breeding is wrong

A. By inbreeding pure lines cannot be evolved

B. Continued inbreeding, especially close inbreeding fertility and productivity

C. Cross-breeding allows desirable qualities of two different breeds to be recombined

D. Inbreeding exposes harmful recessive genes that are eliminated by selection

Answer: A

 Watch Video Solution

39. Breeding crops for improved nutritional quality is referred to as

A. Biomagnification

B. Biome

C. Biofortification

D. Biomining

Answer: C

Watch Video Solution

40. Green revolution in India occurred during

A. 1960's

B. 1970's

C. 1980's

D. 1950's

Answer: A

Watch Video Solution

41. In gobar gas, the maximum amount is that of

A. butane

B. methane

C. propae

D. carbon dioxide

Answer: B

Watch Video Solution

42. Pusa Komal variety of Cow pea is resistant to disease

A. White rust

B. Leaf curl

C. Bacterial blight

D. Hill bunt

Answer: C

Watch Video Solution

43. Which of the following is a variety of Himgiri?

A. Chilli

B. Cowpea

C. Cauliflower

D. Wheat

Answer: D

Watch Video Solution

44. Pusa Gaurav variety of Brassica is resistant to

A. Jassids

B. Aphids

C. Shoot borers

D. Fruit borers

Answer: B

Watch Video Solution

45. Besides paddy fields, cyanobacteria are also found inside vegetative part of:

A. Pinus

B. Cycas

C. Equisetum

D. Psilotum

Answer: B

Watch Video Solution

46. The first stable product of fixation of atmospheric nitrogen in leguminous plants is

A. NO_2^-

B. Ammonia

C. NO_3^-

D. Glutamate

Answer: B

Watch Video Solution

47. Which of the following Bt crops is being grown in India by the farmers ?

A. Maize

B. Cotton

C. Brinjal

D. Soyabean

Answer: B

Watch Video Solution

48. A good producer of citric acid is:

A. Aspergillus

B. Pseudomonas

C. Closteridium

D. Saccharomyces

Answer: A

Watch Video Solution

49. In anaerobic sludge digestion, during secondary treatment of sewage, biogas is produced which is a mixture of :

A. Methane and H_2S

B. (a) and CO_2

C. a,b and CO

D. a,b,c and ethane

Answer: B

Watch Video Solution

50. Several plant pathogens can be controlled by the biocontrol agent:

A. Phytophthora

B. Trichoderma harzianum

C. Albugo

D. Saccharomyces

Answer: B

Watch Video Solution

51. To make soya sause from soyabean meal, the fungas used is:

A. Penicillium

B. Aspergillus

C. Agaricus

D. Saccharomyces

Answer: B

Watch Video Solution

52. To obtain virus-free healthy plants from a diseased one by tissue culture technique, which part/parts of the diseased plant will be taken?

A. Both apical and axillary meristems

B. Epidermis only

C. Apical meristem only

D. Palisade parenchyma

Answer: C

Watch Video Solution

Watch Video Solution

53. An unorganised mass of cells is called

A. Totipotent

B. Explant

C. Callus

D. Corax

Answer: C

Watch Video Solution

54. The crops engineered for glyphosate are resistant/tolarant to

A. Fungi

B. Bacteria

C. Insects

D. Herbicides

Answer: D

Watch Video Solution

55. Which of the following enhances or induces fusion of protoplasts

A. Sodium chloride and potassium chloride

B. IAA and kinetin

C. Polyethene glycol and sodium nitrate

D. IAA and gibberellins

Answer: C

Watch Video Solution

56. Golden rice is a genetically modified crop plant where the incorporated gene is meant for biosynthesis of:

A. Vitamin

B. Vitamin C

C. Omega-3

D. Vitamin-A

Answer: D

 Watch Video Solution

57. Outbreeding is an important strategy of animal husbandry because it

A. Helpsin accumulation of superior genes

B. Is useful in producing pure lines of animals

C. Is useful overcoming inbreeding depresion

D. Express harmful recessive genes that are eliminated by selection

Answer: C

Watch Video Solution

58. Which of the following is Coleopteran?

A. Housefly

B. Mosquito

C. Both of these

D. Beetles

Answer: D

Watch Video Solution

59. Which of the following is variety of Brassica?

A. Pusa Swarnim

B. Pusa Guarav

C. Both of these

D. Pusa Komal

Answer: C

Watch Video Solution

60. Himgiri is resistant to:

A. Leaf and stripe rust

B. White rust

C. Black rot of crucifers

D. None of these

Answer: A

Watch Video Solution

61. Green revolution referes to increased production of

A. Green plants

B. Pulses

C. Milk

D. High yield variety crops

Answer: D

 Watch Video Solution

62. Rearing of honey bees is known as:

A. Apiculture

B. Sericulture

C. Pisciculture

D. Lac culture

Answer: A

Watch Video Solution

63. Among the following edible fishes, which one is a marine fish having rich source of omega -3 fatty acids ?

A. Mackerel

B. Mystus

C. Mangus

D. Mrigala

Answer: A

Watch Video Solution

64. Interspecific hybridization is the mating of

A. More closely related individuals within the same breed for 4-6 generations

B. Animals withiin the same breed without having common ancestors

C. Two different related species

D. Superior males and females of different breeds

Answer: C

Watch Video Solution

65. A system of rotating crops with legume or grass pasture to improve soil structure and fertility is called

A. Crop rotation

B. Ley farming

C. Contour farming

D. Strip farming

Answer: B

Watch Video Solution

66. Whch one of the following is an important breed of fowl?

A. Nageswari

B. Jersey

C. Rhode Island Red

D. Khaki campbell

Answer: C

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67. The process of breeding crops with higher levels of vitamins and minerals is reffered as:

A. Nutritional quality

B. Biofortification

C. Biological magnification

D. Mineralization

Answer: B

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68. A plant where endangered genetic material of plants are kept is

A. Gene library

B. Gene bank

C. Gene pool

D. Herbarium

Answer: B

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69. Process by which we can add or delete certain gene is:

A. Gene therapy

B. Biotechnology

C. Genetic engineering

D. Cytogenetics

Answer: C

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70. Disease free plants are produced by

A. Anther culture

B. Ovary culture

C. Shoot apex culture

D. Root apex culture

Answer: C

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71. Mycorrhizae are the example of

A. Fungistasis

B. Amensalism

C. Antibiosis

D. Mutualism

Answer: D

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72. Homozygous purelines in cattle can be obtained by

A. Mating of related individual of the same breed

B. Mating of unrelated individuals of the same breeds

C. Mating of individuals of different species

D. Mating of individuals of different species

Answer: A

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73. Artificial selection to obtain cows yielding higher milk output represents

A. Stabilizing selection as it stabilizes this character in the population.

B. Directional selection as it pushes the mean of character in one direction.

C. Disruptive selection as it splits population into two: one yielding higher output and other yeidling lower output

D. Stablizing selection followed by distruptive selection as it stabilizes the population to produce higher yielding cows

Answer: B

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74. The main purpose of embryo culture is for

A. Production of haploid plants

B. Production of virus free plants

C. Protoplast fusion

D. Embryo rescue

Answer: A

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75. Bacillus thuringiensis is used as

A. Biofertilizer

B. Biopesticide

C. Biocontroller

D. Bioweapon

Answer: B

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76. Bt cotton is resistant against

A. Salt

B. Herbicide

C. Insect

D. Drought

Answer: C

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77. Germplasm conservation at liquid nitrogen at $196^{\circ} C$ temperature is

A. Stratification

B. Cryopreservation

C. Scarification

D. None of above

Answer: B

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78. Consumption of which one of the following foods can prevent the kind of blindness associated with vitamin 'A' deficiency ?

A. Flavr savr tomato

B. Canola

C. Golden rice

D. Bt-brinjal

Answer: C

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79. Who developed the semi dwarf variety of wheat?

A. Noramal E. Borlaug

B. M.S. Swaminathan

C. Gregor Mendel

D. Herbett Boyer

Answer: A

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80. Baker's yeast is used in the prepation of edible product:

A. Curd

B. Bread

C. Idli

D. Fermented fish

Answer: B

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81. Which high -yielding semi dwarf variety of rice was developed in India?

A. Ratna

B. IR-8

C. Taicung Native-I

D. Kalyan sona

Answer: A

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82. Which high yielding semi dwarf variety of rice was developed in International Rice Reasearch Institute, Philippines?

A. IR-8

B. Taichung Native -I

C. Ratna

D. Jaya

Answer: A

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83. Which high yielding semi dwarf variety of rice was developed at Taiwan?

A. Taichung Native-I

B. Ratna

C. Jaya

D. IR-8

Answer: A

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84. Spirulina is:

A. Biofertilizer

B. Biopesticide

C. Edible fungus

D. Single cell protein

Answer: D

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85. Select disease resistant variety of bhindi produced by mutation breeding:

A. Himigiri

B. Parbhani Kranti

C. Pusa Gaurav

D. Pusa Komal

Answer: B

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86. Conversion of milk to curd improves its nutritional value of increasing the amount of

A. Vitamin-D

B. Vitamin $-B_{12}$

C. Vitamin-A

D. Vitamin-E

Answer: B

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87. Which of the 'following is true for Golden rice' ?

A. It is vitamin-A enriched, with a gene from daffodil

B. It is pest resistant, with a gee from bacillus thuringiensis

C. It is drought resistant, developed using Agrobacterium vector

D. It has yellow grains, because of a gene introduced from a primitive variety of rice

Answer: A

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88. What triggers activation of protoxin to active toxin of Bacillus thuringiensis in boll worm

A. Body temperature

B. Moist surface of midgut

C. Alkaline pH of gut

D. Acidic pH of stomach

Answer: C

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89. Match the columns:

Column-I	Column-II
1. Pusa Komal	(i) White rust
2. Himgiri	(ii) Bacterial blight
3. *Brassica*	(iii) Yellow mosaic virus
4. Prabhani Kranti	(iv) Leaf and stripe rust

Select the correct option:

A. 1-(ii),2-(iv),3-(i),4-(iii)

B. 1-(i),2-(ii),3-(iii),4-(iv)

C. 1-(iv),2-(i),3-(iii),4-(ii)

D. 1-(iv),2-(iii),3-(ii),4-(i)

Answer: A

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90. In Ti-Plasmid, which of the following is removed?

A. Auxin gene

B. Virulent gene

C. Cytokinin gene

D. Auxin and cytokinin gene

Answer: B

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91. Which of the following process is helpful in hybrid seed production:

A. Embryo rescue

B. Apomixis

C. Polymbryony

D. Somatic hybridisation

Answer: B

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92. Emasculation is the process of removal of:

A. Stigama

B. Stamens

C. Carpel

D. Petals

Answer: B

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93. Somatic hybridization can be done by:

A. Protoplast fusion

B. Cell culture

C. Haploid anther

D. Polle culture

Answer: A

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94. Cryopreservation is done at temperature

A. $106^{\circ} C$

B. $80^{\circ} C$

C. $-196^{\circ} C$

D. $20^{\circ} C$

Answer: C

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95. The plant part used in tissue culture is

A. Micriopropagation

B. Explant

C. Callus

D. Biofortification

Answer: B

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96. Meaning of prefix Bt in Bt-cotton is

A. Bacterial toxin

B. Biological toxin

C. Toxin released by Bacillus thuringiensis

D. Biotechnology

Answer: C

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Competition File Matching Type Questions

1. Match the items in column A with suitable terms in column B:

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2. Match the terms in column A with suitable terms in Column B.

Column A	Column B
(i) *Apis florae*	(a) Royal jelly
(ii) *Apis mellifera*	(b) Biological control of mosquitoes
(iii) *Gambusia*	(c) Jersey
(iv) Exotic breed	(d) Parthenogenetically developed
(v) Polyculture	(e) Little bee
(vi) Apiary	(f) Plymouth Rock
(vii) Queen	(g) Karan-Swiss
(viii) Drones	(h) Composite fish farming
(ix) Milch breed	(i) Exotic species of bee
(x) Cross breed	(j) Beehive

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3. Match the following varieties with their respective crops:

Variety	Crop
(i) Pusa swarnim	(a) Chilly
(ii) Pusa snowball	(b) Bhindi
(iii) Pusa sawani	(c) Cauliflower
(iv) Pusa sadabahar	(d) Brassica

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Competition File Assertion Reason Type Questions

1. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation

of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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2. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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3. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation

of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: B

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4. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation

of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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5. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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6. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation

of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: D

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7. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation

of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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8. Assertion: Indian ranks fifth in the world in cattle population, but figures poorly in milk production.

Reason: Buffaloes gives more milk with higher fat and mineral contents than cows.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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9. Assertion: Indian ranks fifth in the world in cattle population, but figures poorly in milk production.

Reason: Buffaloes gives more milk with higher fat and mineral contents than cows.

A. If both Assertion and Reason are true and the Reason is a correct explanation

of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: B

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10. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation

of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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11. Assertion (A) : In Indian dairy farms , the owners prefer to have buffaloes than the cows .

Reason (R) : Buffaloes yield more milk than the cows and their milk contains more fats .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Asssertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true and Reason is false.

D. If both Assertion and Reason are false.

Answer: B

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Chapter Practice Test

1. Select the indigenous breed of buffalo of Gujarat state:

A. Murrah

B. Mehsana

C. Surti

D. Nili Ravi

Answer:

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2. Veterinary Research Institute of India is locatated at:

A. Izatnagar

B. Kanpur

C. Muzaffrabad

D. Delhi

Answer:

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3. Breeding between unrelated animals of same breed but from different ancestories is called:

A. In-breeding

B. Cross-breeding

C. Out-breeding

D. Self-breeding

Answer:

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4. Rapid increase in fish production is called:

A. Green revolution

B. yellow revolution

C. White revolution

D. Blue revolution

Answer:

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5. Breeding crops with the objective of increased nutricional quality is called:

A. Biofortification

B. Biomagnification

C. Biodergradation

D. Bio-availability

Answer:

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6. Select the combination of wheat varieties:

A. Jaya and Sonalika

B. Sonalika and Ratna

C. Sonalika and Kalyan Sona

D. Kalyan Sona and IR-8

Answer:

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7. Define protoplast fusion. Give one example.

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8. Enlist steps of process of hybridisation in crop breeding. Give one advantage of hybridisation.

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9. Define single cell protein. What are its advantages.

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10. Name two main components of cattle fed and state their sources.

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11. What is inbreeding? State its one advantage and one disadvantage.

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12. What is mutation breeding? List two disease resistant crop plants produced by mutation breeding. Also list its two limitations.

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13. Write a note on MOET. Give its significance.

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14. (a) Define polyculture of fishes. Give its significance.

(b) Give the significance of hypophysation in fish breeding.

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15. (a) What is plant tissue culture? List various requirements of tissue culture medium.

(b) Define the terms explant and somaclones

(c) Which part of plant is best suited for producing virus free plants?

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