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Class: 12
Subject: Biology
Topic: Biotechnology Principles and Processes
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

1. Plasmids are used in genetic engine because they are
   A. Easily available
   B. Able to replicate
   C. Able to integrate with host chromosome
   D. Inert

Answer: B

2. Differentiation of callus into plant parts is
   A. Embryogenesis
   B. Embryoid formation
   C. Morphogenesis
   D. Totipotency

Answer: C

3. Degenerative disease in adults can be treated with stem cells obtained from
   A. Blood sample
   B. Muscle fibre
   C. Bone marrow
   D. Keratin

Answer: C

4. Haploids are more suitable for mutation studies than diploids because
   A. Haploid are more abundant
   B. All mutations, whether dominant or recessive, are expressed in haploids
   C. Haploids are reproductively more suitable
   D. Mutagens penetrate in haploids more effectively than in diploids

Answer: B

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5. Frost resistance is obtained from genetically engineered
   A. Escherichia coli
   B. Pseudornonas putida
   C. Pseudomonas fluorescens
   D. Trichodenna

Answer: C

6. Stem cells are obtained from
   A. Umbilical cord
   B. Healing wounds
   C. Epithelial cells
   D. Neuron

Answer: A

7. One of the following is a major requirment for DNA finger printing
   A. Electron microscopy
   B. ELISA
   C. Electrophoresis
   D. HPLC

Answer: C

8. A drug obtained through genetic engineering and useful for treating infertility is
   A. Calcitonin
   B. Chorionic
   C. Interleukin
   D. Tissue plasminogen activator

Answer: B

9. Toxic component of Bacillus thuringiensis is
   A. Alkaloid
   B. Steroid
   C. Amino acid
   D. Protein

Answer: D

10. Dermatoglyphics is connected with
   A. Skin diseases
   B. Care of skin
   C. Gsmetics
   D. Finger printing

Answer: D

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11. VNTR stands for
    A. Variable number thymine repeats
    B. Variable number transcription repeats
    C. Variable nucleotide tandem repeats
    D. Variable number tandem repeats
Answer: D

12. Modification and adjustment of an organism to local environment is called
    A. Introduction
    B. Selection
    C. Aeclimitisation
    D. Quarantine
Answer: C

13. Which technique can be helpful in overcoming hybridisation barrier
    A. Shoot tip culture
    B. Embryo rescue
    C. Protoplast fusion
    D. Both B and C
Answer: D

14. Restriction enzymes are used in genetic engineering because they
    A. Can join DNA fragments
    B. Cut DNA at specific base sequence
    C. Cut DNA at variable sites
    D. Are proteolytic enzymes which degrade harmful proteins
Answer: B
15. The problem of necrosis and gradual senescence while performing tissue culture can be
    A. Spraying cytokinins
    B. Spraying auxin
    C. Subculture
    D. Suspension culture
Answer: C
16. Which of the following is most commonly used for creation of genetic variation
    A. Polyploidy
    B. Hybridisation
    C. Mutation
    D. Genetic engineering
Answer: B

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17. In Maize, hybrid vigour is exploited by
    A. Inducing mutations
    B. Bombarding the protoplast with DNA
    C. Crossing of two inbred parental lines
    D. Harvesting seeds from the productive plants

Answer: C

18. Transgenic plants are developed by
    A. Introducing foreign genes
    B. Introducing gene mutations
    C. Deleting certain chromosome parts
    D. Stopping spindle formation

Answer: A

19. Two protoplasts can be made to fuse through the application of
    A. Electrofusion
    B. Polyethylene glycol
    C. Sodium nitrate
    D. All the above

Answer: D

20. Which one is triploid crop
    A. Banana
    B. Groundnut
    C. Potato
    D. Mango

Answer: A