Entry Test Sample for MS in Genetics Program

Weightage Distribution:

<table>
<thead>
<tr>
<th>Section No.</th>
<th>Section Name</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>English</td>
<td>25%</td>
</tr>
<tr>
<td>II</td>
<td>Quantitative Ability</td>
<td>25%</td>
</tr>
<tr>
<td>III</td>
<td>Subjective Knowledge</td>
<td>50%</td>
</tr>
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</table>

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 exits 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

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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 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

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average after 4 innings</td>
<td>Average after 5 innings</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Age</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 years and under</td>
<td>63,376</td>
</tr>
<tr>
<td>18–44 years</td>
<td>86,738</td>
</tr>
<tr>
<td>45–64 years</td>
<td>43,845</td>
</tr>
<tr>
<td>65 years and over</td>
<td>24,054</td>
</tr>
</tbody>
</table>

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. In DNA, Adenine pairs with:
A. Thymine B. Uracil C. Guanine D. Uracil
2. During the process of meiosis, synapsis and recombination occur in:
   A. Prophase I  B. Prophase II  C. Metaphase I  D. Metaphase II

3. Down’s syndrome is due to:
   A. Linkage  B. Sex-linked inheritance
   C. Crossing over  D. Nondisjunction of chromosomes

4. The most common cystic fibrosis mutation consists of:
   A. a duplication  B. a deletion  C. a substitution  D. an insertion

5. If the blood group of the child is ‘O’, then the blood group of the parent’s cannot be:
   A. A and A  B. A and B  C. B and O  D. AB and O

6. Unit of inheritance is called:
   A. Phenotype  B. Genotype  C. Gene  D. Chromosome

7. Laws of heredity were proposed by:
   A. Morgan  B. Muller  C. Maipighi  D. Mendel

8. A cross between F1 hybrids with either of the parent is called:
   A. Test cross  B. Back cross  C. Reverse cross  D. None of these

9. The ratio of progeny of dwarf plants in a cross between heterozygous tall plant with homozygous dwarf plant will be:
   A. 25%  B. 50%  C. 75%  D. 100%

10. Which is the following is an example of monosomy in humans?
    A. Trisomy 21  B. Klinefelter’s Syndrome
     C. Turner Syndrome  D. Non-disjunction