PAPER CODE: 6703

MSC SEM –III (New Course)
JULY-SEP-2021
BIOTECHNOLOGY
BT CC-3030 (PLANT BIO TECHNOLOGY)

કુલ સમય :– ૬૦ મીનીટ કુલ પ્રશ્નો : ૫૦ વિદ્યાર્થીએ ટીક કરવાના પ્રશ્નો : ૩૫

નોંધ : વિદ્યાર્થીએ માત્ર ૩૫ પ્રશ્નો જ ટીક કરવાના રહેશે. જો વધારે ટીક કરેલ હશે તો પ્રથમ ૩૫ પ્રશ્નો જ ગણતરીમાં લેવામાં આવશે.

1. Plant biotechnology excludes
   A.Production of valuable products in plants B.Production of virus free plants
   C.Rapid clonal multiplication of desired genotypes D.Purification of biomolecules
2. Plant derived elicitors includes
   A.Chitin B.Pectin C.Both are correct D.None of these is correct
3. Somatic embryos encapsulated in a gel is known as _____.
   A.True seeds B.Totipotency C.Artificial seeD .D.Zygotic embryogenesis
4. _____ is the developmental stage during which the fertilized ovum goes through a series of differentiation events that leads to the production of a mature embryo.
   A.Zygotic embryogenesis B.Direct somatic embryogenesis
   C.Indirect somatic embryogenesis D.None of the above
5. The phase of embryo development in which the basic body plan of the embryo is established
   A.Meiosis phase B.Morphogenesis phase C.Maturation phase D.Mitotic phase
6. The variation in invitro culture is called as
   A.Somaclonal variation B.Mutation C.Invitro variation D.In vivo variation
7. Which of the following can not be used as a cryoprotectant
   A.DMSO B.Xylene C.Sucrose D.Maltose
8. Which of the following enzyme can be used in callus differentiation?
   A.Auxin B.Cytokinin C.Both D.None of these
9. How many individual plants we can obtained from a single callus of banana?
   A.Only one plant from one callus B.Two plants from one callus
   C.Desirable numbers of plants D.Not a single plant
10. If one scientist is working on plant tissue culture and he/she is treating plant cells with 1:1 amount of Indole-3-butyric acid and Kinetin then,
    A.The cells will expand and differentiate B.Better shoot developmentwill occur
    C.Better root developmentwill occur D.Nothing will be going to happen
11. Meristematic cells are plant cells which possess_____.
    A.Multipotency B.Totipotency C.Pluripotency D.All of the above
12. A one-cell fertilized egg (zygote) capable of dividing and maturing into a fertile adult is considered to have?
    A.Multipotency B.Total potency C.Pluripotency D.None of them
13. A cell without cell wall is known as_____.
    A.Meristematic stem cells B.Cork cells C.Protoplast D.embryo
14. In which of the following methods, two protoplasts are fused by fusogens?
    A.Spontaneous fusion B.Mechanical fusion C.A and B both D.Induced fusion
15. In which of the following methods, enzymes have been used in protoplast fusion?
    A.Spontaneous fusion B.Mechanical fusion C.B and D both D.Induced fusion
16. *A. tumefaciens* develop tumor in crown region of which part of the plant
    A.Leaf B.Stem C.Root D.Branches
17. Size of Ti plasmid is _____.
    A.20-50 kB. B.< 200 kB. C.15-30 kB. D.> 200 kb
18. Which gene was incorporated in BT cotton
    A.Cry1AC. B.Cry2AC. C.CryAc1 D.CryAC2
19. Which gene can be amplified for identification of transgenic cotton?
    A.Cry2AB. B.Cry2AC. C.BTac1 D.CryAb2
20. A. Fungi can be used as a vector.
    B. Plasmid can be used as a vector.
    C. Phages can be used as a vector
    A.A and B are correct B.B and C are correct C.A and C are correct D.All statements are correct
21. Which enzyme cut DNA at recognition sequences?
    A.Endonucleases B.Ligase C.Protease D.polymerases
22. Ligase is obtained only from *E.coli.*
    A.True B.False
23. Size of T-DNA is _____.
    A.20-50 kB. B.< 200 kB. C.15-30 kB. D.> 200 kb
24. Opines are_____.
    A.Nutrients for humans B.Nutrients for crops C.Nutrients for bacteriA. D.Nutrients for animals

25. Size of binary vectors are

A.160 kb and 20 kB. B.1700 kb and 200 kb C.170 kb and 20 kB. D.1600 kb and 200 kb

26. Several repeating units of short sequences in eukaryotic DNA is called as

A.Tendom repeats B.Tandem repeats C.Tenderm repeats DNone of the above

27. Species specific primes are required for RAPD.

A.True B.False

28. Radioactive probes are required in RAPD

A.True B.False

29. RAPD is a

A.DNA sequencing-based methoD. B.Restriction digestion-based method

C.PCR based methoD. D.All of the above

30. RFLP is used to identify a specific

A.Protein and RNA. B.RNA and DNA. C.DNA D.RNA

31. Molecular markers include

A.RFLP B.RAPD. C.AFLP D.All of the above

32. Molecular markers are used to construct

A.Chromosome maps B.Physical map C.Cytogenetic map D.All of the above

33. Which one is wrong for RFLP marker

A.Shows less reproducibility B.Show codominant alleles

C.Detect coupling phase of DNA. D.All of the above

34. Which one is true for RFLP technique

A.Reliable marker in linkage and breeding analysis B.Cost-effective process

C.Less time required D.It is not labor intensive

35. In which year RAPD was developed?

A.1989 B.1990 C.1991 D.1992

36. Which of the following statements about the RAPD is true?

A.It isn't based on PCR B.Detects nucleotides sequence polymorphism

C.Large amount of DNA templet requireD. D.Hard and lengthy process

37. Simple sequence repeat is also known as

A.Microsatellites B.RFLP C.RAPD. D.AFLP

38. Synthetic seeds are

A.Preserved embryoids B.Natural seed

C.Fermented seeds D.Seeds made by humans

39. ADP glucose pyrophosphorylase is a bacterial gene, which can increase amount of

A.Starch B.Sucrose C.Maltose D.None of the above

40. Which of the following dies from Ti plasmid infection?

A.All living organisms and nonliving elements of the environment B.Rice, corn and sorghum

C.Plants and animals D.Plants, animals and microbes

41. T-*DNA transfer and processing into plant genome requires the use of*

A.Vir A. B.Vir B. C.Vir C. D.All of the above

42. Meristem culture of banana enables

A.Slow growth B.Fast growth

C.Protection against disease caused by virus D.B and C both

43. *A. tumefaciens* is a

A.Gram positive and soil bacteriA. B.Gram positive and water bacteria

C.Gram negative and water bacteriA. D.Gram negative and soil bacteria

44. Insect resistance in plant can be obtained by transferring a gene for

A.BT toxins B.Protease inhibitors C.Insecticidal secondary metabolites D.All of the above

45. Which of the following gene can not be used in nematode resistance?

A.Cry1AC. B.Cry5B. C.Cry6A. D.Cry14A

46. Which vector is used for the introduction of nematode specific genes in host?

A.Agrobacterium B.Fungal C.Viral D.pUC18

47. _____is not an example of abiotic stress.

A.Microorganisms B.High Temperature C.Salinity D.Drought

48 Which metal is responsible for infertility in Punjab?

A.Silver B.Cobalt C.Mercury D.Arsenic

49. CAT gene showing resistance against

A.Streptomycin B.Ampicillin C.Chloramphenicol D.Clotrimazole

50. Which of the approach is used to induce herbicide resistance in plants?

A.Target protein is overproduceD. B.A pathway should be introduced that detoxify the herbicides

C.Target molecules is made insensitive to be herbicide D.All of the above