

ICAR ARS NET Previous Questions on Agricultural Biotechnology

1. Which of the following pairs are anomers?
 - a) Ribose and Ribulose
 - b) Glucose and mannose
 - c) Pyruvate lactate
 - d) α -D-glucose and β -D-glucose
2. Hybridoma technology is used in the production of
 - a) mRNA
 - b) Monoclonal serum
 - c) Monoclonal antibodies
 - d) Polyclonal antibodies
3. For mitochondrial structure and function mt-DNA specifies
 - a) 10%
 - b) 20%
 - c) 30%
 - d) 40%
4. Which of the following reagent is useful for visualizing DNA?
 - a) Uracil
 - b) DNA polymerase
 - c) Diphenylamine
 - d) Ethidium bromide
5. Homologous pairs line up along equatorial plane during
 - a) Anaphase II
 - b) Metaphase I
 - c) Telophase
 - d) Interphase
6. Between mitotic divisions, the cell is in

- a) G0
- b) G1
- c) G2
- d) S phase

7. Most plant cells are surrounded by a rigid cell wall made primarily of

- a) Monosaccharides
- b) Pectin
- c) Chitins
- d) Polysaccharides

8. The organelle that functions in the breakdown of cells and tissues is the

- a) Episomes
- b) Mitochondrion
- c) Centrosomes
- d) Lysosomes

9. Endoplasmic reticulum

- a) Is found only in animals
- b) is a system of membrane bound channels
- c) is called rough if mitochondria is attached to it
- d) is a site of ATP production

10. "9+2" describes the basic structure of which of the following one

- a) chromosome
- b) Basal body
- c) Chloroplast
- d) Flagellum

11. The function of nucleus includes

- a) Cellular respiration
- b) Synthesis of proteins

c) Housing the hereditary information

d) Synthesis of carbohydrates

12. Baculoviruses

a) RNA viruses

b) DNA viruses

c) Both a and b

d) None of the above

13. Secondary metabolites like antibiotics are not essential for

a) Log phase growth

b) Exponential growth

c) Both a and b

d) None of these

14. The restriction enzymes useful to the molecular biologist belongs to

a) Type I

b) Type II

c) Type III

d) Type IV

15. Which of the following vector is suitable for DNA sequencing

a) EMBL

b) PBR 322

c) M 13

d) Lambda

16. During which process, the free end of the chromosome moves from Hfr donor in to the F cell across an intracellular bridge called pili

a) Transformation

b) Transduction

c) Conjugation

d) All of these

17. Francis Jacob and Monod Proposed

- a) Lock and Key Hypothesis
- b) Gene for Protein Synthesis
- c) Operon Synthesis
- d) Gene for protein synthesis

18. State which of the following is not a desired characteristic of a vector?

- a) Unique restriction site
- b) Large Size
- c) Gene that confer antibiotic resistance
- d) Autonomous replication

19. Which of the following is a carrier hosts for new genes?

- a) EcoRI
- b) Bacteriophages
- c) Nucleus
- d) Transplanted Organs

20. Which of the following chemical is used for preparation of competent cell?

- a) HCl
- b) NaCl
- c) CaCl₂
- d) Glycine

Answers

- 1. d) α -D-glucose and β -D-glucose
- 2. c) Monoclonal antibodies
- 3. a) 10%
- 4. d) Ethidium bromide
- 5. b) Metaphase I
- 6. b) G₁

7. d) Poly saccharides
8. d) Lysosomes
9. b) is a system of membrane bound channels
10. d) Flagellum
11. c) Housing the hereditary information
12. b)DNA viruses
13. c) Both a and b
14. b) Type II
15. c) M 13
16. c) Conjugation
17. c) Operon Synthesis
18. b) Large Size
19. b) Bacteriophages
20. c) CaCl₂