

ICAR ARS NET Previous Questions on Agricultural Biotechnology

21. Endochitinase can be used as an

- a) Antibacterial
- b) Antiviral
- c) Antifungal
- d) Antinematodal

22. The direct DNA uptake by the protoplast is stimulated by the chemical

- a) Cellulose
- b) Sucrose
- c) PEG
- d) Mannose

23. Which of the following is an herbicide resistant gene?

- a) Bar
- b) Hpt
- c) Chitinase
- d) oxidase

24. Restriction enzymes that cuts straight across the DNA produces

- a) Nick
- b) Sticky ends
- c) Blunt ends
- d) None of these

25. Lambda has short single stranded 5' projection of

- a) 8 nucleotide length
- b) 10 nucleotide length
- c) 12 nucleotide length
- d) 14 nucleotide length

26. In Agrobacterium mediated plant transformation which one of the following is used to check the Agrobacterium growth

- a) PPT
- b) Kanamycin
- c) Timentin
- d) Pencillin

27. The T-DNA region of all the Ti and Ri plasmids are flanked by direct repeat sequence

- a) 15bp
- b) 20 bp
- c) 25 bp
- d) 35 bp

28. During Agrobacterium infections the plant cell begins to synthesise an Arginine derivative called as

- a) Hygromycin
- b) Opines
- c) Acetobenzylpurine
- d) Acetosyringone

29. During Agrobacterium transformation the T-DNA is coated by protein, which is the product of gene

- a) Vir B
- b) Vir C
- c) Vir D
- d) Vir E

30. Most commonly used strategy to develop transgenic plant against any viral disease is to engineer a

- a) Anti sense RNA for viral genome
- b) Coat or capsid protein gene
- c) Direct DNA transfer to viral gene

d) Liposome Mediated transfer of viral RNA

31. The vir region is organised into six operons viz., vir A, vir B, vir C, vir D, vir E, vir G out of these which four operons are required for virulence

a) A,B,C,D

b) B,C,D,E

c) C,D,E,G

d) A,B,D,G

32. Replication of DNA by rolling circle mechanism give rise to a

a) Blunt end DNA

b) Theta structure

c) Concatamer

d) Single strand DNA with nick

33. . The gene transferred from E.coli to tobacco to increase the level of manitol is

a) Manitol dehydrogenase

b) Manitol carboxylase

c) Manitol oxygenase

d) Manitol hydrolase

34. Relaxed plasmid

a) Have only single copy per cell

b) Cannot be purified

c) Does not exist in bacteria

d) Have multiple copies per cell

35. Which of the following is a green tissue specific promoter?

a) Pea vicilin

b) Arabidopsis small subunit of RUBISCO

c) 35s CaMV

d) Bean phytohemagglutinin

36. In vitro packaging is required for which one of the following vector

- a) BAC
- b) YAC
- c) PAC
- d) None of these

37. Cosmids have the Cos site of

- a) Lambda
- b) Plasmid
- c) ML3
- d) YAC

38. Thiobacillus thiooxidans grows on

- a) Iron
- b) Sulphur
- c) Aluminium
- d) Pyrites

39. An example of commercially important primary metabolites is

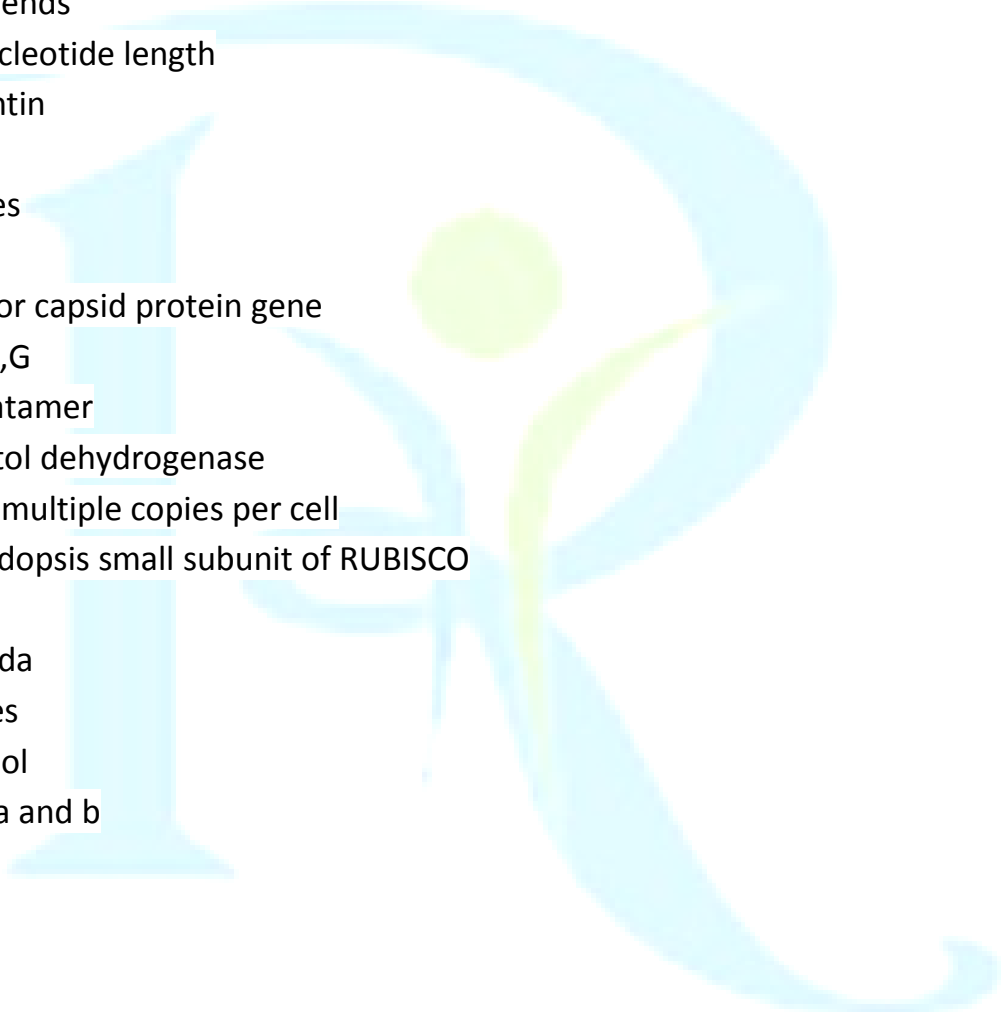
- a) Toxin
- b) Alkaloid
- c) Amine
- d) Alcohol

40. Secondary metabolites like antibiotics are not essential for

- a) Log phase growth
- b) Exponential growth
- c) Both a and b
- d) none of these

Answers:

21. c) Antifungal

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22. c) PEG
 23. a) Bar
 24. c) Blunt ends
 25. c) 12 nucleotide length
 26. c) Timentin
 27. c) 25 bp
 28. b) Opines
 29. d) Vir E
 30. b) Coat or capsid protein gene
 31. d) A,B,D,G
 32. c) Concatamer
 33. a) Manitol dehydrogenase
 34. d) Have multiple copies per cell
 35. b) Arabidopsis small subunit of RUBISCO
 36. c) PAC
 37. a) Lambda
 38. d) Pyrites
 39. d) Alcohol
 40. c) Both a and b