

ETERNAL CAREER CLASSES

SUBJECT : BIOLOGY

CLASS : XII

FULL MARKS : 40

NAME :

BOARD TEST : 19

DATE : 26.12.2024

SECTION - A

Single answer type question. Attempt any Fourteen question :-

Marks : 1 × 14 = 14

- Which of these processes does not give off CO₂?
 - Lactate fermentation
 - Aerobic respiration
 - Alcoholic fermentation
 - None of the above.
- The guts of various ruminants contain ____
 - Acidophiles
 - Halophiles
 - Methanogens
 - All of the above
- Which of the following microbes are used for the commercial production of citric acid?
 - Xanthomonas citri
 - Asparagine
 - Asparagus
 - Aspergillus
- Ethanol can be produced using ____
 - Saccharomyces cerevisiae
 - Escherichia coli
 - Pseudomonas syringae
 - None of the above
- Bacillus thuringiensis is used for
 - Fermentation of beer
 - Biopesticide
 - Antibiotic
 - None of the above
- Before antibiotics, the first commercial antibacterial available was ____
 - Penicillin
 - Prontosil
 - Azithromycin
 - None of the above
- Example of a natural insect repellent
 - Citronella oil
 - Coconut oil
 - Linseed oil
 - None of the above
- Which of the following is used as a substrate for alcohol fermentation?
 - Maize
 - Barley
 - Sucrose
 - None of the above
- Antibiotics are the most effective on:
 - Bacteria
 - Virus
 - Fungi
 - None of the above
- Bacillus thuringiensis is widely used as:
 - Insecticide
 - Weedicides
 - Rodenticide
 - None of the above
11. What is associated with genetic engineering?
 - Plasmid
 - Mutation
 - Plastid
 - Heterosis
12. PCR and Restriction fragment length polymorphism are methods used for
 - Genetic fingerprinting
 - DNA sequencing
 - Genetic transformation
 - Enzyme study
- The plasmid
 - Is an additional genetic part in microorganisms apart from DNA
 - Is a component of the bacterial cell wall
 - Is a gene found inside the nucleus
 - Assists in respiration
- Which technique has made it possible to genetically engineer living organisms?

- (a) Hybridization (b) Heavy isotope labeling
(c) X-ray diffraction (d) Recombinant DNA techniques
15. In genetic engineering, antibiotics are used
(a) As starting sequences for replication
(b) To keep the cultures infection-free
(c) To select healthy vectors
(d) As selectable markers
16. 16. There is a restriction endonuclease named EcoRI. What does the “co” part represent?
(a) coli (b) Coelom
(c) Coenzyme (d) Colon
17. 17. The bacteria generally used for genetic engineering is
(a) Clostridium (b) Bacillus
(c) Pseudomonas (d) Agrobacterium
18. Which of the following is used in gene cloning?
(a) Plasmids (b) Mesosomes
(c) Lomasomes (d) Nucleoids
19. In bacterial chromosomes, the nucleic acid polymers are
(a) Linear RNA molecule (b) Of two types – DNA and RNA
(c) Circular DNA molecule (d) Linear DNA molecule
20. 20. The ability to cut DNA at a specific location was made possible by the discovery of
(a) Probes (b) Restriction enzymes
(c) Ligases (d) Selectable markers

SECTION - B

Short answer type question. Attempt any two question :-

Marks : 2 × 3 = 6

21. What is sewage? In which way can sewage be harmful to us?
22. How do biofertilisers enrich the fertility of the soil?
23. What is Genetic engineering and its usage?
24. What do you understand by gene cloning?

Long answer type question. Attempt any four question :-

Marks : 4 × 5 = 20

25. Microbes can be used to decrease the use of chemical fertilisers and pesticides. Explain how this can be accomplished.
26. Explain biogas. How is biogas produced and which are microbes involved in biogas production?
27. Explain the Ganga and Yamuna Action Plan
28. What is the role of Agrobacterium tumefaciens in plant transformation?
29. What is a bioreactor? Explain different types of bioreactors.
30. Mention any three vector-less methods that are used to introduce recombinant DNA into a competent host cell.

