

LD/719

2012

BIOCHEMISTRY

Series



Paper - II

Time : 150 Minutes

Max. Marks : 300

INSTRUCTIONS

1. Please check the Test Booklet and ensure that it contains all the questions. If you find any defect in the Test Booklet or Answer Sheet, please get it replaced immediately.
2. The Test Booklet contains 150 questions. Each question carries **two** marks.
3. The Test Booklet is printed in four (4) Series, viz. **A B C D**. The Series, **A** or **B** or **C** or **D** is printed on the right-hand corner of the cover page of the Test Booklet. Mark your Test Booklet Series **A** or **B** or **C** or **D** in Part C on side 1 of the Answer Sheet by darkening the appropriate circle with Blue/Black Ball point pen.

Example to fill up the Booklet Series

If your Test Booklet Series is A, please fill as shown below :



*If you have not marked the Test Booklet Series at Part C of side 1 of the Answer Sheet or marked in a way that it leads to discrepancy in determining the exact Test Booklet Series, then, in all such cases, your Answer Sheet will be invalidated without any further notice. No correspondence will be entertained in the matter.*

4. Each question is followed by 4 answer choices. Of these, you have to select one correct answer and mark it on the Answer Sheet by darkening the appropriate circle for the question. If more than one circle is darkened, the answer will not be valued at all. Use Blue/Black Ball point pen to make heavy black marks to fill the circle completely. Make **no** other stray marks.

e.g. : If the answer for Question No. 1 is Answer choice (2), it should be marked as follows :





1. A unit of mass very nearly equal to that of a hydrogen atom is called as
- (1) Molecular weight
  - (2) Dalton
  - (3) Joule
  - (4) Kilodalton
2. Non sulfur cross links derived from amino acids
- (1) Lysine
  - (2) Proline
  - (3) Arginine
  - (4) Glutamic acid
3. The peptide unit is planar because
- (1) The C-N are Co-planar
  - (2) The C-N bond has single bond character
  - (3) The carbon-nitrogen bond has partial double bond character
  - (4) The C-N are unstable
4. The polypeptide chain can abruptly reverse its direction because of CO group is
- (1) Hydrogen bonded to NH
  - (2) Hydrogen bonded to N
  - (3) Hydrogen bonded to C
  - (4) Hydrogen bonded to O
5. Myoglobin is the oxygen carrier in muscle with mol wt.
- (1) 15 Kd
  - (2) 25 Kd
  - (3) 18 Kd
  - (4) 20 Kd
- \*6. Ribonuclease at 37° C and pH 7 cannot be readily reduced by  $\beta$ -mercapto ethanol unless the protein is treated with
- (1) DNP
  - (2) Uric acid
  - (3) SDS
  - (4) Guanidine hydrochloride
7. Most adults are intolerant of milk because they are deficient in enzyme
- (1) lactase
  - (2) casein
  - (3) lactose
  - (4) maltase
8. The coat present around erythrocyte is made up of the following
- (1) Glycophorin B
  - (2) Glycoprotein
  - (3) Glycophorin E
  - (4) Glycophorin A

9. Carbohydrate binding proteins are called as
- (1) Lectins
  - (2) Pectins
  - (3) Asialoglyco proteins
  - (4) Oligo peptides
10. Three ATPs and two NADPH are used to bring CO<sub>2</sub> to the level of a
- (1) Hexose
  - (2) Heptalose
  - (3) Triose
  - (4) Mannose
11. Thioredoxin plays a key role in co-ordinating the reactions in
- (1) RNA synthesis
  - (2) Protein synthesis
  - (3) Photosynthesis
  - (4) Gluconeogenesis
12. Cholesterol and triacylglycerols are transported to target cells by
- (1) lipoproteins
  - (2) transport proteins
  - (3) transferins
  - (4) channals
13. LDL receptor is a protein with five different functional domains and is present in
- (1) Cytosol
  - (2) Peripheral protein
  - (3) Membrane bound
  - (4) Transmembrane
14. Bile salts derived from cholesterol facilitate the digestion of
- (1) Proteins
  - (2) Lipoproteins
  - (3) Lipids
  - (4) Carbohydrates
15. The percentage of DNA codes for proteins is
- (1) 10% of mammalian DNA
  - (2) 3% of mammalian DNA
  - (3) 5% of mammalian DNA
  - (4) 2% of mammalian DNA
16. A striking feature of the human mitochondrial genome is its extreme
- (1) Complexity
  - (2) Economy
  - (3) Simplicity
  - (4) Present in mitochondria

17. The sequence of the human globin genes matches the order in which they are expressed in the following order

- (1)  $\epsilon \rightarrow \delta, \beta \rightarrow \gamma$
- (2)  $\epsilon \rightarrow \gamma \rightarrow \delta, \beta$
- (3)  $\gamma \rightarrow \delta \rightarrow \beta$
- (4)  $\epsilon \rightarrow \beta \rightarrow \delta$

18. A family of 300 - bp sequences occurring nearly a million times in the human genome

- (1) Alu sequences
- (2) Rapid sequences
- (3) Repetitive sequences
- (4) LINES

19. Mevalonate and squalene are intermediates in the synthesis of the following

- (1) Prostaglandins
- (2) Cholesterol
- (3) Testosterone
- (4) Carotene

20. The sedimentation co-efficient of hemoglobin is  $4 \times 10^{-13}$  S or 4S, the subcellular organelles

- (1) 70 S ribosome
- (2) 30 S subunit
- (3) 40 S subunit
- (4) 60 S protein

21. The co-ordination of a zinc ion to three nitrogen atoms of histidine side chains is essential in the following enzyme

- (1) Carbonic anhydrase
- (2) Lygase
- (3) Chymotrypsin
- (4) Ribonuclease

22. The pK value of aspartic acid at 25° C is

- (1)  $\alpha$  COOH 2.0 &  $\alpha$  NH<sub>3</sub> 10.0
- (2)  $\alpha$  COOH 1.0 &  $\alpha$  NH<sub>3</sub> 8.0
- (3)  $\alpha$  COOH 1.5 &  $\alpha$  NH<sub>3</sub> 9.0
- (4)  $\alpha$  COOH 2.0 &  $\alpha$  NH<sub>3</sub> 9.0

23. The  $\alpha$ -amino acids undergo decarboxylation by decarboxylases which are dependent on

- (1) NHD
- (2) PLP
- (3) FHD
- (4) PEP

24. Colorimeter used to measure coloured substances this instrument is operative in the visible range

- (1) 500 - 900 nm
- (2) 280 - 550 nm
- (3) 400 - 800 nm
- (4) 300 - 800 nm

25. The three ionizing radiations are  $\alpha$ -rays  $\beta$ -rays  $\gamma$ -rays. The  $\beta$ -rays are due to emission of

- (1) Light
- (2) Protons
- (3) Photons
- (4) Electrons

26. The precipitin bands are due bands of

- (1) Antibodies and antigens
- (2) Protein bands
- (3) Antibodies and proteins
- (4) aniten bands

27. For the transmission of nerve impulse we need

- (1) Acetylcholine
- (2) Triacylglycerol
- (3) Choline
- (4) DOPA

28. The Biogenic amines are synthesized by

- (1) Decarboxylases
- (2) Phosphatases
- (3) Dehydrogenases
- (4) Synthetases

29. Vitamin like compound choline is synthesized from amino acid

- (1) Hydroxy proline
- (2) Tyrosine
- (3) Threonine
- (4) Serine

30. An ATP generating process in which an inorganic compound serves as the ultimate electron acceptor is

- (1) Glycolysis
- (2) Electron transport
- (3) Respiration
- (4) Photosynthesis

31. The oligomycin - sensitivity conferring protein (OSCP) will
- (1) Contain ATP catalytic site
  - (2) Contain proton channel
  - (3) Contain electron channel
  - (4) Regulates proton flow
32. Electrons in the iron sulfur clusters of NADH-Q reductase are first shuttled to
- (1) Co-enzyme-C
  - (2) Ubiquinone
  - (3) Co-enzyme-A
  - (4) Ubiquitin
33. The complete oxidation of Glucose yield
- (1) 30 ATPs
  - (2) 25 ATPs
  - (3) 28 ATPs
  - (4) 18 ATPs
34. A cytochrome is an electron transferring protein that contains a prosthetic group
- (1) Iron proteins
  - (2) Cytochrome C
  - (3) Porphyrin molecule
  - (4) Heme
35. The rate of oxidative phosphorylation is determined by
- (1) Need for activation
  - (2) Need for energy
  - (3) Need for gluconeogenesis
  - (4) Need for ATP
36. Superoxide anion can be scavenged by enzyme
- (1) Oxidase
  - (2) Catalase
  - (3) Superoxide dismutase
  - (4) Hydrolase
37. Respiratory control is
- (1) Electron transport coupled to phosphorylation
  - (2) ATP control
  - (3) Electron transport control
  - (4) ATP synthesis

38. What are the P:O ratios for electrons donated by matrix NADH and by succinate?

- (1) 2.5 and 1.5 ratio
- (2) 1 and 2 ratio
- (3) 1.6 and 3 ratio
- (4) 4 and 6 ratio

39. Component blocks electron transport and proton pumping at site 2 is

- (1) Rotenone
- (2) Azide
- (3) Actinomycin
- (4) DTNB

40. When, oxidation and phosphorylation are not tightly coupled in mitochondria the resulting syndrome?

- (1) RAS syndrome
- (2) Coupled syndrome
- (3) Cushion's syndrome
- (4) Luft syndrome

41. Michaelis Leonor interpreted the maximal velocity of an enzyme catalyzed reaction in terms of formation of a discrete

- (1) enzyme - product complex
- (2) enzyme - substrate complex
- (3) enzyme - substrate product complex
- (4) enz - inhibitor complex

42. In non competitive inhibition

- (1) The binding sites do not overlap
- (2) The binding sites overlap
- (3) The binding sites compete
- (4) The binding sites do not compete

43. Allosteric enzymes do not obey Michaelis Menten kinetics where in the

- (1) Binding is covalent
- (2) Binding is parallel
- (3) Binding of substrates is non co-operative
- (4) Binding of substrates is co-operative



44. How does penicillin inhibit bacterial growth?
- (1) Interfere with growth
  - (2) Interfere with DNA
  - (3) Interfere with cell wall formation
  - (4) Interfere with nucleus formation
45. Thiamine pyrophosphate is a prosthetic group for the enzyme
- (1) Transketolase
  - (2) Decarboxylase
  - (3) PEP kinase
  - (4) Glutamate dehydrogenase
46. Citrate synthase undergoes a large conformational change on binding oxaloacetate to
- (1) To get more activated
  - (2) To get inactivated
  - (3) Leading to creation of binding site
  - (4) None of the above
47. The peptidoglycan is a component of
- (1) Bacterial cell wall
  - (2) Fungal cell wall
  - (3) RBC cell wall
  - (4) Tree bark
48. Enzymes are controlled by regulatory proteins
- (1) glycoproteins
  - (2) calmodulins
  - (3) proteoglycons
  - (4) epoxy compounds
49. RNA molecules can be potent
- (1) Hormones
  - (2) Inhibitors
  - (3) Enzymes
  - (4) Drugs
50. The oxidative decarboxylation of  $\alpha$  ketoglutarate is catalyzed by an enzyme complex that is structurally similar to the
- (1) Fructose dehydrogenase complex
  - (2) Lactate dehydrogenase complex
  - (3) Glutamate dehydrogenase complex
  - (4) Pyruvate dehydrogenase complex
51. Primosome a protein assembly that begins
- (1) DNA repair
  - (2) DNA replication
  - (3) DNA damage
  - (4) DNA polymerization

52. The two polynucleotide chains running in opposite directions coil around a common axis to form
- (1) Left handed double helix
  - (2) B-DNA helix
  - (3) Right handed double helix
  - (4) C-DNA helix
53. All types of DNAs are right handed under physiological conditions in the
- (1) A - DNA form
  - (2) Z - DNA form
  - (3) C - DNA form
  - (4) B - DNA form
54. Most naturally occurring DNA molecules are
- (1) Negatively supercoiled
  - (2) Supercoiled no charged
  - (3) Positively supercoiled
  - (4) Just coiled
55. The DNA synthesis is assayed by using
- (1) Radioactive precursors
  - (2) Acid precipitation
  - (3) Trichloro acetic acid
  - (4) Deoxy thymidine
56. The 5' - 3' exonuclease activity plays a key role in DNA replication by removing
- (1) DNA primer
  - (2) Polymerase I
  - (3) RNA primer
  - (4) Polymerase II
57. The Okazaki fragments and leading strand are synthesized in the direction of
- (1) Formation of short fragments
  - (2) 3' to 5' direction
  - (3) 5' to 3' end
  - (4) Forward direction
58. The SOS response is triggered by cleavage of the
- (1) rec - A protein
  - (2) lex - A protein
  - (3) ruv - C protein
  - (4) ruv - B protein
59. The Beta S sickle gene is an allele of the normal Beta A gene. The genes for the  $\alpha$  and Beta chains of hemoglobin are
- (1) alleles of each other
  - (2) different alleles of Hb - s
  - (3) same alleles of Hb
  - (4) not alleles of each other
60. The following is an effective immunogen
- (1) Anti DNP antibody
  - (2) Epitope
  - (3) DNP-BSA
  - (4) Haptenic determinant

61. Antibody producing cells can synthesize large amounts of specific antibody in the complete absence of the corresponding
- (1) antigen
  - (2) immunogen
  - (3) antibody
  - (4) IgG
62. Antibodies differ from enzymes in which respect?
- (1) High sp. gravity
  - (2) Non protein nature
  - (3) Specificity and heterogeneous
  - (4) Heterogeneous
63. A mixture of lymphocytes and plasma cells fused in vitro with myeloma cells resulting in
- (1) Hybrid cells
  - (2) Monoclonal antibodies
  - (3) Hybridoma cells
  - (4) Homogeneous antibodies
64. The major class of antibodies in external secretion of saliva, tears, mucus is
- (1) Immunoglobulin G
  - (2) Immunoglobulin A
  - (3) Immunoglobulin M
  - (4) Immunoglobulin E
65. Antigen - Antibody complexes trigger the complement cascade to lyse
- (1) Red cells
  - (2) T cells
  - (3)  $\beta$  cells
  - (4) Target cells
66. Foreign peptides bound to class MHC proteins, signal that a cell is infected and mark it for destruction by
- (1) Killer cells
  - (2) T - cells
  - (3)  $\beta$  - cells
  - (4) Antibodies
67. In conditions of HIV positive cases the host cell is the
- (1) Hepatic cell
  - (2)  $\beta$  - cell
  - (3) Helper T cell
  - (4) Killer cell

68. HIV constantly changes its coat proteins 60th gp 120 and gp 41 to evade detection by host the mutation rate is \_\_\_\_\_ times higher than the influenza virus.
- (1) 65 times
  - (2) 10 times
  - (3) 5 times
  - (4) 100 times
69. G - protein mediated B - Adrenergic receptor brings about physiologic response of
- (1) Visual excitation
  - (2) Chemotaxis
  - (3) Glycogen Breakdown
  - (4) Olfaction
70. Ionophores such as A 23187 and ionomycin can traverse a lipid bilayer because
- (1) They have a hydrophobic periphery
  - (2) They have a hydrophilic periphery
  - (3) They have receptors an membrane
  - (4) They have diffusion property
71. In cholera - the phosphorylation of chloride channels in intestinal epithelial cells
- (1) Increases the efflux of  $Cl^-$  and water
  - (2) Inhibited
  - (3) Decrease the efflux of calcium and water
  - (4) Activated
72. The key cytosolic messenger in many physiologic processes is
- (1) Cyclic AMP
  - (2) Adelylase cyclase
  - (3) GMP
  - (4) PIP
73. RHODOPSIN the photoreceptor proteins of Rods is a member of the
- (1) Five -Helix receptor families
  - (2) Chromophore family
  - (3) Seven-Helix receptor family
  - (4) Chromogen family

74. Cyclic AMP stimulates the phosphorylation of many target proteins by

- (1) Protein kinase A
- (2) Adenylate cyclase
- (3) Protein kinase
- (4) GMP kinase

75. Epithelial cells contain a chloride channel which is opened by PKA - catalyzed reactions. If this channel is defective it results in

- (1) Allergy
- (2) Cystic fibrosis
- (3) Ab and Ag reactions
- (4) Uterine fibroids

76. Diacylglycerol activates protein kinase C which phosphorylates

- (1) Tyrosine residues
- (2) Serine residues
- (3) Hydroxy proline residues
- (4) proline residues

77. Many cancer producing genes encode altered signal transduction proteins such as

- (1) AT pase activity
- (2) Phospholipase
- (3) GT pase activity
- (4) Tyrosine kinase

78. Aldosterone and vasopressin are involved in

- (1) Carpus luteum formation
- (2) Liver function
- (3) Kidney function
- (4) Electrolyte and water balance

79. Thyrotropin is a glycoprotein with molecular weight in the range

- (1) 210 Kd to 310 Kd
- (2) 26,000 to 33,000
- (3) 1000 to 10,000 Daltons
- (4) 5000 to 20,000

80. Glucagon physiological effect is

- (1) Antagonistic to Insulin
- (2) Induce positive N balance
- (3) Same as Insulin
- (4) Lipogenic action

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First para*

A

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81. Blood volume in the human is related to the total body surface is being

- V. Sudya  
na. ayar
- (1) 5 to 7 percent of body wt
  - (2) 7 to 10 percent of body wt
  - (3) 2 to 3 percent of body wt
  - (4) 9 to 10 percent of body wt

82. Diffusible constituents of blood are

- Chatterjee
- (1) Globulins
  - (2) Albumins
  - (3)  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Cl}^-$ ,  $\text{HCO}_3^-$
  - (4) Enzymes

83. Colostrum is rich in the following

- Immunology  
Book
- (1) Proteins
  - (2) Immunoglobulins
  - (3) Lactose
  - (4) Calcium

84. The co-factors like inorganic ions

- Voet
- (1) Activate enzyme
  - (2) Effect enzyme activity
  - (3) Inhibit enzymes
  - (4) Enhance enzyme-sub binding

85. The determination of uric acid is used to diagnose

- Voet
- (1) Gout
  - (2) Brain fever
  - (3) Liver failure
  - (4) Arthritis

86. Estrogens are characterized by unsaturated ring \_\_\_\_\_ which permit analysis by UV absorption.

- Voet
- (1) and a  $\alpha$ -OH group
  - (2) and a phenolic group
  - (3) a non phenolic group
  - (4) and a keto group

87. Cholesterol is estimated by a procedure using

- Hawk
- (1) Sobel and Mayer
  - (2) Bloor, Pelkan
  - (3) Liebermann reaction
  - (4) Malloy and Evelyn

88. The central dogma in bio informatics

- (1) RNA - DNA  $\alpha$  - Proteins
- (2) Structure - Sequence  $\alpha$  - function
- (3) DNA - RNA - proteins
- (4) Sequence - Structure function

89. Which algorithms used for local alignment?

- BT
- (1) Global alignment
  - (2) Pair wise alignment
  - (3) Needle man - Wunch
  - (4) Smith Waterman

90. What is meant by BLAST?

- BT
- (1) Basic local align sequence tool
  - (2) Basic local alignment search tool
  - (3) Basic local alignment sequence tool
  - (4) Basic local alignment search test

91. What is the formula for chi - square test?

- (1)  $X^2 = \sum \frac{(O_1 - E_1)^2}{E_1}$
- (2)  $X = \sum(O - E) / E$
- (3)  $X = \sum(E - E)^2 / N$
- (4)  $X = \sum(O - E) / 2N$

92. Data can be stored in the form of

- (1) Bites
- (2) Megabytes
- (3) Bits (0 or 1)
- (4) Kilo bytes

93. Find the input device from the following

- (1) CD
- (2) Mouse and joysticks
- (3) Head phones
- (4) Printers

94. Registers can be stored in

- (1) CPU
- (2) RAM
- (3) Bytes
- (4) Files

95. What are the measures of central tendency?

- (1) Arithmetic mean
- (2) Mean, median, mode
- (3) Mode, mean
- (4) Mode

96. What is transcriptome?

- (1) Study of RNA molecules +DNA
- (2) Study of proteins
- (3) Study of RNA (mRNA, rRNA, tRNA)
- (4) Study of DNA

97. Gel electrophoresis application has been in separation of

- (1) Total proteins
- (2) Single protein
- (3) Conjugated proteins
- (4) Derived proteins

98. The level of serum lipase activity is a reflection of the activity of

- (1) Pancrease
- (2) Liver
- (3) Kidney
- (4) Brain

✓ 99. The diminishing renal function can be detected firstly by

- (1) Blood urea clearance
- (2) Blood  $\text{NH}_3$
- (3) Blood creatinine
- (4) Blood creatine

100. The value of serum ascorbic acid if less than 0.2 mg, this results in

- (1) Cretinism
- (2) Beri beri
- (3) Scurvy
- (4) Night Blindness

✓ 101. The phages which are able to undergo lysogeny are known as

- (1) Bacculo virus
- (2) Temperate phages
- (3) None of the above
- (4) Retrovirus

✓ 102. Bacteriophage infect specific bacteria by

- (1) Binding to surface receptors
- (2) Transformation
- (3) Conjugation
- (4) Transfection

103. The therapeutic use of bacteriophages to treat pathogenic bacterial infections is called

- (1) Antibacterial therapy
- (2) Phage therapy
- (3) Retroviral therapy
- (4) Bacterial treatment

✓ 104. Bacteriophage was discovered by

- (1) L. Pasteur
- (2) Robert Koch
- (3) Leeuwenhoek
- (4) Frederick Twort

105. Enterobacteria phage  $T_4$  infects

- (1) Vibrio cholera
- (2) Mycoplasma
- (3) E. Coli Bacteria
- (4) Spirilla

106. Vertical viral transmission is commonly seen in

- (1) HIV
- (2) Influenza
- (3) Ritrovirus
- (4) Dengue



107. Virus associated with human cancer

- (1) Human papilloma virus
- (2) Herpes virus
- (3) Epstein-Barr virus
- (4) All the above

108. The enzyme dihydrofolate reductase, produced by dhfr gene is inhibited by

- (1) dihydrouracil
- (2) Sulfonamide
- (3) Methotrexate
- (4) Straptomycin

109. Which one of the following has a cell wall degrading activity?

- (1) Poly galacturonase
- (2)  $\beta$  - galactosidase
- (3) murein
- (4) amylase

110. Which of the following method is used to detect unique DNA sequences?

- (1) Northern blotting
- (2) Western Blotting
- (3) Southern Blotting
- (4) Iso electrophoresis

111. m-RNAs can be identified by

- (1) Western blotting
- (2) Northern Blotting
- (3) Southern blotting
- (4) Isoelectro focusing

112. Which of the following has a  $\beta$  - lactam ring?

- (1) Cephalosporin
- (2) Streptomycin
- (3) Tetracyclines
- (4) Chloramphenicol

113. Viral vaccines consists of

- (1) Killed virus
- (2) Live attenuated viruses
- (3) Viral proteins
- (4) All of the above

114. The proteins which are named after their ability to interfere with viral replication in host cell are

- (1) Integrins
- (2) Interferons
- (3) Cytokines
- (4) Cytokeratins

115. Tobacco mosaic virus is a

- (1) RNA virus
- (2) Retrovirus
- (3) DNA virus
- (4) All the above

116. The protein kinase is activated by

- (1) Adenylate cyclase
- (2) AMP
- (3) PIP
- (4) cAMP

117. The second messenger is phosphatidyl inositol in

- (1) Glucagon action
- (2) FSH
- (3) Gastrin action
- (4) Calcitonin

118. The antidiuretic hormone is a

- (1) Steroid hormone
- (2) Peptide hormone
- (3) Mineralo corticoid
- (4) Gluco corticoid

119. Cushing's syndrome is caused by over production of

- (1) Thyroid
- (2) ACTH
- (3) LM
- (4) FSH

120. Cretinism is caused by

- (1) Vitamin C
- (2) Hyperthyroidism
- (3) Hypothalamus
- (4) Hypothyroidism

121. Which of the following neutralize acid chime?

- (1) Bile salts
- (2) Bile acids
- (3) Cholesterol
- (4) Bile pigments

122. The most prevalent nutritional disorder is

- (1) Goitre
- (2) Vitamin B deficiency
- (3) Iron deficiency
- (4) Vitamin A deficiency

123. Anorexia nervosa is a

- (1) Eating disorder
- (2) Psychological disorder
- (3) Digestive disorder
- (4) Nervous disorder

124. Co-enzyme A is the co-enzyme form of

- (1) Folic acid
- (2) Vitamin A
- (3) Vitamin C
- (4) Pantothenic acid

125. Bioflavonoids acts as

- (1) Antibiotics
- (2) Antioxidants
- (3) Inhibitors
- (4) Anti inflammatory

126. Parathyroid hormone regulates

- (1) Glucose regulation
- (2) Carbohydrate metabolism
- (3) Calcium metabolism
- (4) Calcitonin

✓ 127. Anterior pituitary gland produces

- (1) Oxytocin
- (2) Vasopressin
- (3) PTH
- (4) Chorionic gonadotropin

128. Glucagon produces \_\_\_\_\_ effect.

- (1) Hyperglycemic
- (2) Hypoglycemic
- (3) Hyperbolic
- (4) Hypochromic effect

✓ 129. Protein energy malnutrition covers both

- (1) Iron deficiency and protein deficiency
- (2) Protein energy deficiency
- (3) Kwashiorker and Marasmus
- (4) Marasmus + protein deficiency

130. \_\_\_\_\_ is a precursor for all the steroid hormones.

- (1) Dehydrochole calciferol
- (2) Dopamine
- (3) Catecholamine
- (4) Pregnenolone

131. The major end products of androgen metabolism are

- (1) Testosterones
- (2) 17-  $\beta$  - estradiol
- (3) 17 - keto steroids
- (4) Andro sterones

✓ 132. The decalcification of bones in the post menopausal women leading to

- (1) Osteoporosis
- (2) Pheochromocytomas
- (3) Cushing syndrome
- (4) Addison's syndrome

133. \_\_\_\_\_ controls due production of progesterone.

- (1) LH
- (2) hCG
- (3) FSH
- (4) None of the above

134. Mechanism of aldosterone action is

- (1) Group II
- (2) Group IV
- (3) Group I
- (4) Group III

135. In the transport of androgens, testosterone and DHT bind to two proteins, these both transport proteins are synthesized in

- (1) Kidney
- (2) pancreas
- (3) Testis
- (4) Liver

136. The plasma testosterone level in normal men about

- (1) 2.8  $\mu$ gs
- (2) 0.7  $\mu$ gs
- (3) 4.0  $\mu$ gs
- (4) 2.3  $\mu$ gs

137. The daily requirement of thiamine is

- (1) 1 to 1.5 mg/day
- (2) 1 to 20 mg/day
- (3) 1 to 10 mg/day
- (4) 1 to 5 mg/day

138. Riboflavin co-enzyme forms are

- (1) FMN and FAD
- (2) Flavoproteins
- (3) Flavonoids
- (4) Flavokinases

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✓ 139. A reference man is considered to be

- (1) 20-39 years and 60 kg wt
- (2) 40 years and 50 kg wt
- (3) 20-50 year and 70 kg wt
- (4) 60 years and 60 kg wt

✓ 140. Adsorption chromatography separates \_\_\_\_\_ substances.

- (1) Polar
- (2) Ionic
- (3) Nonpolar
- (4) Nonionic

✓ 141. Cyanogen bromide (CNBr) used to cleave peptide bond to form a

- (1) Peptidyl homoserine lactone
- (2) Peptidyl lactone
- (3) Peptidyl lactone serine
- (4) Peptidyl Bromide

✓ 142. Phosphorylase kinase deficiency causes

- (1) Cori's disease
- (2) Tarui's disease
- (3) Pompe's disease
- (4) Hers' disease

✓ 143. Gramicidin A forms helical trans membrane channels and is from

- (1) Thermus aquaticus
- (2) Bacillus globigii
- (3) E. Coli
- (4) Bacillus brevis

✓ 144. 2,4 - Dinitrophenol (DNP) used as \_\_\_\_\_ for oxidative phosphorylation.

- (1) Connector
- (2) Uncoupler
- (3) Activating agent
- (4) Coupler

✓ 145. Heat generation is the physiological function of brown adipose tissue. This tissue contains

- (1) free fatty acids
- (2) triglycerols
- (3) triacylglycerols
- (4) steroids

✓ 146. Myasthenia gravis, in which individuals make self antibodies to

- (1) Acetyl choline receptors
- (2) Melanocyte receptors
- (3) Adrenergic receptors
- (4) Steroid receptors

✓ 147. Restriction maps provide a means of characterizing a

- (1) Gene maps
- (2) DNA molecule
- (3) Enzyme molecule
- (4) Protein molecule

✓ 148. Methotrexate inhibits the synthesis of

- (1) Lipid precursor
- (2) Proteins precursor
- (3) Vitamin precursor
- (4) DNA precursor

✓ 149. Vitamin pantothenic acid produces \_\_\_\_\_ as its co-enzyme form.

- (1) Flavin co-enzyme
- (2) Co-enzyme B
- (3) Co-enzyme A
- (4) Co-enzyme C

✓ 150. Cobalamin B<sub>12</sub> deficiency causes

- (1) Pernicious anaemia
- (2) Pellagra
- (3) Mesaloblastic anaemia
- (4) Beri Beri

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**ROUGH WORK**