

Name:
Enrolment No:



UPES
End Semester Examination, December 2023

Course: Biosciences
Program: B.Sc. (Microbiology)
Course Code: HSMB 1010

Semester : I
Duration : 3 Hours
Max. Marks: 100

Instructions: The Assessment consists of 4 sections.

- **Part A contains 20 questions of 1.5 marks each and all questions are compulsory.**
- **Part B consists of 4 questions of 5 marks each and all questions are compulsory.**
- **Part C consists of 2 questions of 15 marks each and all questions are compulsory.**
- **Part D consists of 2 questions of 10 marks each and all questions are compulsory.**

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q 1	Which is the lowest level of organization in the living kingdoms? a. molecular level b. cellular level c. population d. tissue level	1.5	CO1
Q 2	The five-kingdom classification was given by? a. Whittaker b. Linnaeus c. Copeland d. Haeckel	1.5	CO1
Q 3	ICBN stands for _____. a. International Code of Botanical Nomenclature b. Indian Code of Botanical Nomenclature c. Indian Congress of Biological names d. Indian Congress of Botanical Nomenclature	1.5	CO1
Q 4	Monerans are unicellular organisms. State: Yes, or not?	1.5	CO2
Q 5	What is the name of the special hyphal tips through which parasitic fungi absorb nutrients directly from the cytoplasm of the living host? a. Haustoria b. Mildew c. Constricting ring d. All of the above	1.5	CO3

Q 6	What is the biologically cohesive unit of taxa? a. Phylum b. Order c. Genus d. Species	1.5	CO1
Q 7	What is the primary mechanism driving molecular evolution? a. Natural Selection b. Mutation c. Migration d. Gene Flow	1.5	CO1
Q 8	Which one of the following is false? a. Gametophytes are multicellular, tiny, and photosynthetic thallus. b. Pro-thallus is another name for sporophyte. c. Gametophyte is the predominant phase in mosses. d. Strobili, a distinctive cone-like structure, is present in Equisetum and Selaginella.	1.5	CO2
Q 9	Which of the following characteristics is unique to the Kingdom Plantae? a. Photosynthesis b. Heterotrophy c. Cell walls made of chitin d. Presence of mitochondria	1.5	CO2
Q 10	Which of the following is not a type of plant tissue? a. Epidermal tissue b. Ground tissue c. Vascular tissue d. Nervous tissue	1.5	CO2
Q 11	Which of the following phyla of plants produces seeds enclosed within fruits? a. Bryophyta b. Pteridophytes c. Gymnosperms d. Angiosperms	1.5	CO2
Q 12	How can you measure a heartbeat?	1.5	CO4
Q 13	How many bones does an adult human skeleton have?	1.5	CO4
Q 14	Justify whether blood is blue or red in the body?	1.5	CO3
Q 15	Which of these is not included in the vascular system? a. Heart b. Blood vessels c. Blood d. Lungs	1.5	CO4
Q 16	Mention if the following statements are true (T) or false (F)? Classification of the organisms gives an idea of their relationships	1.5	CO1

Q 17	Identify the false statements and rewrite them correctly by changing the first or last word only. Green plants perform photosynthesis.	1.5	CO2
Q 18	If our bodies were not in a state of homeostasis, our cells would probably not function properly. State: true or false?	1.5	CO4
Q 19	Statement A: The opening of windpipe is called gastro-esophageal sphincter. Statement B: Its covering prevents the entry of food. a. Both the statements are true b. Both the statements are false c. Statement A is true, but Statement B is false Statement B is true, but Statement A is false	1.5	CO4
Q 20	Which of the following is not part of the human respiratory system? a. Pharynx b. Alveoli c. Trachea d. Lumen	1.5	CO3
Section B (4Qx5M=20 Marks)			
Q 1	Compare the salient features of Monera with Protista?	5	CO2
Q 2	Describe the anatomy of the cardiovascular system?	5	CO4
Q 3	How can we be sure that evolution has taken place?	5	CO1
Q 4	Which processes explain isolation and speciation?	5	CO2
Section C (2Qx15M=30 Marks)			
Q 1	How does the body regulate its temperature? Explain homeostasis after experiencing both a rise and a reduction in temperature? What is the process by which blood is distributed to other bodily areas by the heart circulatory system?	5+5+5	CO4
Q 2	Give comparison between the following: (a) C3 and C4 pathways (b) Cyclic and non-cyclic photophosphorylation (c) Anatomy of leaf in C3 and C4 plants	5+5+5	CO2
Section D (2Qx10M=20 Marks)			
Q 1	Illustrate the taxonomical hierarchy with suitable examples of a plant? and an animal?	5+5	CO1
Q 2	Based on the graph, answer the following questions: (a) At which point/s (A, B or C) in the curve is light a limiting factor? (b) What could be the limiting factor/s in region A?	5+5	CO2

