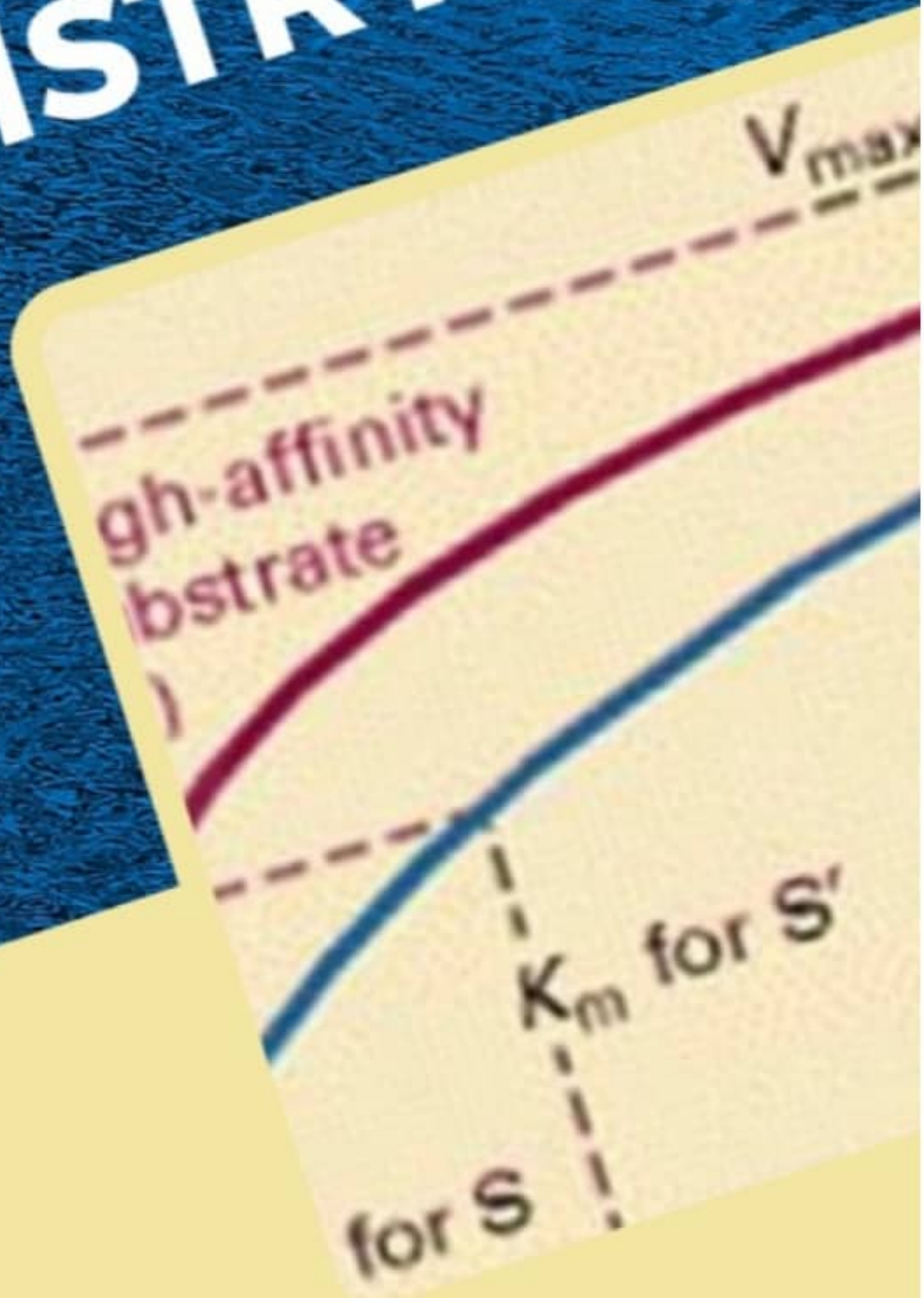


دفعة القدس

PAST PAPERS OF BIOCHEMISTRY

FINAL 2021



كلية الطب
لجان الدفعات

DONE BY:
MOHAMMAD RABABA'A

{ Biochemistry – final }

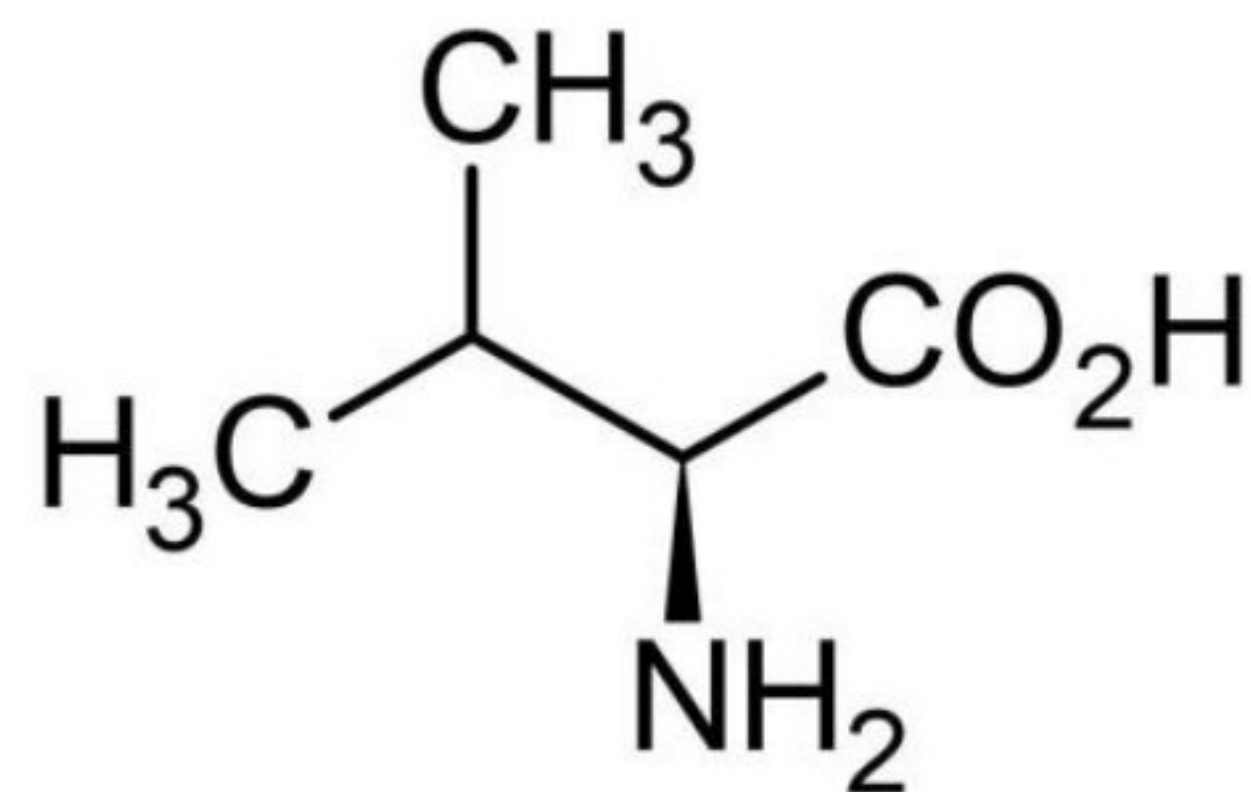
1. The best description of the primary structure is:

- A. the localized organization of parts of a polypeptide chain.
- B. the three-dimensional structure of the protein
- C. the sequence and type of amino acid residues
- D. the number and relative positions of the subunits in a multimeric protein.
- E. None of the above

Answer: C

2. The following amino acid is:

- A. Leu
- B. Lys
- C. Val
- D. Glu
- E. Thr



Answer: C

3. What is the net charge of Cys residues in Oxytocin?

- A. -2
- B. +1
- C. -1
- D. 0
- E. +2

Answer: D

4. Which protein of the following will be denatured by heat?

- A. Immunoglobulin
- B. Elastin
- C. Myoglobin
- D. Keratin
- E. Collagen

Answer: C

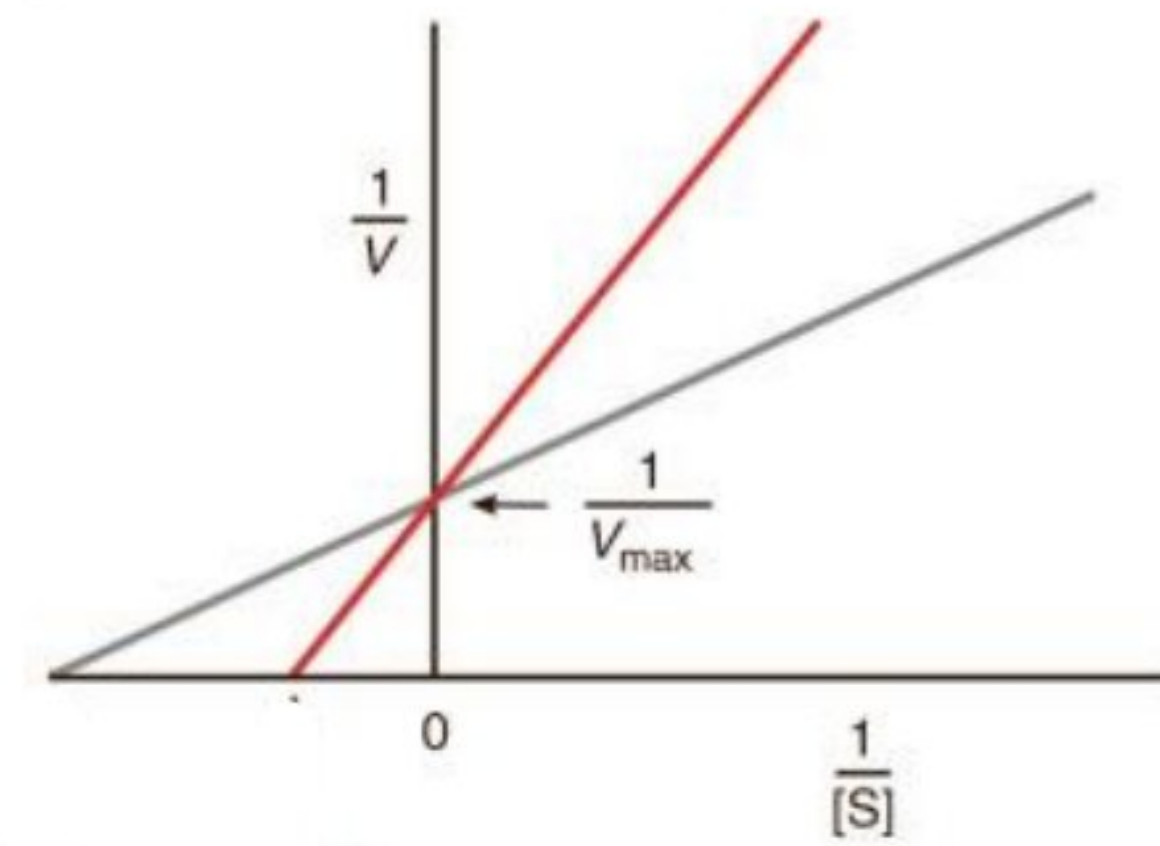
5. How many peptide bonds are in ADH?

- A. 7
- B. 10
- C. 9
- D. 11
- E. 8

Answer: E

6. Which of the following inhibitors act as the following blot?

- A. Penicillin
- B. Sarin
- C. Aspirin
- D. Glucose phosphate
- E. Alopurinol



Answer: D

7. Which is found in the cis configuration more frequently than other amino acids?

- A. Pro
- B. Gly
- C. Trp
- D. Ile
- E. Ala

Answer: A

8. What is the ratio of V to V_{max} if $[S]=9 K_m$?

- A. 1.11
- B. 0.09
- C. 1
- D. 0.9

Answer: D

9. The best description of C-reactive protein:

- A. acute-phase inflammatory protein
- B. Help in the defense against bacteria
- C. Its level reaches a peak after 2 days
- D. Undetectable in healthy individuals
- E. All of the above

Answer: E

10. The antigen binds specifically to which part of the antibody?

- A. Fc domain
- B. Fab domain
- C. CDR
- D. Hinge region

Answer: C

11. The R conformation of hemoglobin always predominates in one of the following tissues:

- A. Muscles
- B. Lungs
- C. Liver
- D. RPCs

Answer: B

12. Which of the following bonds is not found in fibrous proteins?

- A. Hydrogen bonds
- B. Phosphodiester bonds
- C. Peptide bonds
- D. Disulfide bonds

Answer: B

13. Newborns of lactating mothers are protected from antigens through the action of:

- A. IgA
- B. IgD
- C. IgM
- D. IgG
- E. both A and D

Answer: E

14. Chaperons are:

molecules that help in the correct folding of other proteins

15. Cheese contain high amounts of a modified amino acid which is derived from:

- A. Tyr
- B. Trp
- C. Tyramine
- D. Glu
- E. Asp

Answer: A

16. The disease that does not result from misfolding:

- A. Alzheimer
- B. Analbuminemia
- C. Creutzfeldt-Jacob
- D. Scrapie

Answer: B

17. Chinese restaurant syndrome:

- A. Oxytocin
- B. Gramicidin S
- C. Enkephalins
- D. Monosodium glutamate

Answer: D

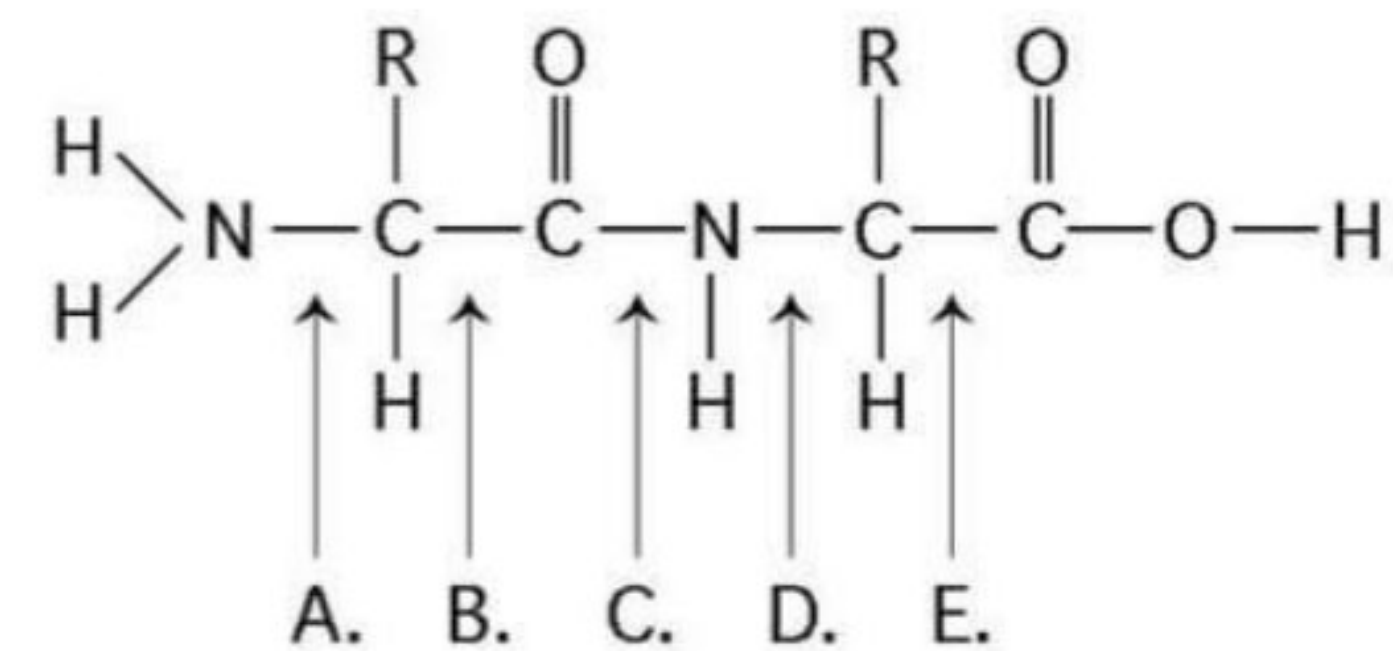
18. Manganese is required for this enzyme:

- A. Carbonic anhydrase
- B. Hexokinase
- C. Carboxypeptidase
- D. Glutathione peroxidase
- E. Superoxide dismutase

Answer: E

19. The letter that represents the peptide bonds is:

- A. A
- B. B
- C. C
- D. D
- E. E



Answer: C

20. The cofactor which doesn't bind covalently is:

- A. CoA
- B. PLP
- C. Biotin
- D. TTP
- E. NAD^+

Answer: E

21. What is false about modified amino acids?

- A. Trp – Epinephrine
- B. Tyr - Pheomelanin
- C. His – Histamine
- D. Glu - GABA

Answer: A

22. Choose the mismatch pair of the following:

- A. Pyridoxine – lyase
- B. Thiamine – decarboxylase
- C. NAD^+ – oxidoreductase

Answer: A

23. The major class of the enzyme which convert Histidine into Histamine is:

- A. Transferase
- B. Oxidoreductase
- C. Lyase
- D. Ligase
- E. Translocase

Answer: C

24. What is phosphoprotein?

- A. Simple protein
- B. Halo protein

Answer: B

25. Which protein reaches the peak after a day of myocardial infraction?

- A. CK-MB
- B. CK-MM
- C. CK-BB
- D. Myoglobin

Answer: A

26. The aromatic amino acids pair of the following:

- A. Cys - Trp
- B. Trp – Tyr
- C. Met – Cys
- D. Tyr – Pro
- E. Pro – Phe

Answer: B

27. The secondary structure is characterized by:

- A. The sequence of amino acids
- B. The hydrogen bonds between R groups
- C. The hydrophobic interactions between the amino acids
- D. The hydrogen bonds between amine and carbonyl groups

Answer: D

28. Choose the wrong statement about the distal histidine in Hemoglobin:

- A. Works as a gate
- B. Stabilizes the binding of oxygen
- C. Keep the Fe in the oxidized state

Answer:

29. if the O₂ pressure in a certain tissue is 3mmHg, what will happen?

- A. The myoglobin will be partially saturated
- B. The myoglobin will be fully saturated
- C. The hemoglobin will be fully saturated
- D. Can't be determined

Answer:

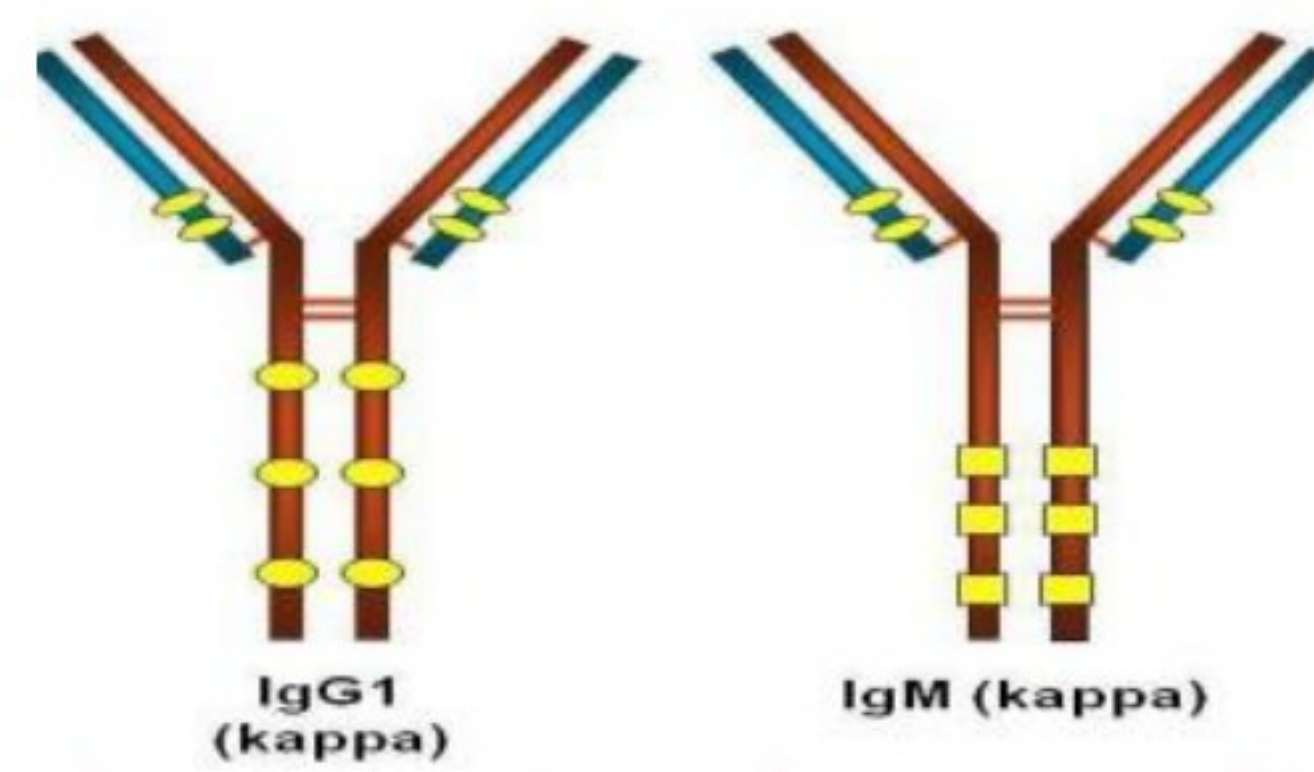
30. One of the following is not true about fibrous proteins:

- A. Glycine and proline residue are abundant in collagen, elastin and keratin proteins
- B. Disulfide bonds within keratin are the reason for curly hair
- C. Hydroxyproline in collagen is necessary for its stability
- D. Collagen is glycosylated at hydroxylysine residues
- E. Lysine is involved in crosslinking elastin molecules

Answer: A

31. The relation between these two antibodies:

- A. Idiotypes
- B. Isotypes
- C. Allotypes
- D. A+C
- E. There is no relationship



Answer: B

32. What is true about plasma proteins?

- A. They are all synthesized in Liver
- B. They are synthesized in the active form
- C. Albumin is a glycoprotein
- D. (the answer) نسيتها

Answer:

33.If the patient is suffering from Hyperalbuminemia:

He should be hydrated

34. What is true about α 1-antitrypsin?

- A. High amount of it will active elastase
- B. Synthesized primarily by the fetal yolk sac
- C. A tetramer
- D. A polymorphic protein

Answer: D

35. What is wrong about the active site of enzymes?

- A. specific three-dimensional shape
- B. It's found on the surface of the enzyme
- C. Takes up a relatively small part of the total volume

Answer: B

36. What is true about the active site of enzymes?

There should be 3 points for binding

37. The specific function of enzymes is:

Reducing the activation energy

38. The wrong mechanism of enzymes is:

- A. Catalysis by bond strain
- B. Michaelis-Menten mechanism
- C. Acid- base catalysis
- D. Covalent catalysis
- E. Proximity effect

Answer: B

39. Monooxygenases are a class of:

- A. Isomerases
- B. Lyases
- C. Transferases
- D. Hydrolases
- E. Oxidoreductases

Answer: E

40. The major class that catalyzes intramolecular rearrangements is:

- A. Ligases
- B. Transferases
- C. Oxidoreductases
- D. Mutases
- E. Translocases

Answer: D

- 41.** You are working on the enzyme Y, with a $K_m=9$, which gives a rate of 360 M/s after 3 minutes, what is its specific activity if the enzyme's weight is 0.2 g?
- A. 1800
 - B. 900
 - C. 3600
 - D. 360
 - E. 600

Answer: E

- 42.** Choose the incorrect statement about ribozymes.
- A. An exception of protein enzymes
 - B. Its catalytic efficiency is more than that of protein enzymes
 - C. They become stronger when they bind to proteins
 - D. Telomerase is an example

Answer: B

- 43.** the stronger binding between the stationary phase and proteins:
- A. Earlier the elution
 - B. When we increase the concentration of salt
 - C. During the elution
 - D. Later the elution

Answer: D

- 44.** The technique that is used in pregnancy test is:
- A. ELISA
 - B. Affinity Chromatography
 - C. Dialysis
 - D. Salting in

Answer: A