BIOLOGY

BOOKS - DINESH PUBLICATION

ENGLISH

PLANT BREEDING AND DISEASE CONTROL

Mcq

1. Picking up plants with superior phenotype for further propagation is

A. mass selection

B. Pure line selection

C. Hybrid vigour

D. Introduction

Answer: A

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2. Picking up only homozygous plants for further cultivation is known as

A. mass selection

B. pure line selection

C. clone

D. Acclimitization

Answer: B

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3. Heterosis cannot be maintained in sexually reproducing plants as it disappears on

A. Outbreeding

B. Inbreeding

C. Cross breeding

D. None of the above

Answer: B

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4. Polyploidy gives

A. Hybrid vigour

B. Improved varieties

C. Gigas effect

D. All the above

Answer: C

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5. Progeny is heterozygous in case of

A. Mutation

B. Autopoloidy

C. Hybridisation

D. Selective breeding

Answer: C

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6. Bagging is done to

(a) Achieve desired pollination

(b) Prevent contamination from unwanted

pollen

(c) Avoid self pollination

(d) Avoid cross pollination

A. Achieve desired pollination

B. Prevent contamination from unwanted pollen

C. Aviod self pollination

D. Avoid cross pollination

Answer: B

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7. Mexican wheat variety introduced in India was

A. Sonora 64

B. Lerma Rojo 64-A

C. Sonora-63

D. All the above.

Answer: D

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8. Norin -10 gene is famous for

A. Gigas effect

B. Dwarfing effect

C. Aromatic effect

D. Early maturation effect

Answer: B

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9. Norin - 10 gene is discovered in

A. India

B. USA

C. japan

D. France

Answer: C

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10. Norin - 10 gene is dwarfing gene of

A. Wheat

B. Rice

C. maize

D. mustard

Answer: A

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11. Dee-geo-woo- gen is dwafing gene of

A. Rice

B. Barley

C. Oat

D. Maize

Answer: A

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12. Modification and adjustment of an organism to local environment is called

A. Introduction

B. Selection

C. Acclimitisation

D. Quarantine

Answer: C

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13. What was the colour of high yielding mexican wheat ?

A. Sharbati Sonora

B. Pusa Lerma

C. Both A and B

D. Tanchung Native I.

Answer: C

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14. Potato famine of Irelend occurred in

A. 1645

B. 1745

C. 1845

D. 1854

Answer: C

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15. Potato famine of Irelend was caused by the attack of fungus

A. Phytophthara palmivara

B. Plasmopara viticola

C. Puccinia graminis

D. Phytophthara infestans

Answer: D

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16. Natural resistance to late blight of potato is present in

A. Solanum tuberosum

B. Solonum acaule

C. S. demissum

D. S. stoloniferum

Answer: C

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17. Maximum genetic diversity of crop plants occurs where agriculture is

A. Run on commercial lines

B. Advanced

C. Rainfed

D. Primitive

Answer: D

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18. Which one willl be searched for obtaining maximum genetic diversity ?

A. Recent varieties

B. Old varieties

C. Wild relatives

D. All the above.

Answer: D

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19. Breeding for disease resistance requires

A. A good source of resistance

B. Planned hybridisation

C. Disease test

D. All the above.

Answer: D

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20. Grains of major cereals and millets lack amino acids

A. Methionine and cysteine

B. Methionine and lysine

C. Typtophan and cysteine

D. Lysine and tryptophan

Answer: D

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21. Pulses usally lack amino acids

A. Methionine and tryptophan

B. Cysteine and methionine

C. Cysteine and trytophan

D. Methionine and tryptophan

Answer: B

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22. Lysine rich Maize variety is

A. Protina

B. Rattan

C. Shakti

D. All the above.

Answer: D

23. Saturated fatty acid that reduces oil quality

A. Palmitic acid

B. Stearic acid

C. Erucic acid

D. All the above.

Answer: C

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24. Antinutritional factor present is Rapeseed and Mustard oil cakes is

A. Glucosinolates

B. Cyanogenic glycosides

C. Isoflavonoids

D. cyanoalanine

Answer: A::C

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25. Prologed use of seeds of Lathyrus sativus causes a debilitating disorder due to presence of

A. Amygdalin

B. Cyanogenic glucosides

C. Neurotoxin

D. Glucosinolates.

Answer: B

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26. Evaluation of newly evolved varieties is carred out by

A. All agricultural universities

B. ICAR

C. IARI

D. National Bureau of plant Genetic Resources.

Answer: C

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27. Purity of seed is guranteed by

A. ICAR

B. NBPGR

C. National seed corporation

D. All the above

Answer: C

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28. Explant is

A. plant collected after harvesting

B. Exploited part of a plant

C. Smal part of the plant meant for tissue culture

D. Uprooted for transplantation.

Answer: c

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29. A technique of micropropagation is

A. Multiple shoot production

B. Multiple shoot production and somatic embryogenesis

C. Growth of microorganisma on culture medium

D. Somatic embryogensis.

Answer: A

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30. Embryoid is

A. Nonzygotic embryo

B. Nonfunctional embryo

C. Parthenogenatic embryo

D. An early stage in callus differentiation.

Answer: D

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31. name the tissue culture technique used to grow nonviable interspecific hybirds

A. Androgenic haplodis

B. Shoot tip culture

C. Somatic embrygenesis

D. Embryo rescue.

Answer: D

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32. Somatic hybridisation is achieved through ?

A. Grafting

B. Protoplast fusion

C. conjugation

D. Recombinant DNA techology

Answer: B

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33. Which one is required for protoplast fusion ?

(A) Treatment with cellulase and pectinase

(B) Electrofusion or PEG treatment

(C) Both A and B

(D) Recombinant DNA techology

A. Treatment with cellulase and pectinase

B. Electrofusion or PEG treatment

C. Both A and B

D. Recombinant DNA techology

Answer: C

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34. Tissue culture is

(a) Growth of specific plant structures on artificial medium

(b) Cryogenic maintenance of tissues

(c) Cryogenic maintenance of tissues

(d) Maintenance, growth and differentiation of cells, tissues and organs on articial medium

A. Growth of specific plant structures on articial medium

B. Cryogenic maintenance of tissues

C. Cryogenic maintenance of tissues

D. Maintenance, growth and differentiation of cells, tissues and organs on articial medium.

Answer: D

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35. The structure employed by White for first successful tissue culture was

(a) Root of Carrot

(b) Root of Tomato

(c) Leaf cells

(d) Apical meristem

A. Root of Carrot

B. Root of Tomato

C. Leaf cells

D. Apical meristem

Answer: B

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36. Callus formation is promoted by

A. Proper light and subculturing

B. Darkness and subculturing

C. Excess of NAA

D. Absence of salts.

Answer: B

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37. Differentiation of callus into plant parts is

A. Embryogenesis

B. Embryoid formation

C. Morphogenesis

D. Totipotency.

Answer: C

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38. Who discovered that morphogenesis in culture medium is controlled by hormones

A. muir et al

B. Vasil and Hilderbrandt

C. Skoog and Miller

D. Helperin and Wetherell

Answer: C

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39. Embryoid culture technique was discovered by

A. Guha and Maheshwari

B. Skoog and Miller

C. Muir et al

D. Steward

Answer: D

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40. The technique of protoplast fusion was developed by

A. Helperin and wetherell

B. Carlson et al

C. White

D. Steward

Answer: B

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41. Explant is required to be disinfected before placing in culture. This is done by

A. Autoclaving

B. Ultra- violet rays

C. Clorax or hypochlorite

D. X - rays

Answer: C

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42. An androgenic plant can be converted into homozygous diploid plant through the application of

A. Nitrogen mustard

B. Nitrous acid

C. Colchicine

D. Acridine orange

Answer: C

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43. Which technique can be helpful in over-coming hybridisation barrier

A. Shoot tip culture

B. Embryo rescue

C. Protoplast fusion.

D.

Answer: D

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44. On culturing the youn anther of a plant a botanist got a few diploid plants alongwith haploid plants. Which of the following might have given the diploid plants

A. Exine of pollen gram

B. Vegtative cell of pollen

C. Cells of anther wall

D. Generative cell of pollen.

Answer: C

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45. Emasculation of flowers is carried out through removal is

A. Stigma

B. sepals and petals

C. Anthers

D. Entire organism

Answer: C

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46. Corp improvement is possible through:

A. Judicious combination of selection, introduction and hybridisation

B. Selection

C. Scientific improvement of cultivated plant s

D. Introduction

Answer: A

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47. A major use of embryo culture is in

A. induction of somaclonal variations

B. Overcoming hybridisation barriers

C. Production of alkaloids

D. Clonal propagation.

Answer: B

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48. In Tobacco callus, which one shall induce shoot differentiation in combination of auxin and cytokinin

A. Higher concentration of cytokinin and lower concentration of auxin

B. Lower concentration of cytokin and higher concentration of auxin

C. only cytokinin and no auxin

D. Only auxin and no cytokinin.

Answer: A

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49. A toipotent cell means

A. An undifferentiated cell capable of developing into a system or entire plant

B. An undifferentiated cell capable of developing into an organ

C. An undifferentiated cell capable of developing into complete embryo

D. Cell which lacks the capability to differentiate into an organ or system.

Answer: A

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50. Heterosis is:

A. Hybrid sterility

B. Hybrid vigour

C. Hybrid incompatibilty

D. Hybrid inviability

Answer: B

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51. Which of the following methods in not used for crop improvement?

A. Inbreeding

B. Introduction

C. Hybridization

D. Mutations

Answer: A

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52. In crop improvement programme , haploids are important because they

A. Require one half of nutrients

B. Are helpful in study of meiosis

C. Grow better under adverse conditions

D. Form perfect homozygous individuals on diploidisation.

Answer: D

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53. Majority of the high yielding varieties of ? Indian rice ' have been developed by cross between :

A. Oryza sativa indica $\times$ oryza nivara

B. Oryza sativa indica $\times$ O. sativa japonica

C. O. sativa japanica $\times$ O. nivara

D. O. rufipogon $\times$ O. nivara.

Answer: B

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54. Tissue culture technique was first performed successfully by

A. Hiderbrandt

B. P.R. White

C. W .H. Muir

D. F.C. Steward

Answer: B

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55. Virus free plants can be obtained by

A. Antibiotic treatment

B. Bordeaux mixture

C. Root tip culture

D. Shoot tip culture.

Answer: D

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56. Tissue culture technique can produce infinite number of new plants from a small parental tissue. The economic improtance of the technique is in raising.

A. Variants through picking up somaclonal variations

B. Genetically unifrom population of an elite species

C. Homozygous diploid plants.

D. Development of new species.

Answer: B

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57. Haploids are preferred over diploids for mutation studies because in haploids:

(a) Recessive mutation express immediately

(b) Dominant mutations express immediately

(c) Mutation are readily induced

(d) Tissue culture is easy

A. Recessive mutations express immediately

B. Induction of mutations is easier

C.

D. Culturing is easier

Answer: A

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58. Four inbreed/pure lines of Maize are crossed the cross is

A. Double cross

B. Dihybrid cross

C. Tetrahybraid cross

D. Tetraploid cross.

Answer: C

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59. In high yielding 'hybrid crop varieties' to exploit hybrid vigour, the farmers need to purchase fresh hybrid seed every year, because

A. Govt, of India has accepted Dunkel's proposals

B. Hybrid vigour is lost due to inbreeeding depression

C. Farmers are not allowed to grow their own seeds

D. It is cheaper to purchase fresh seed.

Answer: B

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60. Desired improved varieties of economically useful crops are raised by

A. Vernalisation

B. Mutation

C. Natural selection

D. Hybridisation

Answer: D

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61. Haploid plant cultures are got from

A. Leaves

B. Root tip

C. Pollen grain

D. Buds

Answer: C

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62. Somacional variations are

A. Caused by Mutagens

B. Produced during tissue culture

C. Induced during sexual embryogeny

D. Caused by gamma rays.

Answer: B

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63. Removal of anthers of some flowers during plants breeding is

A. Anthesis

B. Emasculation

C. Pollination

D. For collection of pollen.

Answer: B

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64. Androgenic haploids are produced in anther cultures by

A. Raising stock fro microppagation

B. Induction of mutations

C. Knowing effect of all genes

D. preparation of homozygous diploids.

Answer: D

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65. Plants developed in vitro culture from pollen grains are

A. Androgenic haploids

B. Pollen plants

C. Male plants

D. Sterile plants

Answer: A

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66. In bacterial/tissue culture, glassware and nutrients are streilised through

A. Water bath at $200^{\circ} C$

B. Dry air oven at $200^{\circ} C$

C. Dehumidifier

D. Autoclave

Answer: D

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67. Callus is

A. Tissue that forms embryo

B. Ab insoluble carbohydrate

C. Tissue that grows of form embryoid

D. Unorganised actively dividing mass of cells maintained in culture.

Answer: D

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68. The enzymes required to obtain protoplast from a plant cell are

A. Cellulase and proteinase

B. Cellulase and pectinease

C. Cellulase and amylase

D. Amylase and pectinase

Answer: B

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69. mass selection is preferred in case of

A. Vegetatively propagated plants

B. Cross pollinated plants

C. Self pollinated plants

D. Both B and C.

Answer: C

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70. Crosses between, the plants of the same variety are called :

A. Intravarietal

B. Interspecific

C. Intervarietal

D. Intra-generic

Answer: A

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71. An old breeding technique is

A. Introduction

B. Selection

C. Mutation breeding

D. Hybridisation

Answer: D

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72. Development of shoot and root is determined by

A. Cytokinin and auxin ratio

B. Enzmes

C. Temperature

D. Plant nutrients

Answer: A

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73. A plant raised from a single germinating pollen grain under cultural conditions is called a

A. Diploid

B. Haploid

C. Triploid

D. Tetraploid

Answer: B

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74. Which of the following plant material is widely used in the preparation of the culture medium?

A. Cycas revoluta

B. Cocos nucifera

C. Pinus roxburghii

D. Borassus flabellifera.

Answer: B

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75. The main aim of plant breeding is to:

A. Control pollution

B. Keep soil fertile

C. Produce improved varieties

D. To maintain wild plants.

Answer: C

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76. True line breed refers to

A. Homozygosity and independent assortment

B. Homozyosity only

C. Heterozygosity

D. Heterozygosity and linkage.

Answer: B

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77. Quarantine regulation is meant for

A. Preventing entry of disesed plants/pathogen/wlid plants in the

country

B. Spraying diseased plants with insectcides

C. Promoting dry farming

D. Growing friut trees in all states.

Answer: A

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78. Why is hybrid vigour best maintained in vegetatively propagated crops?

A. Resistant to diseases

B. Easily propagated

C. With long life span

D. Little liable to lose vigour due to absence of sexual reproduction.

Answer: D

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79. Which will vanish in the absence of human help

A. Rice

B. Wheat

C. Maize

D. Potato

Answer: C

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80. The new varieties of plants are produced by

A. Selection and hybridisation

B. Mutation and selection

C. Introduction and mutation

D. Selection and introduction

Answer: A

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81. Clonal cell lines are got from

A. Tissue culture

B. Tissue fractionation

C. Tissue homogenisation

D. Tissue system

Answer: A

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82. In tissue culture, callus can be induced to form shoot or root by altering the ratio of:

A. Auxin to cytokin

B. Cytokinin to ethylene

C. Auxin to gibberellin

D. Gibberellin to cytokinin.

Answer: A

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83. A somatic hybride between potato and tomato is named as

A. Tomapo

B. Pomato

C. Potamato

D. None of the above.

Answer: B

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84. Pomato is a

A. Somatic hybrid

B. Natural haploid

C. Sometic embryoid

D. Somaclonal variant

Answer: A

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85. Farmers cannot use seeds of plants showing hybrid vigour in successive years because

A. Hybrid vigour is lost on inbreeding

B. Dunkel's proposals

C. They are not allowed to sow their own seeds

D. It is cheaper to purchase fresh seed.

Answer: A

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86. Norin gene' of dwarfness in wheat originated through spontaneous mutation in

A. India

B. Japan

C. Mexico

D. U.S.S.R.

Answer: B

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87. In maize, hybrid vigour is exploited by

A. Reperated crossing

B. Repeated selection

C. Vegetative propagation

D. Repeated selfing

Answer: D

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88. Wild varieties of plants must be conserved to

A. Maintain ecosytem

B. Feeding wild animals

C. Future evolution

D. Incoroporate useful traits in future crop varieties.

Answer: D

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89. Androgenic haploids were produced from anther culture for the first time by

A. Bateson

B. Ninan

C. Auerbach and stadler

D. Gucha and maheswari

Answer: D

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90. Excretion is removal of

A. Stigma from flower of male parent

B. Calyx from flower of male parent

C. Calyx from flower of female parent

D. sStamens from flowers of female parent

Answer: D

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91. Selection is the method of

A. Cytology

B. Plant physiology

C. Plant breeding

D. Genetics

Answer: C

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92. Chemofusion and electrofusion are employed in

A. Eugenics

B. Protoplast fusion

C. Cloning

D. Mutations

Answer: B

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93. IPGRI is

A. Indian plant Genetic Resource Institute

B. International plant Genetic Resources institute

C. International pine Genetic Resource Institute

D. International Potato Genetic Resource Insitiute.

Answer: B

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94. Emasculation is related to

(a) Pure line

(b) Mass selection

(c) Clonal selection

(d) Hybridisation

A. Hybridisation

B. Pure line selection

C. Mass selection

D. Clonal selection

Answer: A

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95. Plant breeder who developed the first hybrid was

A. Fairchild

B. Mendel

C. Swaminathan

D. Maheshwari

Answer: A

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96. In pedigree method of hybridisation upto which generation the plants tested and released for cultivation

A. (a) F_2 generation

B. (b) F_3 generation

C. (c) F_4 generation

D. (d) F_6 generation

Answer: B

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97. Differentiation of shoot is promoted by

A. High auxin : cytokinin ratio

B. High cytokinin : auxin ratio

C. High gibberellin : auxin ratio

D. High gibberellin : cytokinin ratio

Answer: B

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98. Murashige and Skoog's medium is used for

(a) Bacterial cultures

(b) Raising plants through micropropagation

(c) Culture of Spirulina

(d) Isolation of fungal strains

A. Bacterial cultures

B. Raising plants through micropropagation

C. Culture of Spirtulina

D. Isolation of fungal strains

Answer: B

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99. The capacity to generate a whole plant from any cell/explant is called

A. Totipotency

B. Ontogeny

C. Phylogeny

D. Proliferation

Answer: A

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100. Alongwith auxin, another hormone is used in culture technique. It is

A. Gibberellin

B. Cytokinin

C. Ethylene

D. Coumarin

Answer: B

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101. A cybrid is hybrid carrying

(s) Genomes and Cytoplams of two different plants

(b) Cytoplasms of two different plants

(c) Cytoplasms of two different plants but genome of one plant

(d) Cytoplasms of several plants but genomes of two plants(a)

A. Genomes and Cytoplams fo two different plants

B. Cytoplasms of two different plants

C. Cytoplasma of two different plants but genome of one plant

D. Cytoplasma of several plants but genomes of two plants.

Answer: C

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102. The technique of obtaining large number plantelts by tissue culture methods is called

A. Micropropagtion

B. Macropropogation

C. Organ culture

D. Plant culture.

Answer: A

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103. India's wheat yield revolution in the 1960s, was possible primarily due to

A. Hybrid seeds

B. Mutations resulting in plants height reduction.

C. Increased chlorophyll content

D. Quantitative trait mutation

Answer: B

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104. The name of Norman Borlaug is associated with

A. White revolution

B. Green revolution

C. Blue revolution

D. Yellow revolution

Answer: B

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105. The phenomenon where the offspring superior than either of the parents is:

A. Heterosis

B. Inheritance

C. Penetrance

D. Influence.

Answer: A

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106. Cross between two species of the same genus is

A. Intraspecific hybridisation

B. Intervaietal hybridisation

C. Interspecific hybridisation

D. Intergeneric hybridisation

Answer: C

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107. Haploids from anther were first obtained from

A. Brassica

B. Datura

C. Nicotiana

D. Gossypium

Answer: B

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108. Somatic hybridisation is carried out by

A. Pollen culture

B. Cell culture

C. Protoplast fusion.

D. Haploid culture.

Answer: C

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109. Callus is

A. Palnt hormone

B. Root foramation in culture media

C. Plant byproduct

D. Undifferentiated mass of tissue.

Answer: D

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110. Which pair of substances are used to induce shoot formation and root formation respectively during organogenesis ?

A. Hydrogen peroxide and chlorine

B. Auxins and cytokinins

C. Cytokinins and auxins

D. Ethylene and abscisic acid.

Answer: C

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111. Agitation of liquid tissue culture serves the purpose of

(a) Aeration

(b) Constant mixing

(c) Breaking cell aggregates

(d) All the above

A. Aeration

B. Constant mixing

C. Breaking cell aggregates

D. All the above.

Answer: D

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112. Anther culture/androgenesis is used to produce

A. Male plants

B. Sterile plants

C. Haploids

D. All the above.

Answer: C

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113. Each of the following questions/statements has four suggested answers. Rewrite the correct answer in each case:

(iii) Both in callus and suspension cultures commonly used auxin is

A. NAA

B. IBA

C. 2,4-D

D. 2,4,5-T

Answer: C

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114. which is not correctly matched ?

A. Explant-Excised plant part used for callus formation

B. Cytokinins - Root initiation in callus

C. Somatic embryos- Embryos produced by vegetative cells

D. Anther culture-Haploid plants

Answer: B

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115. In callus culture , root can be induced by supply of

A. Ethylene

B. Gibberellin

C. Cytokinin

D. Auxin.

Answer: D

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116. The terminator gene technology causes

A. Helps in terminationg flowering

B. Helps in terminating seed germination

C. Used in hybridisation

D. None of the above.

Answer: B

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117. Axenic culture is

(a) pure culture without any contamination

(b) pure culture without any nutrient

(c) Culture of tissue

(d) Culture of gene

A. pure culture without any contaminaion

B. pure culture without any nutrient

C. Culture of tissue

D. Culture of gene

Answer: A

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118. In initial stages of protoplast culture, sorbitol of mannitol is added as

(a) Source of carbon

(b) Osmotic stabilizer

(c) Additional source of energy

(d) To keep cells alive after removal of cell wall

A. Soruce of carbon

B. Osmotic stabilizer

C. Additional source of energy

D. To keep cells alive after removal of cell wall.

Answer: B

119. Androgenic haploidy makes use of cells

(a) Anther cells

(b) Callus cells

(c) Megaspore cells

(d) Microspore cells

A. Anther cells

B. Callus cells

C. megaspore cells

D. Micropore cells.

Answer: A

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120. The technique that was employed to produce haploids of datura was :

A. Meristem culture

B. Anther culture

C. Embryo culture

D. Protoplast culture

Answer: B

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121. In maize, hybrid vigour is exploited by

A. Crossing two indreed lines

B. Inducing mutations

C. Bombarding the protoplast with DNA

D. Harvesting seeds from most productive plants.

Answer: A

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122. The branch of biology which deals with improvement of plant variety

A. Eugenics

B. Plant breeding

C. Agrology

D. Serendipity

Answer: B

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123. In which nematode infection is observed

A. Leaves

B. Stem

C. Root

D. Flowers

Answer: C

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124. The disease root-knot of brinjal is caused by

A. Phytophthara infestans

B. Melodiaogyne incognita

C. Fusarium udum

D. Xanthomonas citiri

Answer: B

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125. Normal borlaug, father of green revolution, developed new varieties of

(a) Paddy

(b) Rice

(c) Wheat

(d) Sugarcane

A. Paddy

B. Rice

C. Wheat

D. Sugarcane

Answer: C

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126. Which is incorrectly matched?

(a) Explant - Excised plant part used for callus formation

(b) Cytokinins - Root initiation in callus

(c) Somatic embryos- Embryos produced by vegetative cells

(d) Anther culture-Haploid plants

A. Explant - Excised plant part used for callus formation

B. Cytokinins - Root initiation in callus

C. Somatic embryos- Embryos produced by vegetative cells

D. Anther culture-Haploid plants

Answer: B

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127. It shows correct chronological order of the event s occurring during callus cutlure

A. Explant $\rightarrow$ cell divison $\rightarrow$ callus $\rightarrow$ Addition of Cytokinin $\rightarrow$ cells acquire meristematic property

B. Callus $\rightarrow$ Explant $\rightarrow$ Cell divison $\rightarrow$ Addition of Cytokinin $\rightarrow$ cells acquire meristermatic property

C. Callus $\rightarrow$ Cell divison $\rightarrow$ Explant $\rightarrow$ Addition of Cytokinin $\rightarrow$ Cells acquire meristermatic property

D. Explant $\rightarrow$ callus $\rightarrow$ cell divison $\rightarrow$ Addition of Cytokinin $\rightarrow$ cells acquire meristematic property.

Answer: A

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128. Tissue culture medium is sterilised by

A. (a) Antifungal agents

B. (b) Keeping at $-20^{\circ}C$

C. (c) Autoclaving at $120^{\circ} C$ for 15 minutes

D. (d) Filtering the medium

Answer: C

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129. The process in which mature differentiated cells reverse to meristematic activity to form callus is called

A. Differentiation

B. Cytodifferentiation

C. Redifferentiation

D. Dedifferentiation

Answer: D

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130. Cross between unrelated group of organisms is called

A. Hybridisation

B. Heterosis

C. test cross

D. Back cross.

Answer: C

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131. Protoplast isolation was first carried out by

A. (a) Mendel

B. (b) Cocking

C. (c) Bateson

D. (d) Skoog

Answer: B

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132. First man-made cereal Triticale is

A. (a) Diploid

B. (b) Hexaploid

C. (c) Octaploid

D. (d) Both B and C.

Answer: D

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133. Asserion : In plant tissue culture, somatic embryos can be induced from any plant cell.

reason : Any viable plant cell can differentiate into somatic embryos.

A. if both are true with reason being correct explanation

B. both true but reason is not correct explanation

C. assertion true but reason wrong

D. both wrong

Answer: A

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134. Match the columns and identify the correct choice

I		II		III	
a.	Pigeon Pea	*i.*	Root knot	1.	*Pseudomonas*
b.	Brinjal	*ii.*	Ear cockle	2.	*Fusarium*
c.	Sugarcane	*iii.*	Wilt	3.	*Anguina*
d.	Wheat	*iv.*	Red stripe	4.	*Meloidogyne*

A. a-iii-2,b-i-4,c-iv-1,d-ii-3

B. a-i-2,b-iii-4,c-ii-3,d-iv-1

C. a-iv-3,b-i-2,c-iii-I,d-ii-4

D. a-iii-4,b-ii-1,c-iv-3,d-1-2

Answer: A

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135. Pick up the wrong statement

A. Pectinase and cellulase dissolve cell wall

B. Some cyanobacteria form symbiotic association with fern Azolla

C. Regeneration of cell wall in somatic hybridisation is induced by PEG

D. Shoot regenertion in callus is promoted by cytokinin like BAP.

Answer: C

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136. Pests which only feed and oviposit on crop are

(a) Major pests

(b) Minor pests

(c) Accidental pests

(d) Occasional pest

A. major pests

B. Minor pests

C. Accidental pests

D. Occasional pests.

Answer: A

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137. Which one of the following statements are not related to Scirpophage incertulus

A. Adult stage does not damage crop

B. It is polyhagous pest

C. if feeds on inner stem tissue

D. It is active in evening

Answer: B

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138. The problem of necrosis and senescence in tissue culture is overcome by

A. Spraying cytokinins

B. Spraying auxins

C. Suspension culture

D. Subculture

Answer: D

Watch Video Solution

139. match the columns

I	II
a Mutation breeding	1. Johannsen
b Inbreeding depression	2. Karpechenko
c Pureline selection	3. Darwin
d Intergeneric hybridisation	4. Staddler
	5. Shull

(a) a -4, b-2,c-5,d-1

(b) a-4,b-5,c-2,d-1

(c) a-4,b-5,c-1,d-2

(d) a-5, b-4,c-1,d-2

A. a -4, b-2,c-5,d-1

B. a-4,b-5,c-2,d-1

C. a-4,b-5,c-1,d-2

D. a-5, b-4,c-1,d-2

Answer: C

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140. Assertion: Citrullus vulgaris is produced from a cross between 4n male and 2n female plants.

Reason: These triploid sterile plants do not bear seeds.

A. A and r are true with r being correct explanation of a.

B. Both a and r are true but r being correct explanation of a.

C. a is true but r is false.

D. a is false but r is true.

Answer: D

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141. Which one is correct matching ?

A. Potato- Late blight - Fusarium udum

B. Citrus - Canker - Pseudomonas rubrilineans

C. Brinjal - Root Knot - Meloidogyne incognita

D. Pigeon pea- seed Gall- Phytophthara infestans.

Answer: C

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142. A man - made genus produced by a cross between cabbage and

Radish is

A. Bursa pastoris

B. Lysogenicophyll

C. Raphanobrassica

D. Secale

Answer: C

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143. which of the following is man -made?

A. Triticum

B. Cicer arietinum

C. Truticale

D. Secale

Answer: C

Watch Video Solution

144. which are correct in the following ?

1. Sterile triploid-Banana and other seedless fruirts.

2. Somaclonal variations - Differences

apperaring in tissue culture

3. Embryodis -Non-zygotic embryos produced from somatic cells

4. Pulses belong to cruciferae.

A. 1,2,3 correct

B. 1,2 correct

C. 2,4 correct

D. 1,3 correct

Answer: A

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145. In protoplast fusion, the enzymes required are

A. (a) Cellulase, hemicellulase, pectinase

B. (b) Pectinase

C. (c) Ligase, hemicellulase

D. (d) Hemicellulase

Answer: A

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146. Chick pea is being grown in area where bacterial blight is common. What measurus (a-d) should be taken

(a) Spraying Bordeaux mixture

(b) Controlling Bordeaux mixture

(c) Controlling insect or vector of pathogen

(d) use seeds of disease resistant variety

A. c,d

B. a,d

C. b,c

D. a,b

Answer: B

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147. Haploids are more stuitable for mutation studies than the diploids. This is because

A. Haploids are more abundant than diploid

B. Haploids are resproductively more stable

C. All mutations whether dominant or recessive are expressed in haploids

D. Mutagens pentrate haploid more effectively than diploids

Answer: C

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148. Bacterial leaf blight of rice is a caused by a species of

A. Alternaria

B. Erwinia

C. Xamthomonas

D. Pseudomonas

Answer: C

Watch Video Solution

149. Polyplploidy can be produced artificially by

A. colchicine

B. Inbreeding

C. Line breeding `

D. Self pollination

Answer: A

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150. Pollen grains of a plant whose 2n = 28 are cultured to get callus by tissue culture method. What would be the number of chromosomes in the cells of the callus ?

A. 56

B. 28

C. 21

D. 14

Answer: D

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151. Genetic diversity in agricultural crops is threatened by :

A. Extensive use of insecticides and pesticides

B. Extensive mixed cropping

C. Introduction of high yielding varieties

D. Extensive use by fertilizers.

Answer: C

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152. Somatic cell hybrids are produced with the help of

(a) Polyhydroxy glycol

(b) Polyethylene glycol

(c) Polycinyl glycol

(d) Polypropylene glycol

A. Polyhydroxy glycol

B. Polyethylene glycol

C. Poltycinyl glycol

D. Polypropylene glycol.

Answer: B

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153. Internatinal rice research institue (IRRI) is located in

A. India

B. Philippines

C. japan

D. Mexico

Answer: B

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154. By which of the following methods, new and better varieties of plants can be formed?

A. selection

B. Hybridisation

C. Grafting

D. Hybridisation followed by selection

Answer: D

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155. Cellular totipotency was first demonstrated by:

A. T. Schwann

B. A.V Leeuwenhoek

C. F.C steward

D. Robert Hooke.

Answer: C

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156. Green potatoes are toxic because of

A. Solanine

B. Phytoalexins

C. Triazine

D. Hormones

Answer: B

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157. The Triticum aestivum wheat is

(a) Haploid

(b) Diploid

(c) Tetraploid

(d) Hexaploid

A. Haploid

B. Diploid

C. Tetraploid

D. Hexaploid

Answer: D

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158. Cellular totipotency is demonstrated by :-

A. Gymnosperm cells

B. All plant cells

C. Only bacterial cells

D. All eukaryotic cells.

Answer: B

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159. Find the correct match

I	II
(a) Use of bisexual flowers as female flowers	i. Clonal selection
(b) Incorporation of several desirable characters into a single variety	ii. Pure line selection
(c) Exploiting hybrid vigour for several generations	iii. Emasculation
(d) Improving local varieties of self pollinated plants	iv. Hybridisation
	v. Polyploidy breeding

A. a-iv,b-v,c-iii, d-i

B. a-ii,b-iii,c-iv,d-v

C. a-iii,b-iv,c-I,d-ii

D. a-I,b-v,c-ii,d-iv

Answer: C

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160. Assertion : Somaclonal variations may be present in plants produce from callus.

Resons : Somaclonal variations are caused due to recombination during meiosis.

A. Both a and r are true and r is the correct explanation of a

B. Both a and r are true but r is not the correct explanation of a

C. a is true but r is false

D. a is false but r is true.

Answer: C

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161. Polyethylene glycol method is used for

A. Seedless friut production

B. Energy production from sewage

C. Gene transfer without a vector

D. Biodiesel production.

Answer: C

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162. Which species of sugarcane was originally grown in North India, but had poor sugar content and yield?

A. S. officinarum

B. S. barberi

C. S. baulardii

D. S. munja

Answer: B

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163. Which tissue shows totipotency

A. Sclerenchyma

B. Parenchyma

C. Xylem vessels

D. Sieve tubes.

Answer: B

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164. Maize hybrids have been developed for higher amount of.

A. Methionine

B. Lysine

C. Leucine

D. Cysteine

Answer: B

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165. Callus is not produced in

A. Wound

B. Tissue culture

C. Suspension culture

D. Sexual reproduction.

Answer: D

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166. Which of the following is a bacterial disease?

A. Tikka diseases of Groundnut

B. Downy mildew of Grapes

C. Ring rot of potato

D. Red rot of Sugarcane

Answer: C

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167. Breeding for disease resistance requires

A. Disease test

B. A good source of resistance

C. Planned hybridisation

D. All the above.

Answer: D

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168. Pusa Swarnim a variety of Brassica is resistant to

A. Bacterial blight

B. White rust

C. Curl and black rot

D. Mosaic virus.

Answer: B

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169. The first man made cereal Triticale has been developed from a cross between

A. Maize and Rye

B. Maize and grass

C. Rice and Rye

D. Heterosis.

Answer: D

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170. Production of superior F_1 hybrids is called

A. Emasculation

B. Domestication

C. Inbreeding

D. Heterosis.

Answer: D

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171. Pieces of plant used in tissue culture is called

A. Explant

B. Somaclone

C. Inoculant

D. Clone.

Answer: A

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172. Jaya and Ratna are the semi-dwarf varieties of

A. Maize

B. Wheat

C. Rice

D. Barley

Answer: C

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173. Somatic embryo can be developed in plant tissue culture from:

A. Somatic cell

B. Single germiline cell

C. Any fertilised cell

D. Anther

Answer: A

Watch Video Solution

174. Himgiri, a variety of wheat is resistant to:

A. White rust

B. Mosaic viruses

C. Bacterial blight

D. Leaf and stripe rust.

Answer: D

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175. Who initiated collaboration with Norman borlaug which culminated in green revolution in india ?

A. Dr W. Dudgeon

B. DrPanchanan Maheshwari

C. M.S Swawinathan

D. Ram Deo Misra.

Answer: C

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176. In tissue culture medium, the soruce of phytohormones is

A. Ager agar

B. Micronutrients

C. Glucose

D. Coconut milk.

Answer: D

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177. Meristem culture is practised in horticulture to get:

A. Somaclonal variations

B. Haploid plants

C. Virus free plants

D. Slow growing plants

Answer: C

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178. 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. Metamorphosis

B. Heterosis

C. Splicing

D. Transformation

Answer: B

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179. Which is wrongly matched

A. Root - Exarch protoxylem

B. Cassia- Imbricate aestivation

C. Root pressure- Guttation

D. Puccinia- Smut.

Answer: D

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180. Consider one of the following statement (A-D) about oganic farming

(1) utlizes genetically modified crops like bt cot ton

(2) uses only natureally produced inputs like compost

(3) does not use pesticvides and urea

(4) produces vegetables rich in vitamins and minerals

A. b,c and d

B. c and d only

C. a and b only q

D. b and c only

Answer: D

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181. Which part would be most suitable for raising virus-free plants for micrpropagation ?

A. Bark

B. Node

C. Vascular tissue

D. Meristem

Answer: D

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182. For hybridisation which part is removed from bisexual flowers

A. Stigma

B. Stigma and style

C. Anthers

D. Ovary

Answer: C

 Watch Video Solution

183. In plant tissue culture, the callus tissues can be regenerated into complete plantlets primarily by altering the concentration of

A. Hormones

B. Amino acids

C. Vitamins

D. Sugars

Answer: A

Watch Video Solution

184. The principle cereal crop of India is:

A. Wheat

B. Rice

C. Maize

D. Barley

Answer: B

Watch Video Solution

185. Totipotency is the basic principle of

A. Tissue culture

B. Silviculture

C. Sericulture

D. Pisciculture.

Answer: A

Watch Video Solution

186. Green revolution in india occurred during

A. 1950s

B. 1960s

C. 1970s

D. 1980s

Answer: B

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187. Read the following four statements (A - D)

(1) Colostrum is recommended for the new born because it is rich in antigens

(2) Chikungunya is caused by a Gram negative bacterium

(3) Tissue culture has proved useful in obtaining virus free plants

Beer is manufactured by distillation of

fermented grape juice

How many of the above statements are wrong?

A. Four

B. three

C. Two

D. One

Answer: B

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188. Consider the following four statement (1-4) and select the option which includes all the correct ones only

(1) Single cell Spirulina can produce large quantities of food rich in protein, minerals, vitamins etc

(2) Body weight-wise the microorganism Methylophilus methylotrophus may be able to produce several times more proteins then the cows pe day

(3) Common button mushrooms are a very rich source of vitamin C

(4) A rice variety has been developed which is very rich in calcium

A. c and d

B. a, c and d

C. b,c and d

D. a and b

Answer: D

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189. Pusa Komal variety of cow pea is resistant to disease :

A. White rust

B. Leaf curl

C. Bacterial blight

D. Hill bunt

Answer: C

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190. An example for semi dwarf variety of wheat is

A. Sonalika

B. IR-8

C. Triticum

D. Saccharum

Answer: A

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191. Which of the statement about breeding is wrong ?

A. Continued inbreeding reduces fertility and productivity

B. By inbreeding pure lines cannot be evolved

C. Cross breeding allows desirable quanlities of two different breeds to be combined

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

Answer: B

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192. Breeding crops for improved nutritional quantity is referred to as

(a) Biome

(b) Biomagnification

(c) Biomining

(d) Biofrotification

A. Biome

B. Biomagnification

C. Biomining

D. Biofrotification

Answer: D

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193. What is somatic hybridisation?

A. Cellulase

B. Primase

C. Pectinase

D. Both A and c

Answer: B

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194. The final step in the tissue culture programme before the new plants are taken out for cultivation in the fields in known as:

1) Micropropagation

2) Embryogenesis

3) Totipotency

4) Hardening

A. Micropropagation

B. Caulogenesis

C. Hardening

D. Embryogenesis

Answer: C

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195. In plant breeding programmes, the entire collection (of plants/seeds) having all the diverse alleles for all genes in a given crop is called

A. Germplasm collection

B. Selection of superior recombinants

C. Cross hybridisation among the selected parents

D. Evalution and selection of parents

Answer: A

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196. Which of the following statements is not true about somatic embryogenesis?

A. Somatic embryos can develop from micropores

B. Somatic embryo is induced usually by an auxin such as 2, 4-D

C. A somatic embryo develops from oa somatic cell

D. Pattern of development of a somatic embryo is comparable to that of a zygotic embryo

Answer: A

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197. Genes of interest can be selected form a genomic library by using

A. DNA probes

B. Gene targets

C. Restriction enzymes

D. Cloning vectors.

Answer: A

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198. A plant hormone used for inducing morphogensis in plant tissue culture is

A. Gibberellins

B. Exthylene

C. Cytokinins

D. ABA

Answer: C

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199. Bomato is somatic hybrid between:

A. Brinjal and tomato

B. Beet root and potato

C. Bean and tomato

D. Bean and potato.

Answer: A

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200. Crop rotation is used by farmers to increase

A. Nitrogenous content of soil

B. Organic content of soil

C. Community area

D. Soil fertility

Answer: D

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201. plants which require human help for cultivation are called

A. Indigenous

B. Cultigens

C. Predators

D. Domesticated

Answer: B

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202. Plants can be disease resistance by :

A. Colchicine treatment

B. X-ray treatment

C. Breeding with relatives

D. Hormone treatment

Answer: C

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203. Emasculation of female plant having bisexual flowers is carried out in hybridisation program with the help of forceps by removing

(a) Style before dehiscence of anthers

(b) Style after dehiscence of anthers

(c) Anthers before their dehiscence

(d) Anthers after their dehiscence

A. Style before dehiscence of anthers

B. Style after dehiscence of anthers

C. Anthers before their dehiscence

D. Anthers after their dehiscence.

Answer: C

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204. Genetically improved crop varieties can be developed by

(a) Somatic hybridization

(b) Transgenic technology

(c) Somaclonal variations

(d) Both a and b

A. Somatic hybridisation

B. Transgenic technology

C. Somaclonal variations

D. Both A and B

Answer: D

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205. Purposeful manipulation of plant species in order to create desired plant type that are

better suited for cultivation give better yields and disease resistance is

A. Hybridisation

B. Germplasm collection

C. Plant breeding

D. Convertional plant breeding

Answer: C

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206. Identify the correct pair of combinations

I. Parbhani Kranti-Resistance to Virus-Bhindi

II. Pusa Gaurav-Resistance to aphids-Mustard

III. Pusa Sadabahar- Resistance to fruit borer-Cow pea

IV. Pusa Shubhra-Resistance to white rust - Cauliflower

A. II, III

B. II, IV

C. I,II

D. I,III

Answer: C

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207. Study the lists and find the correct match

I	II
(a) Micrographia	(i) Skoog
(b) Technique of plant tissue culture	(ii) Bessey
(c) Phylogenetic classification	(iii) Joseph Priestley
(d) Absorption of toxic gases by plants	(iv) Robert Hooke
	(v) Stephen Hales

A. a-iv,b-iii,c-ii,d-i

B. a-ii,b-I,c-iv,d-v

C. a-iv,b-I,c-ii,d-iii

D. a-iii,b-ii,c-v,d-iv

Answer: C

208. During somatic hybridisation in plants

A. Somaclones are produced in large numbers

B. Apical meristems are cultured to get vrius- free plants

C. Cell walls and middle lamella are digested before fusing the cells

D. Crop plants with higher levels of vitamins, proteins and minerals are hybridised

Answer: C

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209. Prabhani Kranti, a variety of bhindi (Lady s finger) is resistant to:

A. Bacterial blight

B. Yellow mosaic virus

C. Black rot

D. Leaf curl

Answer: B

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210. Artifical hybridisation is the transfer of pollen grains to stigma from:

A. A flower with desired trait

B. The same flower

C. Any flower

D. None of the above

Answer: A

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211. Which of the following shows the correct sequence of steps involved in breeding a new genetic variety of a crop?

(i) Selection and testing of superior recombinants

(ii) Germplasm collection

(iii) Cross hybridisation among selected parents

(iv) Evalution and selection

(v) Testing, relese and commercialisation of cultivars

A. ii, iv, iii, I and v

B. I,ii, iv , iii and v

C. iii,iv,I, ii and v

D. ii, iii, I, iv and v

Answer: A

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212. The totipotent cells form a

A. Bud

B. Cell membrane

C. Cell organelle

D. Complete new organism

Answer: D

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213. The semi dwarf wheat which was instrumental in increasing wheat production was production was developed by:

A. Alexander von Humboldt

B. Paul Ehrlich

C. Dr. Kurien

D. Edward jenner

Answer:

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214. Match the columns and choose the correct option

I	II
1. Totipotency	(*a*) Breeding crops with higher levels of nutrients
2. Micropropagation	(*b*) Plant grown from hybrid protoplast
3. Somaclone	(*c*) Producing large number of plants through tissue culture
4. Somatic hybrid	(*d*) Capacity to generate a whole plant from an explant
5. Biofortification	(*e*) Plants genetically identical to original plant

A. 1-d,2-c,3-e,4-b,5-a

B. 1-a,2-e,3-b,4-d,5-c

C. 1-c,2-b,3-e,4-d,5-c

D. 1-d,2-e,3-a,4-d,5-c

Answer: A

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215. 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. Palisade parenchyma

B. Both apical and axillary meristems

C. Epidermis only

D. Apical meristerm only

Answer: B

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216. Somaclones are

A. Callus culture

B. Sexual reproduction

C. Micropropagation

D. Somatic hybridisation

Answer: C

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217. The phenomenon that operates in the formation of root or shoot in a callus culture is

A. Differentiation

B. Redifferentiation

C. Dedifferentiation

D. Rejuvenation

Answer: A

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218. [A]: A correct concentration of auxin and cyto- kinin is required for the development of root and shoot in a callus.

[B]: When the ratio of cytokinin to auxin is high, then only shoots develop. But when the ratio is low then only roots develop.

A. if both are true with reason being correct explanation

B. both true but reason in not correct explantion

C. assertion true but reason is wrong

D. both are wrong

Answer: A

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219. match the columns and find correct option

I	II
(a) *Brassica*	(i) Himgiri
(b) Okra	(ii) Pusa komal
(c) Wheat	(iii) Pusa Gaurav
(d) Cowpea	(iv) Pusa Sawani

A. a-iii,b-iv,c-I,d-ii

B. a-I,b-iii,c-ii,d-iv

C. a-iv,b-iii,c-I,d-ii

D. a-ii,b-iv,c-I,d-iii

Answer: A

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220. Which one of the following varieties is resistant to white rust disease?

A. Pusa Sem 2

B. Pusa Komal

C. Pusa Sawani

D. Pusa Swarnim

Answer: D

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221. Semi-dwarf rice variety IR-8 was developed in:

A. Taiwn

B. Philippines

C. India

D. China

Answer: B

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222. The secondary metabolite obtained from Catharanthus roseus is

A. Vincristine

B. Anthocyanin

C. Menthol

D. Nicotine

Answer: A

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223. Pusa Subhra is a variety of:

A. Cauliflower

B. Chilli

C. Wheat

D. Cabbage

Answer: A

Watch Video Solution

224. In tissue culture, callus can be induced to form shoot or root by altering the ratio of:

A. IAA

B. ABA

C. GA_3

D. Cabbage

Answer: D

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225. Flooding of the field controls:

A. Fungi

B. Bacteria

C. Viruse

D. Nematodes

Answer: D

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226. During hardenting , plants are kept under

A. Reduced light and hight humidity

B. Increased light and hight humidity

C. Reduced light and low humidity

D. Increased light and low humidity

Answer: A

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227. Continued self pollination results in:

A. Self incompatibility

B. Gametes lose vigour

C. Inbreeding depression

D. Formation of unisexual flowers.

Answer: C

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228. Sonalika and Kalyan Sona are varieties of

A. Maize

B. wheat

C. Rice

D. Sugarcane

Answer: B

Watch Video Solution

229. In mung bean, resistance to yellow mosiac virus and powdery mildew were induced by

A. Sehore

B. Raphanus sativus

C. Prabhani Kranti

D. Musa pudica

Answer: C

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230. Who among the following is known as father of Green revolution in India?

A. N.E. Borlaug

B. M.S Swaminathan

C. H.G. Khorana

D. E.P. Odum

Answer: A

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231. Which one possesses highest protein content?

A. Spirulina

B. Glycine max

C. Arachis hypogea

D. Pisum sativum

Answer: A

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232. The concept of cellular totipotency was given by

A. Haberlandt

B. Steward

C. White

D. Skoog

Answer: A

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233. Father of Green Revolution in India is:

(a) Swaminathan

(b) B.C.Roy

(c) Birbal Sahni

(d) P. Maheshwari

A. Swaminathan

B. B.C.Roy

C. Birbal Sahni

D. P. Maheshwari

Answer: A

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234. Plants obtained through tissue culture are genetically identical and they are obtained by somatic cells. What do you call them?

A. Somaclones

B. Monoclones

C. Somatic hybrids

D. Cross hybrids

Answer: A

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235. Who is known as father of plant tissue culture?

A. Haberlandt

B. Steward

C. White

D. Skoog

Answer: A

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236. Which of the following is an improved variety of chicken ?

A. Soya Bean

B. Sonora-64

C. Tanchung native-1

D. All the above.

Answer: D

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237. Assertion: Virus-free plants can be produced from virus infected plants by means of meristem tissue culture,

Reason: The virus fails to grow during the growth of host tissue in the artificial medium.

A. A and R are true and R is the correct explanation of A

B. A and R are true and R is not the correct explanation of A

C. A is true R is false

D. A is false R is true.

Answer: C

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238. The correct sequence in the tissue culture technique is:

A. Inoculation-explant incubation -callus fromation-organgenesis-preparation of medium-transferred to field

B. Preparation of medium - inoculation-explant incubation - callus formation - orfanogenesis-transferred to field

C. Explant incubation-Preparation of medium - inoculation- organogensis-callus formation- transferred of field

D. Preparation of medium- inoculation-explant incubation- organogenesis-callus formation-transferred to field.

Answer: B

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239. High aspartic acid,low nitrogen and sugar content in maize leads to resistance in maize against

A. Aphids

B. Jssids

C. Bollworms

D. Stem boreres

Answer: D

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240. Remarkable increase in rice production from 35 million tonnes to 89-5 million tonnes during 1960-2000 was mainly due to

(a) Improved semi-dwarf varieties

(c) Introduction semi-dwarf varieties

(c) Increased use of chemical fertilizers

(d) Cultivation of wild varieties

A. Improved semidwarf varieties

B. Introduction semidwarf varieties

C. Increased use of chemical fertilizers

D. Cultivation of wild varieties

Answer: A

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241. During hybridization off springs with hybrid vigour superior to both parents are self-pollinated for a few successive generations to

A. Retain their paraental characters

B. Remove their parental characters

C. Get homozygosity

D. Segregate characters.

Answer: C

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242. Assertion : the technique of micropropagation has been used to introduce variations in the offspring

Reason: It is not possible to generate virus free plants by micropropagation

A. if both are true with reason being correct explanation

B. Both true but reason is not correct explanation

C. assertion true but reason is wrong

D. both are wrong

Answer: D

 Watch Video Solution

243. Black rust of wheat is caused by

A. if both are true with reason being correct explanation

B. Both true but reason is not correct explanation

C. assertion true but reason is wrong

D. both are wrong

Answer: C

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244. Somatic hybridisation is a processs where protoplasts of two desired plants can be fused to develop improved plants.

A. if both are true with reason being correct explanation

B. Both true but reason is not correct explanation

C. assertion true but reason is wrong

D. both are wrong

Answer: B

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Check Your Grasp

1. Multiple shoot culture requires

A. NAA

B. High salt content

C. Subculturing

D. All the above.

Answer:

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2. Callus develops roots if medium is supplied with

A. Cytokinin

B. Auxin

C. both cytokinin and auxin

D. More cytokinin and less auxin

Answer:

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3. Embryoid formation is favoured by

A. Auxin

B. Gibberellin

C. Ammonium salts + little auxin

D. NAA + Cytokinin

Answer:

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4. An economically useful somaclonal variation is

A. Short duration sugarcane

B. High protein content in potato

C. Leaf hopper resistance in Rice

D. All the above.

Answer:

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5. Embryo culture is performed to

A. Develop seeds quickly

B. Overcome dormancy and multiply difficult hybrids

C. Raise a large number of plants from cells of embryo throgh shaking

D. Overcome the requirement of fertilization.

Answer:

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6. Banana can be rapidly multiplied by

A. Multiple shoot production

B. Embryoid formation

C. Shoot tip culture.

D. Callus formation.

Answer:

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7. Pathogen free plants can be obtained from

A. Shoot tip/bud culture

B. Callus formation

C. Embryoid formation

D. All the above.

Answer:

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8. Embryo culture is performed to

A. obtain new generation of plants quickly

B. To remove chances of seeding mortality

C. Ensure growth of interspecific hybrids

D. Induce somaclonal variations.

Answer:

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9. Heterosis increases yield by

A. (a) 0.1

B. (b) 25-50%

C. (c) 50-100%

D. (d) 25-300%

Answer:

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10. Gene for resistance to late blight of potato has been obtained from

A. (a) Solanum vernei

B. (b) S. Stoloniferum

C. (c) S.acaule

D. (d) S.demissum

Answer:

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