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Entry Test Sample for MS in Biotechnology Program

Weightage Distribution:

Section No.	Section Name	Weight
I	English	25%
II	Quantitative Ability	25%
III	Subjective Knowledge	50%

Section No. I - English

Syllabus:

1. Analytical Ability
 - a) Logical Reasoning (5%)
 - b) Analytical Reasoning (5%)
2. Verbal Ability
 - a) Sentence Completion (Grammar) (5%)
 - b) Analogy (5%)
 - c) Antonyms (5%)

Sample Test Questions

1. "A meadow in springtime is beautiful, even if no one is there to appreciate it."
This statement would be a logical opposite to which of the following claims?
 - A. People will see only what they want to see.
 - B. Beauty exists only in the eyes of the beholder.
 - C. Beauty does not depend on seasons.
 - D. The greatest pleasure available to mankind is the contemplation of beauty.
2. A map representing countries R, S, W, X, Y and Z is to be drawn. Adjacent countries cannot have the same color in the map. The countries adjacent to each other are as follows:
 - A. Each of R, S, X and Y is adjacent to W.
 - B. X is adjacent to Y.
 - C. Each of R and S is adjacent to Z.

Which of the following is a pair of countries that can be the same color?

- A. R and S B. S and W C. W and X D. X and Y

3. Many surveys _____ out the idea that effective communication is essential for success and promotion in every field.

- A. are bearing B. should have borne C. has borne D. have borne

4. IMAGINE : IMAGINATION

- A. Therapy : Thermometer C. Oblivion : Obvious
B. Bowl : Bowdlerize D. Liturgy : Literature

5. Choose the lettered word or phrase that is most nearly opposite in meaning to the word DISINTEGRATE.

- A. Coalesce B. Pulverize C. Annihilate D. Severe C. Trounce

Section No. II - Quantitative Ability

Syllabus

The quantitative section will consist of questions from following areas of General Mathematics:

- Basic arithmetic
 - Fractions and Decimals
 - Percents and Averages
 - Ratios and Proportions
- Algebra
 - Equations and Inequalities
 - Linear and Quadratic Equations
- Geometry
 - Lines and Angles
 - Triangles
 - Quadrilateral and other Polygons
 - Circle

Question Format

The section will include three types of questions which are:

a) Discrete Quantitative Question

Each multiple-choice question will consist of a question statement which requires you to perform some calculations for selecting exactly one of the available choices.

Example

Miss Saima, a boutique owner, received a shipment of stitched suits from a stitching factory. She sold half of them in the first week. In second week, after two more were sold, she had exactly $\frac{2}{5}$ of the suits left. How many suits were in the shipment?

- A. 10 B. 20 C. 30 D. 40

b) Quantitative Comparison Question

Quantitative comparison questions consist of two quantities and you have to compare them.

Example

A cricketer scored 75 runs in each inning of his first three matches and 80 runs in his fourth and fifth match.	
A	B
Average after 4 innings	Average after 5 innings

- A. The quantity in column A is greater
B. The quantity in column B is greater
C. The two quantities in both columns are equal
D. The relationship cannot be determined from the given information

c) Data Interpretation Question

The data is presented in any format (chart, graph or table) and questions are based on the presented information.

Example

Population by Age Group

(in thousands)

Age	Population
17 years and under	63,376
18–44 years	86,738
45–64 years	43,845
65 years and over	24,054

How many people are 44 years old or younger?

- A. 63,376 B. 86,738 C. 150,114 D. 150,114,000

Section No. III – Subjective Knowledge

1. Which of the following is a plasmid?

- A. *EcoRI* B. *BamIII* C. *HindIII* D. PUC18

2. In Gram staining, Gram's Iodine acts as:
A. Primary stain B. Counter stain C. Secondary stain D. Mordant
3. Which of the following is a characteristic of Uracil?
A. the ability to bond with adenine B. is a purine
C. the ability to bond with guanine D. the ability to bond with cytosine
4. An important characteristic of mycobacteria is that they are:
A. Gram negative B. rapid growing C. alpha hemolytic D. Acid fast
5. Gel permeation chromatography separates the molecules on the base of their:
A. Molecular weight B. Density C. Size D. Isoelectric point
6. Sterilization is:
A. Complete killing of microbes B. incomplete killing of microbes
C. partial removal of microbes D. no killing of microbes
7. An operon consist of the following, except:
A. Transcriptional factors B. Operator C. Structural genes D. Promoter
8. Each tRNA has an amino acid arm with the terminal sequence:
A. CCA B. CCC C. AAA D. AAC
9. The technique that utilizes probes to detect specific DNA sequences is known as:
A. Eastern blot B. Southern blot C. Northern blot D. Western blot
10. DNA Ligase helps in:
A. removal of nucleotide residues B. linking of single stranded nicks
C. fragmentation of DNA strand D. energy supply for DNA synthesis