

GURUDAS COLLEGE  
DEPARTMENT OF BIOCHEMISTRY  
UG INTERMEDIATE EXAMINATION, 2020  
B.SC BIOCHEMISTRY HONS. SEMESTER IV  
PAPER Clinical Biochemistry BCM-A-SEC B1-TH (Semester 4)

TIME 45 mins

**Choose the correct answer**

Answer all questions

1.Total serum bilirubin levels are:

- a. Markedly increased in chronic hemolytic disease (above 10 mg/dl)
- b. Mildly elevated in hepatocellular disease (below 5 mg/dl)
- c. Markedly increased in cholestasis (10-60 mg/dl)
- d. b and c
- e. None of the above

2.In suspected diabetes mellitus it is necessary to determine:

- a. Blood glucose level
- b. Urinary glucose
- c. Glycosylated haemoglobin
- d. Cholesterol
- e. Triglycerides

3.Methods used for blood glucose determination:

- a. Glucose oxidase method
- b. Ortotolidine method
- c. Hexokinase method
- d. Biuret method

4. Plasma lipids are:

- a. Cholesterol.
- b. Triglycerides

c. Glycogen

d. Fatty acids

e. All of them are correct except c

5. Main risk factors of developing atherosclerosis are:

a. High level of HDL and low level of LDL in serum

b. High level of LDL and low level of HDL in serum

c. Both a and b

d. High level of chylomicrons

6. Increased level of serum triglycerides may be revealed in:

a. Obesity

b. Alcoholism

c. Diabetes mellitus

d. Diabetes insipidus

e. All of them are correct except d

7. In fasting serum from healthy individuals following types of lipoproteins are revealed:

a. LDL

b. Cholesterol

c. Chylomicrons

d. VLDL

e. All of them are correct except b

8. Hypertriglyceridaemia may develop in:

a. Pancreatitis

b. Diabetes mellitus

c. Hepatitis

d. Thyrotoxicosis

e. Starvation

9. Apolipoprotein is:

a. Protein that forms protein-lipid complex

b. Protein that determines properties of protein-lipid complex

c. Protein that causes hyperlipoproteinaemia in inherited defect or impaired apoprotein synthesis

- d. Protein in fructosamine
- e. All of them are correct except d

10. VLDL are synthesized in:

- a. Muscles
- b. Fatty tissue
- c. Hepatocytes
- d. Lungs

11. LDL are synthesized in:

- a. Kidneys
- b. Fatty tissue
- c. Plasma
- d. Connecting tissue

12. Isoenzymes are:

- a. Multiple forms of enzymes catalyzing different reactions
- b. Multiple forms of enzymes catalyzing the same reaction
- c. Multiple forms of enzymes with different physical and chemical properties
- d. Multiple forms of enzymes with the same physical and chemical properties
- e. Both b and c are correct

13. Maximal activity of ALT is revealed in:

- a. Lungs
- b. Liver
- c. Skeletal muscles
- d. Kidneys
- e. Pancreas

14. Maximal activity of Creatine Kinase is revealed in:

- a. Heart muscle
- b. Prostate gland
- c. Spleen
- d. Kidneys
- e. Pancreas

15. Lactate Dehydrogenase molecule consists of such subunits:

- a. B and M
- b. H and M
- c. B,M and H
- d. B and H
- e. B

16. How many isoenzymes does Lactate Dehydrogenase have:

- a. 2
- b. 3
- c. 5
- d. 10

17. Myocardium is rich in:

- a. LDH-1
- b. LDH-2
- c. LDH-3
- d. LDH-4

18. Which enzyme is considered to be early marker of myocardial infarction?

- a. LDH-5
- b. Cholinesterase
- c.  $\alpha$ -Amylase
- d. Creatine Kinase
- e. Alkaline Phosphatase

19. Increasing of which Creatine Kinase isoenzymes is specific for myocardial infarction?

- a. CK-MM
- b. CK-MB
- c. CK-BB 66
- d. CK-CC

20. Isoenzymes can be characterized by

- a. Proteins lacking enzymatic activity that are necessary for the activation of enzymes
- b. Proteolytic enzymes activated by hydrolysis

- c. Enzymes with identical primary structure
- d. Similar enzymes that catalyse different reaction

21. The isoenzymes of LDH

- a. Differ only in a single amino acid
- b. Differ in catalytic activity
- c. Exist in 5 forms depending on M and H monomer contents
- d. Occur as monomers

22. In early stages of myocardial ischemia the most sensitive indicator is the measurement of the activity of

- a. CPK
- b. SGPT
- c. SGOT
- d. LDH

23. The isoenzymes LDH5 is elevated in

- a. Myocardial infarction
- b. Peptic ulcer
- c. Liver disease
- d. Infectious diseases

24. On the third day of onset of acute myocardial infarction the enzyme elevated is

- a. Serum AST
- b. Serum CK
- c. Serum LDH
- d. Serum ALT

25. LDH1 and LDH2 are elevated in

- a. Myocardial infarction
- b. Liver disease
- c. Kidney disease
- d. Brain disease

26. The CK isoenzymes present in cardiac muscle is

- a. BB and MB

b. MM and MB

c. BB only

d. MB only

27. The pathogenesis of diabetic cataract involves accumulation of

a. Galactose

b. Mannitol

c. Sorbitol

d. Pyruvate

28. Correct ordering of lipoprotein molecules from lowest to the greater density is

a. LDL, IDL, VLDL, chylomicron

b. Chylomicron, VLDL, IDL, LDL

c. VLDL, IDL, LDL, chylomicron

d. LDL, VLDL, IDL, chylomicron

29. Serum lactate dehydrogenase rises in

a. Viral hepatitis

b. Myocardial infarction

c. Carcinomatosis

d. All of these

30. Which of the following serum enzyme rises in myocardial infarction:

a. Creatine kinase

b. GOT

c. LDH

d. All of these

31. The shape of a normal erythrocyte is described as:

a. biconcave disc

b. spherocyte

c. polymorphonucleocyte

d. thin column

e. bull's eye

32. Which test could not be performed on a serum sample:

a. iron

b. vitamin B12

- c. total lipids
- d. clotting factors
- e. potassium

33. The liquid portion of blood remaining after a clot has formed is called:

- a. the buffy coat
- b. serum
- c. plasma
- d. lymph
- e. tissue fluid

34. Blood for an RBC count must be prepared from:

- a. EDTA blood
- b. citrated blood
- c. heparinized blood
- d. oxalated blood
- e. clotted blood

35. Glassware used to measure 24-hour urine volumes is a:

- a. volumetric flask
- b. beaker
- c. Erlenmeyer cylinder
- d. graduated cylinder
- e. safety bulb