IV. **Match the statements of column A and column B.** **10 x 1 = 10M**

Group- A	Group- B
41. Lactobacillus.	a) Acetic acid
42. Saccharomyces.	b) curd
43. Aspergillums Niger.	c) citric acid
44. Acetobacter acetic	d)Bread
45. Primary lymphoid organ	e) BCG
46. Secondary Lymphoid organ	f) Thymus
47. Live Vaccine	g) DPT
48. Triple vaccine	h) Lymph nodes
49. Southern Blotting	i) Milk Sugar
50. Lactose	j) EM.Southemn

V. True or False. **10 x 1 = 10M**

51. Robert Koch is the Father of Microbiology

52. The first recorded observation of microorganisms was in the nineteenth century.

53. Anabolic pathway involve the breaking down of complex molecule into simple

54. Breakdown of proteins into amino acids is catabolic pathway

55. In medical applications, the ultimate goal of gene mapping is to disease genes

56. A sequence can be aligned with itself to identify internal repeat elements.

57. Anabolic pathway build complex molecule from simple molecules

58. The scientist responsible for discovering the fermenting properties of microorganisms Were Louis Pasteur.

59. Bone marrow is a secondary lymphoid organ.

60. Innate immunity is also called as inborn immunity.

[D]

23ZOO-MJ2-1A/23BOT-MJ2-1A

GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS), SRIKAKULAM

REACCREDITED WITH NAAC 'A' GRADE

B.Sc (Regular)Semester-I

(w.e.f. 2023 Admitted Batch)

PAPER : Introduction to Applied Biology **TIME : 3 Hrs**

Marks : 60 **Date : 04-01-2024**

I. Multiple Choice Questions: **20 x 1 = 20M**

1.Microbiology is----

a) Study of molecules that are visible to human eyes b) Study of animals

c)Study of organisms that are not visible to naked eyes d)Study of microscopes

2.Who is known as father of Microbiology

a) Edward Jenner b) Robert Koch c) Joseph Lister d) Louis Pasteur

3. Which microorganism(s) among the following perform photosynthesis by utilizing light?

a) Cyanobacteria, Fungi and Viruses b) Viruses c) Cyanobacteria d) Fungi

4. Which of the following are produced by microorganisms?

a) Alcoholic beverages b) Fermented dairy products c) Breads d) All of the above

5. Polysaccharides are

a) Acids b) Oils c) Polymers d) Proteins

6. The number of isomers of glucose is

a)2 b)16 c)08 d)4

7. The most important epimer of glucose is

a) Ga-lactose b) Fructose c) Arabinose d) Xylose

8. Which of the following is a monosaccharide?

a) Maltose b) Sucrose c) Fructose d) Starch

9. Among these which one is a product of Biotechnology?

a) Skin b) Bacteria c) Plants d) Vaccine

10. Traditional hybridization procedures have limitations, which are solved by approaches.

a) Modern Hybridization b) Immunology c) Cell Biology d) Genetic engineering

11. Mention the term initiates the Replication in DNA?

a) Origin of replication b) DNA ligase c) Histone protein d) Termination sequences

12.A circular extra chromosomal DNA that replicates independently is known as.

a) Nitrogenous base b) Bacteria c) Plasmid d) RNA

13. The PCR Technique was developed by

a) Koheler b) Altmon c) Milsten d) Karymullis

14.Thermus aquaticus is the source of Ans:

a) Vent polymerase b) Primase Enzyme c) Taq polymerase d) Both a and c

15. Which of the following is the basic equipment of PCR reaction?

a) Two oligonucleotide primers b) DNA segment to be amplified

c) A heat -stable DNA polymerase d) All of the above

16. Which of the following is the first and the most important step in the PCR

a) Annealing b) Primer extension c) Denaturation d) None

17. The collection of proteins that can be produced by a given species is:

a) Considered that species' genetic complement. b) Correlated with the size of the organism.

c) Called the proteome. d) All of these.

18. Magnitude of score is included in which of the central tendency measure

a) Median b) Mode c) Mean d) None

19.The value of extreme items do not influence the average for

a) Median b) Mode c) Mean d) None

20) The technique used to amplify specific DNA sequences is called:

a) PCR (Polymerase Chain Reaction) b) Gel electrophoresis

c) DNA sequencing d) Micro array analysis

II. Fill in the Blanks. **10 x 1 = 10M**

21. The study of viruses is _____

22. The cells of prokaryotic organisms lack a _____

23. 2 lactose is _____

24. Nucleic acids are formed with _____

25. A small circle of DNA found outside the main chromosome is called _____

26. Penicillin is obtained from _____

27. The PCR is used for_____

28. ELISA Full form_____

29. The Genomics is the study of_____

30. The formula of finding out A.M by deviation method is_____

III. Very Short Answer Questions. **10 x 1 = 10M**

31. Define Microbiology

32. What is germ theory of diseases?

33. Write examples of Disaccharides?

34. write different types of t-RNA?

35. Which is used extensively for genetic engineering in plants?

36. Who is the father of BT cotton?

37. What is Gene therapy?

38. What are Eugenics?

39. Define Proteomics?

40. The human genome is composed of?

IV Match the following **10 X 1 = 10M**

Match the statements of column A and column B.

Group- A	Group- B
41.Central dogma	a)Cholera
42.Radioactivity	b)Kreb's cycle
43.Covalent bond	'c)silk farming
44.Aerobic respiration	d) Whittaker
45.Water pollution	e)Immunity
46.Five kingdom system	f) Korenberg
47.Biodiversity	g) Insitu conservation
48.Lymphatic system	h)Crick
49.Sericulture	i) sharing of electrons
50.Nucleosome model	j)nuclear chemistry

V. True or False **10 X 1 =10M**

51. Metacentric chromosomes are L shaped during anaphase.
52. Green chemistry cannot prevent pollution.
53. Several lifesaving drugs and antibiotics help humanity in a large number of ways.
54. Binomial nomenclature system was proposed by Carolus Linnaeus.
55. Pyramid of biomass is upright in pond ecosystem.
56. Ethylene is a fruit ripening growth hormone.
57. Endothecium is important layer as the entire food supply reaching to the sporogenous cells pass through it.
58. The gastrointestinal tract and endocrine system have no interaction.
59. Apiculture is the rising and care of bees for commercial or agricultural purposes.
60. The cell theory postulates that the cells form structural units of living organisms.

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[C]

23ZOO-MJ1-1A/23BOT-MJ1-1A

GOVERNMENT COLLEGE FOR WOMEN(AUTONOMOUS), SRIKAKULAM
REACCREDITED WITH NAAC 'A' GRADE
B.Sc (Regular)Semester-I
(w.e.f.2023 Admitted Batch)

PAPER : Introduction to Classical Biology TIME : 3 Hrs
Max.Marks : 60 Date : 03-01-2024

I. Multiple Choice Questions **20 X 1= 20M**

1. Eggs of birds are
a)Microlecithal b)Centrolecithal c)Telolecithal d)A lecithal

2. Scientific and commercial method of bee keeping for production of honey and wax is
a)Apiculture b)Sericulture c)Sericulture d)Silviculture

2. Which scientist was the first to explain that new cells arise from pr - existing cells.
a)Leeuwen hook b)Schleiden
c)Rudolph Virchow d)Theodore Schwann

4. The formation of RNA is known as
a) Replication b)DNA repairs c) Translation d)Transcription

5. The primary cause of most genetic disorders is
a)cross chromosomal b)Abnormalities
c)Mutations d)The gender of an individual

6. Primitive atmosphere of contains mixture of
a)Hydrogen, oxygen, Ammonia, Methane
b)Hydrogen, oxygen, Ammonia and water
c)Hydrogen, stream, Ammonia methane
d)Hydrogen, CO, water and methane

7. This 'green' chemical is used in household cleaners to remove stains and is also a favorite dressing on salads!?
a) Vinegar (acetic acid) b) Citric acid
c) Hydrochloric acid (HCl) d) Water

8. Which of the following bonds are weakest in nature?
a) Single bond b) Double bond
c) Triple bond d) Hydrogen bond

9. Lignin, switch grass, and cellulose are all types of?
a) Enzymes b) Catalysts
c) Bio-based feedstock's d) Anti-cancer compounds

10. _____agent is responsible for turning the Taj Mahal yellow.
a) Sulphur b) Sulphur dioxide
c) Nitrogen dioxide d) Chlorine

11.Basic unit or smaller taxon of taxonomy is
(a) species (b) genus (c) family (d) variety

12. The scientific name when printed should be
(a) in capital letters (b) in small letters
(c) in italics (d) underlined

13. Most biodiversity zones are
(a) Western Ghats and North-East region
(b) Deccan Peninsula and Sunderbans
(c) Semi-arid Zone and North-East region
(d) Andaman and Nicobar Islands

14. Which example below is not a threat to biodiversity?
(a) Habitat destruction (b) Bioremediation
(c) Introduced species (d) Over-exploitation

15. Sequence of taxonomic categories is
(a) Class-Phylum-Tribe-Order-Family-Genus-Species
(b) Division-Class-Family-Tribe-Order-Genus-Species
(c) Division-Class-Order-Family-Tribe-Genus-Species
(d) Phylum-Order-Class-Tribe-Family-Genus-Species

16. Non-cyclic photophosphorylation utilizes which of the following?
(a) Only PS-I (b) Only PS-I
(c) Both PS-I and PS-II (d) None of these

17. Nemea phenomenon ' relates to
(a) 7 celled female gametophyt (b) 8 nucleated male gametophyte
(c) formation of pollen kit (d) None of the above

18. In anther , meiosis occurs in
(a) tapetal cells (b) endothelial cells
(c) pollen mother cells (d) stomium cells

19. Which animal has segmented body
a)Mollusca b)Annelida c)Coelenterate d)Porifera

20. Which hormone is responsible for controlling blood sugar levels
a)Estrogen b)Testosterone c)Insulin d)Thyroxine

II. Fill in the Blanks **10 X 1 = 10M**

21.The early globular embryo is called as _____
22._____ is made up of kidneys, ureters, bladder and urethra.
23.In females ovum is produced by the process called _____
24.The phase between two mitotic divisions is _____
25.The formation of diverse organic molecules from inorganic molecules was proposed by _____.
26.Give an example of chemistry applications _____
27.The weakest bond is _____.
28.ICZN stands for _____
29.The ozonosphere is depleted by .....
30.The CO_2 acceptor in Calvin cycle is _____

III Very short answer questions **10 X 1 = 10M**

31. Respiration
32. pollination
33. Holoblastic cleavage
34. Apiculture
35. Gene
36. Translation
37. Ionic bond
38. Green chemistry
39. Systematic Botany
40. Food chain