

SEAT No. _____

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[206/A-9]

SARDAR PATEL UNIVERSITY

S.Y.B.sc. 3rd SEMESTER EXAMINATION JANUARY, 2021

BIOCHEMISTRY: USO3CBCH22

TITLE: BIOPHYSICAL

BIOCBEMISTRY

Date: 01/01/2021, Friday Time: 02:00 PM TO 04:00 PM TOTAL MARKS: 70

Q.1 Select proper option from following MCQ.

[10]

- 1) Which of the following fluid is minimum in our body?
a) ECF b) ICF c) ITF d) CSF
- 2) Water intoxication is due to _____.
a) Pure water dehydration b) pure salt dehydration
c) poor secretion of ADH d) renal failure
- 3) Minimum excretory volume is about _____ ml / 24 hours
a) 100-200 b) 200-400 c) 500-600 d) 700-900
- 4) Unequal distribution of diffusible ion of RBC is due to _____.
a) surface tension b) diffusion
c) donnan membrane equilibrium d) viscosity
- 5) Emulsoids are _____ colloids.
a) liophilic b) liophobic c) protective d) association
- 6) In various diseases of blood the viscosity of blood
a) increases b) decreases c) remain constant d) none
- 7) PH meter is composed of _____.
a) a reference electrode b) a glass electrode
c) an electrometer d) all of these
- 8) Most important buffer system regulating blood pH is _____ buffer
a) Hb b) bicarbonate c) phosphate d) protein
- 9) _____ radioisotopes are frequently used for investigation of metabolic pathways
a) ¹⁴C b) ¹⁴N c) ¹⁴P d) ¹⁴Ca
- 10) _____ is based on excitation of solid or solution
a) scintillation counting b) GM counter c) autoradiography d) all of these

[1]

[P.T.O.]

Q2. Fill in the blanks and true false

[8]

1. The bond angle between H and O atom in structure of water is _____.
2. Suspensoid are example of _____ colloid.
3. Formula of calomel is _____.
4. SI unit of radioactivity is _____.

True or false

5. The most important buffer system regulating blood PH is Hb buffer.
6. In plants opening and closing of stomata is regulated by diffusion.
7. Volume receptor is sensitive for intravascular pressure.
8. Obligatory losses is approximatly 200ml.

Q3. Answer in short. (Any ten)

[20]

1. Define buffer with examples
2. Define hydrogen bond
3. Define diffusion.
4. Define viscosity
5. What is Tyndall effect?
6. What is role of ADH?
7. Define radioisotopes.
8. Give reason structure of ware is V shape.
9. Make flow chart for distribution of body water.
10. What is function phosphate buffer?
11. Define atomic and mass number.
12. Define pH.

Q4.: Long answer questions. (any four) (8 marks each)

[32]

1. Give an account on normal water balance
2. Explain physiological buffer system.
3. Explain classification of colloids.
4. Explain biological significance of osmosis.
5. Pure water dehydration.
6. Explain Acid Base and derived H-H equation.
7. Application of radioisotopes
8. Explain GM counter

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[2]