



**NAVACHANA  
UNIVERSITY**  
a UGC recognized University

**School:** School of Science  
**Program/s:** B.Sc.  
**Year:** 1<sup>st</sup> **Semester:** 1<sup>st</sup>  
**Examination:** End Semester Examination  
**Examination year:** December 2022

**Course Code:** BY102 **Course Name:** Foundation course in Biology I  
**Date:** 12/12/2022  
**Time:** 08:30 am to 10:30 am

**Total Marks:** 40  
**Total Pages:** 02

**Instructions:**

- Write each answer on a new page.
- Use of a calculator is permitted/not permitted.
- \* COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	<p><b>Multiple choice questions (1*10=10 Marks)</b></p> <ol style="list-style-type: none"> <li>The term cell was given by a) Robert Hooke b) Tatum c) Schwann d) De Bary</li> <li>Which of the following is a functional unit of a body? a) Mitochondria b) Cytoplasm c) Spleen d) Cell</li> <li>The power house of cell is called a) Cell wall b) Mitochondria c) Ribosomes d) Nucleus</li> <li>Ocean acidification begins with a) pollution from ships b) carbon dioxide released from combustion c) dumping of waste from cities into the ocean d) all of the above</li> <li>Which of the following is correct: (a) Cells of all living organisms have a nucleus. (b) Both animal and plant cells have a well defined cell wall. (c) In prokaryotes, there are no membrane bound organelles. (d) Cells are formed de novo from abiotic materials.</li> <li>New cells generate from (a) bacterial fermentation (b) regeneration of old cells (c) pre-existing cells (d) abiotic materials</li> <li>Which nutrient provides the most amount of energy per gram? a) Carbohydrate b) Fats c) Protein d) Vitamin</li> <li>Which of the following statements are true regarding chloroplasts a) it is a double membrane bound organelle b) chloroplasts are the sites for photosynthesis c) chloroplasts are responsible for the synthesis of carbohydrates d) all of the above</li> <li>Which of the following organelle is called the "suicidal bags" of the cell? (a) Cytoplasm (b) Lysosomes (c) Mitochondria (d) Endoplasmic reticulum</li> <li>Which of the following food items provides dietary fibre? (a) Pulses (b) Wholegrain (c) Fruits and vegetables (d) All of these</li> </ol>	10	CO1, CO2, CO3, CO4, CO5	BT1, BT2, BT3, BT4, BT5, BT6

Q.2	<b>Briefly explain: (any 3) (3*3=9 Marks)</b> a) Cell theory b) Biodiversity c) Cell membrane d) Proteins	9	C01, C02, C03, C04, C05	BT1, BT2, BT3, BT4, BT5, BT6
Q.3	<b>Answer the following questions in detail (any 4) (4*4=16 Marks)</b> 1. Explain food pyramid with the help of schematic diagram. 2. What is ocean acidification and its impact on marine life. 3. Discuss the factors responsible for biodiversity loss and its impacts. 4. With the help of a diagram, explain the structure and function of a nucleus. 5. Describe the roles of peroxisomes and glyoxisomes	16	C01, C02, C03, C04, C05	BT1, BT2, BT3, BT4, BT5, BT6
Q.4	<b>Q.4. State the difference between animal and plant cell with the help of a diagram. (5*1=5 Marks)</b> <b>Or</b> <b>State the difference between prokaryotic and eukaryotic cell with the help of a diagram.</b>	5	C01, C02, C03	BT1, BT2, BT4

\*\*\*\*\*End of Question Paper\*\*\*\*\*