

# HONOURS

446/Chem

SKBU/UG/4th Sem/Chem/HT405/21

## U.G. 4th Semester Examination - 2021

### CHEMISTRY

Course Code : BCEMSEHT405

Course Title : Analytical Clinical Biochemistry

Full Marks : 50

Time : 2 Hours

*The figures in the right-hand margin indicate marks.*

Answer **all** the questions by choosing correct alternative:

2×25=50

1. Ribozymes are

- i) RNA acting as enzymes
- ii) Ribose sugar acting as enzyme
- iii) Antibodies acting as enzymes
- iv) Protein acting as enzyme

2. Holoenzyme is made of

- i) Apoenzyme and Zymogen
- ii) Apoenzyme and Co-enzyme
- iii) Co-enzyme and Prosthetic group
- iv) Prosthetic group and Co-factor

3. Which of the following is not a co-enzyme?

- i) NAD
- ii) NADP
- iii) FAD
- iv)  $Mn^{++}$

4. In competitive inhibition, inhibitors bears a close structural similarity with the

- i) Co-enzyme
- ii) Co-factor
- iii) Prosthetic group
- iv) Substrate

5. Enzyme acts best at a particular temperature called

- i) Catalytic Temperature
- ii) At normal Body temperature
- iii) Optimum temperature
- iv) None of the above

6. Lock and Key model is also known as

- i) Template model
- ii) Induced fit model
- iii) Khosland's Model
- iv) Enzyme-substrate interaction model

[Turn Over]

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7. Which of the following statement is incorrect?
- Enzymes are protein in nature
  - Enzymes are colloidal in nature
  - Enzymes are thermolabile
  - Enzymes are inorganic catalyst
8. Enzymes bringing about hydrolysis of esters and peptides are
- Transferases
  - Lyases
  - Hydrolases
  - All of the above
9. The General Mechanism is that an Enzyme acts by
- Reducing the activation energy
  - Increasing activation energy
  - Decreasing pH value
  - Increasing pH value
10. Which one is bad fat for life?
- cis unsaturated fat
  - trans unsaturated fat
  - both of these
  - none of these
11. Toxin free radicals can bind with
- saturated fat
  - unsaturated fat
  - blood
  - none of these
12. Reusing of cooking oil is not good for health because-
- change the taste of food
  - change colour of food
  - increases trans fat
  - convert trans fat to cis fat
13. The percentage of blood plasma is
- 50%
  - 45%
  - 55%
  - 60%
14. Colour of blood is red due to
- RBC
  - HBC
  - Plasma
  - Water

15. Which fat is good for our life?
- Omega 3
  - Omega 9
  - Omega 10
  - Omega 4
16. The degree of unsaturation of lipid can be measured by
- Iodine number
  - Saponification number
  - Reichert Meissel number
  - Polenske number
17. The plasma protein is responsible for blood coagulation
- Fibrinogen
  - Globulin
  - Serum amylase
  - Albumin
18. Increase of triglycerides level in blood cause
- Cardiovascular disease
  - Stroke
  - Cancer
  - Both (i) and (ii)
19. Among below which is the cause of rancidity of oil/ fat –
- hydrolysis
  - virus
  - sunlight
  - reduction
20. Which of the following is not a reducing sugar?
- D-fructose
  - D-ribose
  - Sucrose
  - Cellobiose
21. The cyclic structures of monosaccharides are which of the following?
- Acetals
  - Hemiacetals
  - Ethers
  - Esters
22. When excess glucose is treated with Benedict's reagent and heated
- colour changes to black
  - colour changes to brick red
  - colour changes to blue
  - colour changes to violet

23. Which is not a lipid?
- i) fat
  - ii) oil
  - iii) wax
  - iv) proteins
24. How diabetic symptoms can be detected by blood test?
- i) cholesterol level
  - ii) creatinine level
  - iii) sugar level
  - iv) triglyceride level
25. What is the normal pH range of urine?
- i) 3.5-8
  - ii) 4.5-8
  - iii) 4-8.5
  - iv) 4.5-9
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