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SUBJECT CODE NO: - SS-6559
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Zoology) (Sem-II)
Examination May / June - 2023
Biophysics -ZOO-203

[Time: 3:00 Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

N. B

- i) Question no.1 is Compulsory.
- ii) Attempt any five from que no.2 to 8

Q.1 MCQ (total 10 MCQ)

20

- 1) Which of the following is example of active transport via membrane
 - a) Absorption of minerals by plant's roots
 - b) Absorption of amino acid from gut
 - c) Uptake of glucose by small intestine
 - d) All of the above.
- 2) The difference between active and passive transport is _____
 - a) Active transport required energy where as passive transport does not
 - b) In active transport movement of molecules against concentration gradient where as in passive transport it is along the Concentration gradient
 - c) Both a & b
 - d) None of above
- 3) The 1st law of thermodynamics is also known as _____
 - a) Law of mass action
 - b) Law of conservation of mass
 - c) Law of conservation of energy
 - d) Law of Conservation of mass & energy
- 4) The oxygen liberated during photosynthesis comes from
 - a) Carbohydrate
 - b) CO_2
 - c) Enzymes
 - d) Water
- 5) The functional unit of contractile system of striated muscle is
 - a) Sarcomere
 - b) Cross bridges
 - c) Myofibril
 - d) Z- bond
- 6) Which of the following is contractile protein of muscle _____
 - a) Tubulin
 - b) Myocin
 - c) Troponin
 - d) None of above

- 7) Which property of light we can relate with eye lens
a) Dispersion b) Scattering c) Convergence d) divergence
- 8) Isotopes of an element have different numbers of _____
a) Protons b) electrons c) Neutrons d) None of above
- 9) Radioactive iodine is used to diagnose the disease of
a) Bones b) kidneys c) Blood cancer d) Thyroid
- 10) The radiation effect which can be passed to later generation of a person receiving radiation are called _____
a) Somatic effect b) Genetic effect
c) Future effect d) Radiosensitive effect

Q.2 Give an account of permeability of cell membrane? Explain Endocytosis and Exocytosis **12**
with suitable diagram

Q.3 What is facilitated diffusion I explain it's type Cuniport, symport, antiport) with help of **12**
suitable diagram

Q.4 What is active transport? Add a note on proton pump & Na^+/k^+ pump **12**

Q.5 Give an account of electron transport and oxidative phosphorylation. **12**

Q.6 Give an account of mechanical properties of muscle. Add a note on types of proteins of **12**
muscle.

Q.7 What is synapse? Explain transmission of nerve impulse (mechanism) **12**

Q.8 Write notes on (Any two) **12**

- a) Theories of hearing
b) Application of radioactive tracers
c) Chemo bioenergetics.