



(نصف ورقه إمتحانيه)

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Choose the correct answer:

( 48x0.5=24 mark)

- 49- ..... amino acids contain amino group and two carboxylic groups.  
a) acidic      b) basic      c) neutral      d) none of them
- 50- Most of naturally occurring amino acids have the ..... configuration.  
a) L      b) D      c) trans      d) cis
- 51- The optical rotation of amino acids depends upon the ..... of solution.  
a) boiling point      b) pH      c) conducting      d) all of them
- 52- Phenylalanine is an example of ..... amino acids.  
a) acidic      b) neutral      c) basic      d) (a)&(b)
- 53- Which of the following amino acids have symmetric carbon atom?  
a) glycine      b) alanine      c) lysine      d) all of them
- 54- Which of the following presented basic amino acids?  
a) valine      b) arginine      c) histidine      d) (b)&(c)
- 55- Proteins can be hydrolysed to give a mixture of ..... amino acids.  
a)  $\alpha$       b)  $\beta$       c)  $\gamma$       d)  $\sigma$
- 56-  $\alpha$ -bromopropionic acid react with excess of liquid ammonia followed by hydrolysis in acidic media to form .....  
a) glycine      b) alanine      c) phenylalanine      d) lysine
- 57- Amino acids exist in ..... form in aqueous solution.  
a) zwitter ion      b) dipolar ion      c) positive ion      d) (a)&(b)
- 58- When formaldehyde treated with HCN then ammonia and finally hydrolysis, the product is.....  
a) histidine      b) glycine      c) alanine      d) phenylalanine
- 59- In acidic solution amino acids exist as .....  
a) cations      b) anions      c) negative ion      d) (b)&(c)
- 60- All amino acids have ..... isoelectric point.  
a) equal      b) the same      c) different      d) (a)&(b)
- 61- The pH of the isoelectric point depends on ..... groups in amino acid structure.  
a) COOH      b) NH<sub>2</sub>      c) OH      d) other functional
- 62- Acidic amino acids have isoelectric point at ..... pH.  
a) high      b) low      c) around 3      d) (b)&(c)

- 63- In basic solution, the amino acid migrates toward .....  
 a) cathode                    **b) anode**                    c) negative electrode                    d) none of them
- 64- Basic amino acids have isoelectric point at pH equal to .....  
**a) 10**                    b) 3                    c) 5.5                    d) 6.3
- 65- The amino acid molecule not migrates to either electrode, which exists as ..... ion.  
 a) zwitter                    b) positive                    c) dipolar                    **d) (a)&(c)**
- 66- Amino acids are soluble in .....  
**a) water**                    b) benzene                    c) xylene                    d) nonpolar solvents
- 67- When glycine treated with barium hydroxide upon decarboxylation, ..... was obtained.  
 a) propylamine                    b) ethylamine                    **c) methylamine**                    d)  $\alpha$ -hydroxyacetic acid
- 68- Hippuric acid was obtained by reaction of glycine with .....  
 a) acetic anhydride                    b) acetyl chloride                    **c) benzoyl chloride**                    d) (a)&(c)
- 69- 2-aminopropionic acid undergoes reduction with  $\text{LiAlH}_4$  to form .....  
**a) 2-aminopropanol**                    b) 2-aminoethanol                    c) methylamine                    d) ethylamine
- 70- Alanine undergoes reaction with nitrous acid to form .....  
 a) glycolic acid                    **b) lactic acid**                    c) hippuric acid                    d) aspartic acid
- 71- Glycine reacts with nitrosyl chloride to form .....  
 a) chloroacetic acid                    b)  $\alpha$ -chloropropionic                    c)  $\alpha$ -halo acid                    **d) (a)&(c)**
- 72- N-methyleneglycine was obtained by reaction of glycine with .....  
 a) acetaldehyde                    **b) formaldehyde**                    c) benzaldehyde                    d) acetyl chloride
- 73-  $\beta$ -amino acids undergo heating to form .....  
**a)  $\alpha, \beta$ -unsaturated acids**                    b) cyclic diamide                    c) lactams                    d) none of them
- 74- On heating of  $\beta$ -alanine, ..... was obtained.  
 a) crotonic acid                    **b) acrylic acid**                    c) acetic acid                    d) 2-amino ethanol
- 75-  $\gamma$ -aminobutyric acid undergoes intramolecular dehydration to form .....  
 a) cyclic diamide                    b) lactam                    c) cyclic amide                    **d) (b)&(c)**
- 76-  $\alpha$ -amino acids undergo heating to give .....  
 a)  $\alpha, \beta$ -unsaturated acids                    b) cyclic amides                    c) lactams                    **d) cyclic diamides**
- 77- Proteins can be classified according to composition for ..... types.  
**a) two**                    b) three                    c) four                    d) five
- 78- Simple proteins are subdivided according to .....  
 a) solubility                    b) prosthetic group                    c) coagulation by heat                    **d) (a)&(c)**
- 79- Albumins are ..... proteins.  
 a) water-insoluble                    b) water-soluble                    c) coagulated by heat                    **d) (b)&(c)**
- 80- Scleroproteins are found in .....  
 a) plants                    **b) animals**                    c) vegetables                    d) (a)&(b)
- 81- Globulins are insoluble in water but soluble in ..... solutions.  
**a) dilute salt**                    b) dilute acid                    c) concentrate acid                    d) dilute base
- 82- Globin in hemoglobin is an example of .....  
**a) histones**                    b) glutenins                    c) albumins                    d) none of them
- 83- Which of the following are water-insoluble proteins?  
 a) albumins                    b) histones                    **c) glutenins**                    d) protamine
- 84- Which of the following proteins are not coagulated by heat?  
 a) globulins                    b) histones                    c) protamine                    **d) (b)&(c)**
- 85- Conjugated proteins are subdivided into several classes according to .....  
 a) solubility                    **b) prosthetic group**                    c) coagulation by heat                    d) all of them
- 86- Glycoproteins contain  $\alpha$ -amino acid plus .....  
 a) carbohydrates                    b) glycolic acid                    c) cholesterol ester                    d) phosphoric acid
- 87- Which of the following proteins consist of a pigmented as prosthetic group?  
 a) glycoproteins                    b) lipoproteins                    c) nucleoproteins                    **d) chromoproteins**

- 88- Casein is an example of .....
- a) glycoproteins      b) lipoproteins      **c) phosphoproteins**      d) nucleoproteins
- 89- Insulin is a common example of a protein .....
- a) enzyme      **b) hormone**      c) antibodies      d) none of them
- 90- Gamma globulins present in blood are example of .....
- a) enzymes      b) hormones      **c) antibodies**      d) structural proteins
- 91- Which of the following act as contractile proteins?
- a) actin      b) pesin      c) myosin      **d) (a)&(c)**
- 92- ..... acts as catalyst for the chemical reaction in living organisms.
- a) hormone      **b) enzyme**      c) vitamin      d) antibodies
- 93- Fibrinogen acts as .....
- a) structural protein      b) hormone      c) antibodies      **d) blood protein**
- 94- ..... act as communication links between different parts of organisms.
- a) enzymes      **b) hormones**      c) antibodies      d) all of them
- 95- Trypsin is an example of .....
- a) contractile protein      b) hormone      **c) enzymes**      d) antibodies
- 96- Collagen is an example of ..... protein.
- a) structural**      b) contractile      c) blood      d) all of them

*With best wishes*  
*Dr. Amal M. Metwally*