Enrollment No.



School:School of ScienceProgram/s:BMSYear:1stExamination:End Semester:Examination year:December - 2022

Course Code: BM103, Course Name: Concepts of Biology & Basis of Life Date: 2/12/2022 Total Marks: 40 Time: 8.30 am to 10.30 am Total Pages: 02

Instructions:

➔ Write each answer on a new page.

➔ Use of a calculator is permitted/not permitted.

Q. No.	Details	Marks	со	BTL
Q.1	<ul> <li>Do as directed <ol> <li>What is the practical purpose of taxonomy or classification?</li> <li>Different versions of genes are called as</li> <li>Linnaeus is credited with <ul> <li>a) binomial nomenclature</li> <li>b) theory of biogenesis</li> <li>c) discovery of microscope</li> <li>d) discovery of blood circulation</li> </ul> </li> <li>In the five kingdom system of classification, which single kingdom out of the following can include blue-green algae, nitrogen fixing bacteria and methanogenic archaebacteria?</li> <li>Which is the most abundant biomolecule on earth?</li> <li>Which of the following is not an essential amino acids? <ul> <li>a) proline</li> <li>b) leucine</li> <li>c) histidine</li> <li>d) methionine</li> </ul> </li> <li>Nucleotides are building blocks of nucleic acids. What are the main constituents of nucleotides?</li> <li>Define 'model organisms'.</li> <li>Lipids are insoluble in water because lipid molecules are <ul> <li>a) hydrophilic</li> <li>b) neutral</li> <li>c) Zwitter ions</li> <li>d) hydrophobic</li> </ul> </li> <li>A group of individuals of the same species living in the same area is called a(n)</li> <li>The type of logical thinking that uses related observations to arrive at a general conclusion is called</li> <li>a) deductive reasoning</li> <li>c) the scientific method b) hypothesis-based science</li> <li>d) inductive reasoning</li> </ol></li></ul> <li>Which one of the following pairs of nitrogenous bases of nucleic acids is wrongly matched with the category mentioned against it? <ul> <li>a) Adenine, Thymine – Purines</li> <li>b) Uracil, Cytosine – Pyrimidines</li> <li>c) Adenine, Guanine – Pyrimidines</li> <li>c) Adenine, Cuanine – Pyrimidines</li> </ul> </li>	1x15=15	CO1,2,3	BTL1,2,3

Q.2 Q.3	<ul> <li>d) Uracil, Thymine - Pyrimidines</li> <li>14. Which of the following consist of prokaryotic cells? <ul> <li>a) bacteria and fungi</li> <li>b) archaea and fungi</li> <li>c) protists and animals</li> <li>d) bacteria and archaea</li> </ul> </li> <li>15. What is a karyotype? <ul> <li>Answer in brief (Any 7)</li> <li>1. Is it right to blame a woman for bearing a girl child? Justify</li> <li>2. Define octet rule with an example.</li> <li>3. Give any two variations of Mendel's Laws.</li> </ul> </li> <li>4. Justify the statement 'Cells are the structural and functional units of life'.</li> <li>5. Why is water a polar molecule?</li> <li>6. Why is carbon important on the Earth?</li> <li>7. Give differences between the two types of cladogenic speciation.</li> <li>8. Which main factor is responsible for the physical characteristics of a living organism?</li> </ul> <li>Write short notes on (Any 2) <ol> <li>Importance of water in human life</li> </ol> </li>	2x7=14 2x2.5=5	
	<ol> <li>Model organisms for genetic studies</li> <li>Endosymbiont theory</li> </ol>		
Q.4	<ul> <li>Answer in detail (Any 2)</li> <li>1. Describe various ways of reproductive isolation.</li> <li>2. Classify carbohydrates with structural details and its respective functions.</li> <li>3. Why is the study of heredity important for understanding human health?</li> </ul>	2x3=6	

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