

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2012.

M.Sc. (MEDICAL BIOCHEMISTRY)

COURSE CODE : 502

Register Number :

*Signature of the Invigilator
(with date)*

COURSE CODE : 502

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. Insertional mutagenesis is associated with the following EXCEPT:
(A) Promoter insertion (B) Gene amplification
(C) Enhancer insertion (D) Long terminal repeats
2. Which among the following human tumor virus is involved in the pathogenesis of Burkitt's lymphoma?
(A) T-cell leukemia (B) Epstein-Bar
(C) Hepatitis B (D) Human papilloma
3. The properties of cells in culture, which have undergone malignant transformation, include the following EXCEPT:
(A) Rounder shape than control cells
(B) Loss of contact inhibition of growth
(C) Loss of anchorage dependence
(D) Increased requirement for growth factors
4. Gene amplification is associated with the following EXCEPT:
(A) Homogeneously staining regions
(B) Double-minute chromosomes
(C) *erbB-2* in breast & ovarian cancers
(D) Increased methotrexate sensitivity
5. Activation of *c-ras* proto-oncogene results in
(A) Decreased adenylycyclase activity
(B) Frame shift mutation
(C) Increased GTPase activity of the product
(D) Increased activities of cAMP dependent protein kinases
6. Which among the following statements is false regarding p53 gene and its product?
(A) Causes G2 specific cell cycle arrest
(B) Binds viral proteins like SV40 large T antigen form inactive complexes
(C) Inhibits apoptosis
(D) Product is stabilized by DNA damage
7. The following are biochemical changes observed in fast growing tumors EXCEPT?
(A) Increased activity of ribonucleotide reductase
(B) Synthesis of fetal proteins
(C) Gain of differentiated biochemical functions
(D) Inappropriate synthesis of growth factors

8. Which among the following anticancer agent intercalates in DNA and stabilizes Topoisomerase II?

(A) Doxorubicin	(B) Melphalan
(C) Vinblastin	(D) Fluorouracil

9. Burkitt's lymphoma is characterized by the following EXCEPT:
 - (A) cancer of human B-lymphocytes
 - (B) reciprocal translocation between chromosomes 8 and 14 are involved
 - (C) *c-myc* gene comes under the influence of immunoglobulin heavy chain enhancer sequences
 - (D) increased synthesis of protein tyrosine kinase

10. Which among the following is true regarding chronic myelogenous leukemia?
 - (A) Reciprocal translocation between chromosomes 8 and 14
 - (B) Activation of *src* gene & increased protein tyrosine kinase activity
 - (C) Activation of *myc* gene & increased production of a DNA binding protein
 - (D) Production of bcr-abl fusion protein with increased protein tyrosine kinase activity

11. Which among the following drugs develop drug resistance due to increase in target enzyme?

(A) Cytarabine	(B) Cysplatin
(C) Methotrexate	(D) Cyclophosphamide

12. Which among the following statements is FALSE regarding Acyclovir – the antiviral drug?
 - (A) Thymine attached to an incomplete ribose ring
 - (B) It is phosphorylated by viral thymidine kinase
 - (C) Competitively inhibits the viral DNA polymerase more strongly than cellular enzymes
 - (D) It is a chain terminator when incorporated into DNA

13. The number of nucleotides added to the nascent chain before the polymerase disengages from the template is known as

(A) Chain elongation rate	(B) Processivity
(C) Proof reading	(D) Catalytic efficiency

14. Which among the following is an inhibitor of eukaryotic topoisomerases used as anti-tumor agent?

(A) Novobiocin	(B) Nalidixic acid
(C) 6-mercaptapurine	(D) Etoposide

15. Methylation directed strand cutting is part of which type of DNA repair?
 - (A) Mismatch
 - (B) Base – excision
 - (C) Nucleotide – excision
 - (D) Double strand break
16. Catalysis by N-glycosylase is part of which type of DNA repair?
 - (A) SOS
 - (B) Mismatch
 - (C) Base – excision
 - (D) Nucleotide excision
17. The mechanism of nucleotide excision repair involves
 - (A) Methylation directed strand cutting
 - (B) Abasic sugar removal
 - (C) Synapsis formation
 - (D) Removal of nucleotide oligomer
18. Which among the following statements is TRUE regarding xerodermapigmentosum?
 - (A) An acquired disease
 - (B) Normal sensitivity to light
 - (C) Defective base – excision repair
 - (D) Neurological derangements are common
19. Which among the following statements is false regarding telomerase?
 - (A) A reverse transcriptase
 - (B) Active in all the cells of the body
 - (C) Genomic stability in germ-line cells is maintained by Telomerase
 - (D) Has an internal RNA template
20. Which among the following is false about Ame's test for carcinogenicity?
 - (A) Negative for carcinogens which require metabolic activation
 - (B) Specially designed strain of *Salmonella typhimurium* is used
 - (C) Histidine containing medium is used
 - (D) In the modified procedure, the carcinogen is first incubated with the S-9 fraction of liver
21. Which among the following statements is true regarding *RB1* gene, its product and the onset of retinoblastoma?
 - (A) Gain of heterozygosity for *RB1* gene occurs in retinoblastoma
 - (B) In sporadic cases of retinoblastoma, only one mutation need to take place in retinoblasts
 - (C) The phosphorylated form of pRB protein binds to the E2F transcription complex
 - (D) Viral proteins like SV40 large T antigen form complexes with hypophosphorylated pRB and inactivates it

22. Which among the following statements is FALSE regarding RNA transcription?
- (A) RNA polymerase does not require a primer
 - (B) The RNA product does not remain base-paired to the template DNA
 - (C) Multiple RNA polymerase molecules can transcribe the same gene
 - (D) Transcription is more accurate than replication
23. Which among the following is FALSE regarding α -Amanitin?
- (A) Responsible for fatal mushroom poisoning
 - (B) RNAP II is most sensitive to its inhibition
 - (C) Mitochondrial RNAP is insensitive to inhibition
 - (D) It decreases the affinity of RNAP with NTPs
24. Which among the following statements is true regarding 'wobble' in the genetic code?
- (A) The 5' nucleotide of the anticodon is not significant in base pairing
 - (B) The codon-anticodon interactions at 5' end of codon does not follow Watson-Crick rule
 - (C) For one codon in the mRNA there can be more than one tRNA with different anticodons
 - (D) The 'wobble' leads to mutations
25. Which among the following statements is FALSE regarding eIF-2?
- (A) It is a control point for protein synthesis initiation
 - (B) It undergoes reversible phosphorylation by protein kinases
 - (C) Under cellular stress its phosphorylation is increased
 - (D) Its phosphorylated form enhances the formation of 43s preinitiation complex
26. The number of high energy phosphate bonds subjected to hydrolysis during the formation of a peptide bond is
- (A) 1 (B) 2 (C) 3 (D) 4
27. Which among the following statements does not describe 'P bodies'?
- (A) They are the sites of translation repression
 - (B) They carry out mRNA decay
 - (C) They harbor RNA helicases and RNA exonucleases
 - (D) Only the mRNA destined for decay are incorporated into it
28. Tetracycline inhibits protein synthesis by
- (A) preventing the binding of aminoacyl-tRNAs to the bacterial ribosome A site
 - (B) by binding to 23s rRNA
 - (C) as a tyrosinyl-tRNA analog
 - (D) inhibiting peptidyl transferase of 60S ribosomal subunit

29. Which antibiotic work by binding to 23S rRNA?
- (A) Puromycin (B) Cycloheximide
(C) Chloromphenicol (D) Tetracycline
30. Which among the following statements is FALSE regarding '*lac operon*'?
- (A) It consists of structural genes, lac promoter and regulatory genes
(B) It codes for the synthesis of a polycistronic mRNA molecule
(C) The polycistronic mRNA has single common translation start and stop codons
(D) It allows for coordinate expression of 3 enzymes of lactose metabolism
31. Which among the following events take place in the regulation of lac operon when glucose concentration in the medium is low?
- (A) cAMP level in the bacterium decreases
(B) Inactivation of catabolite gene activator protein (CAP)
(C) CAP facilitates the binding of RNA polymerase to the promoter
(D) Decreased translation of '*lac operon*'
32. During vigorous muscular exercise, which amino acid is liberated from skeletal muscles in maximum amount into the circulation?
- (A) Glutamine
(B) Glutamate
(C) Alanine
(D) Branched chain amino acids
33. Which among the following statements is false regarding transamination processes?
- (A) There is no net deamination
(B) It is an example of a double displacement reaction
(C) Biochemical standard free energy change is zero
(D) Each transaminase is specific for both amino acid / keto acid pairs
34. Which among the following occurs in metabolic acidosis?
- (A) Liver glutaminase activity increases
(B) Rate of urea synthesis increases
(C) Less ammonia is excreted in urine
(D) Body shunts more glutamine from liver to kidney

35. Which among the following statements is false regarding treatment of leukemia with a sparaginase?
- (A) Leukemic cells produce increased amounts of asparagine
 - (B) The exogenous asparaginase hydrolyses blood – born asparagine on which leukemic cells rely
 - (C) Asparagine is synthesized in the body from glutamine and aspartic acid
 - (D) Normal cells survive the asparaginase treatment as they are capable of synthesizing asparagine.
36. Which among the following is NOT recommended in the therapy for hyperammonemia?
- (A) Intake of protein rich diet
 - (B) Treatment with antibiotics
 - (C) Oral administration of sodium benzoate
 - (D) Administration of lactulose
37. DOPA is an additional requirement in the treatment of type IV hyperphenylalaninemia because
- (A) Defective regeneration of tetrahydrobiopterin affects the formation of DOPA
 - (B) Associated degeneration of substantianigra
 - (C) Decreased production of tyrosine, the precursor of DOPA
 - (D) High levels of phenylalanine inhibits the formation of DOPA
38. Which among the following is NOT a feature of the phenylketonuria?
- (A) Mental retardation.
 - (B) Positive urinary ferric chloride test.
 - (C) Dark color of the skin.
 - (D) Mousy odor.
39. Carbidopa is included in the treatment of Parkinson's disease in order to
- (A) Enhance the availability of Dopamine to the peripheral tissues.
 - (B) Inhibit the activity of DOPA decarboxylase out side the CNS.
 - (C) Decrease the toxicity of DOPA to the CNS.
 - (D) Minimize the cell degeneration of brain nuclei.
40. Which among the following conditions is associated with pellagra like signs and symptoms?
- (A) Hartnup disease
 - (B) Phenyl ketonuria
 - (C) Pheochromocytoma
 - (D) Albinism

41. Which among the following statements is FALSE?
- (A) Protein rich food causes wakefulness.
 - (B) After a protein rich food, the entry of tryptophan into the brain is slow.
 - (C) The insulin released following a carbohydrate rich meal enhances the plasma concentrations of amino acids.
 - (D) The bulkiness of tryptophan side chain makes its transport across the blood brain barrier sluggish in comparison to other amino acids.
42. Which among the following statements is FALSE regarding homocystinuria type I?
- (A) Cyanide – nitropruside test will be positive in urine.
 - (B) Subluxation of lens is a frequent clinical feature.
 - (C) Diet restriction in the form of low methionine and rich cysteine is harmful.
 - (D) In some cases, treatment with mega doses of vitamin B6 helps in correcting the defect.
43. Hyperhomocysteinemia is related to atherogenesis due to the following reasons EXCEPT that
- (A) It causes aggregation of low density lipoproteins.
 - (B) It increases the serum cholesterol level.
 - (C) It enhances platelet aggregation.
 - (D) It brings about lipid peroxidation
44. For an essential irreversible biochemical reaction, ΔG° is
- (A) Positive and is of high magnitude
 - (B) Negative and is of high magnitude
 - (C) Positive and is of low magnitude
 - (D) Negative and is of low magnitude
45. Under biochemical standard conditions which among the following favor a spontaneous forward reaction?
- (A) ΔG° is positive
 - (B) ΔG° is zero
 - (C) ΔG° is negative
 - (D) K'_{eq} is less than 1
46. The ΔG° for the formation of creatine phosphate from creatine and ATP is +12.6 kJ/mole. It can take place in the human body
- (A) during vigorous muscular exercise.
 - (B) when ATP concentration increases
 - (C) when creatine concentration decreases
 - (D) during extra heat production in the body

47. Which among the following is a high-energy compound involved in the substrate level phosphorylation that takes place during the TCA cycle?
- (A) Succinyl CoA (B) Phosphoenol pyruvate
(C) Carbamoyl phosphate (D) 1,3 biphosphoglycerate
48. Which among the following enzymes catalyze the removal hydrogen from a substrate using oxygen as an acceptor?
- (A) Oxidases (B) Dehydrogenases
(C) Hydroperoxidases (D) Oxygenases
49. Which among the following cytochromes of the respiratory chain is NOT a dehydrogenase?
- (A) b (B) c (C) c₁ (D) aa₃
50. Which among the following enzymes incorporates one of the atoms of the molecular oxygen into the substrate?
- (A) Oxidases (B) Mixed function oxidases
(C) Dioxygenases (D) Peroxidases
51. Which among the following is present in the inner mitochondria membrane?
- (A) Adenylate kinase (B) Monoamine oxidase
(C) Succinate dehydrogenase (D) Glutamate dehydrogenase
52. Which step in the respiratory chain is irreversible?
- (A) NADH dehydrogenase (B) Succinate dehydrogenase
(C) Cytochrome oxidase (D) Cytochrome b
53. Which among the following statements is false?
- (A) The respiratory chain as a whole is exergonic
(B) The efficiency of energy capture in anaerobic Conditions is more in comparison to aerobic conditions
(C) The efficiency of energy capture in the biological system is 68%
(D) The energy not captured as ATP in the biological system contributes to maintenance of body temperature
54. During vigorous muscular exercise, the rate of respiration is controlled by
- (A) Availability of ADP (B) Availability of substrate
(C) Capacity of respiratory chain (D) Availability of inorganic phosphate

55. Addition of atractyloside to a Suspension of mitochondria causes
- (A) Activation of ATP synthase
 - (B) Decrease in the rate of respiration
 - (C) Activation of ATP/ADP exchange transporter
 - (D) Increase in the amount of oxygen consumption
56. To a suspension of mitochondria, when oligomycin was added followed by 2,4-dinitrophenol, the rate of respiration
- (A) First increases followed by a decrease
 - (B) Increases after both the additions
 - (C) First decreases followed by an increase
 - (D) Decreases after both additions
57. MELAS is due to the deficiency of which component of the respiratory chain?
- (A) Succinate dehydrogenase or ATP synthase
 - (B) NADH dehydrogenase or cytochrome oxidase
 - (C) ATP synthase or cytochrome c
 - (D) Coenzyme Q and cytochrome c
58. Which among the following statements is false?
- (A) In the respiratory chain, once the electrochemical gradient is established, further flow of electrons will not take place.
 - (B) When ADP is not available, flow of electron through the respiratory chain decreases.
 - (C) An uncoupler uncouples oxidative phosphorylation by transporting protons from the mitochondrial matrix to the outside.
 - (D) The antibiotic valinomycin discharges the electrical potential difference across the inner mitochondrial membrane.
59. Which among the following is NOT an experimental evidence in favor of Mitchell's chemiosmotic theory?
- (A) The ATP synthase complex undergoes conformational changes during oxidative phosphorylation.
 - (B) Addition of protons to the external medium of intact mitochondria leads to the generation of ATP.
 - (C) Disruption of the integrity of inner mitochondrial membrane abolishes ATP production.
 - (D) Transverse asymmetry of the respiratory chain components is essential for them to function as proton pumps.

60. Which among the following is NOT a product from the hydrolysis of glycolipids?
- (A) Glycerol (B) Fatty acid
(C) Carbohydrates (D) Sphingosine
61. Which among the following is an acidic lipid?
- (A) Lecithin (B) Cephalin
(C) Cerebroside (D) Phosphatidyl inositol
62. Which is **true** regarding the All-cis-9,12,15-octadecatrienoic acid?
- (A) It is a 20 carbon fatty acid
(B) It is an omega-3 fatty acid
(C) It has double bonds with fatty acid chains oriented on opposite sides of the double bond
(D) It is a nonessential fatty acid
63. Which among the following statements is correct regarding fatty acids?
- (A) Linoleic acid is a true essential fatty acid
(B) Omega-9 fatty acids are essential fatty acids
(C) Our body introduces double bonds between the omega-9 double bond and omega carbon atom of the fatty acid
(D) Arachidonic acid is found esterified to the sn-1 carbon atom of glycerol in membrane lipids
64. Which among the following statements is false?
- (A) Trans fatty acids have higher melting points in comparison to Cis fatty acids
(B) We get trans fatty acids from margarine and ruminant fat
(C) Coconut oil and milk fat are relatively less soluble in comparison to other dietary lipids
(D) The energy yield from saturated fatty acids is more in comparison to unsaturated fatty acids
65. The fluidity of biomembranes is influenced by the following EXCEPT:
- (A) Fatty acyl chain length
(B) Degree of unsaturation of the fatty acids
(C) Cholesterol content
(D) Sphingolipid content

66. Which among the following statements is true?
- (A) Fluidity of biomembranes increases with the fatty acyl chain length
 - (B) The storage form of lipids are more unsaturated
 - (C) The carbon atoms of fatty acids in a more reduced state in comparison to that of carbohydrates
 - (D) The water of hydration for lipids is more in comparison to carbohydrates
67. Respiratory distress syndrome of the newborn is due to the
- (A) Accumulation of phospholipids in lung alveoli
 - (B) Deficiency of dipalmitoyl lecithin in lung alveoli
 - (C) Decrease in the surface tension in lung alveoli
 - (D) Increase in the fluidity of alveolar membranes
68. The two second messengers formed by the action of phospholipase C are
- (A) Phosphatidyl inositol and mono acyl glycerol
 - (B) Arachidonic acid and the eicosanoids
 - (C) Inositol triphosphate and diacylglycerol
 - (D) Inositol 4,5-bisphosphate and lecithin
69. Platelet activating factor is a
- (A) Lecithin
 - (B) Cephalin
 - (C) Ether lipid
 - (D) Ceramide
70. Cardiolipin is
- (A) Asphingolipid
 - (B) Found in cardiac muscle plasma membranes
 - (C) A neutral phospholipid
 - (D) A lipid with 3 glycerol moieties
71. Ceramide is structurally and functionally more related to
- (A) Mono acyl glycerol
 - (B) Diacyl glycerol
 - (C) Triacyl glycerol
 - (D) Glycerol
72. In Niemann-Pick disease, there is accumulation of _____ in brain.
- (A) Neutral glycolipids
 - (B) Sphingomyelin
 - (C) Gangliosides
 - (D) Lecithin

73. Which among the following is NOT a phospholipid?
- (A) Sphingomyelin (B) Lecithin
(C) Cephalin (D) Derebroside
74. In Tay-Sachs disease there is
- (A) Accumulation of GM₃ ganglioside
(B) Deficiency of sphingomyelinase
(C) Deficiency of hexosaminidase
(D) Accumulation of sphingomyelin
75. Glycerophospholipid in aqueous medium prefers to form
- (A) Micelles (B) Bilayer
(C) Emulsions (D) Hexagonal phase
76. Which class of enzymes split molecules by mechanisms other than hydrolysis leaving double bonds in one of their products?
- (A) Transferases (B) Ligases
(C) Lyases (D) Hydrolases
77. Which among the following is TRUE regarding the action of enzymes on biochemical reactions?
- (A) Dictate the direction of the reaction
(B) Increase equilibrium constant
(C) Decrease the activation energy
(D) Decrease the standard free energy change
78. Which among the following statements is FALSE regarding a coenzyme?
- (A) The chemical changes in the coenzyme exactly counterbalance those taking place in the substrate
(B) They are defined as co substrates
(C) They are linked to the enzymes through covalent bonds
(D) They are heat stable low molecular weight compounds
79. Which among the following statements is FALSE regarding the specific activity of an enzyme?
- (A) It indicates the number of enzyme units per mg protein
(B) It is an index of the specificity of the enzyme for its substrate
(C) It increases during the purification of an enzyme
(D) It becomes maximal and remains constant when the enzyme is in the pure state

80. Which statement is FALSE regarding an enzyme-catalyzed reaction?
- (A) At V_{max} , the V_i becomes maximal and does not increase at all on further addition of substrate
 - (B) The enzyme is said to be saturated with its substrate at V_{max}
 - (C) The rate limiting step is the breakdown of ES complex
 - (D) Enzyme combines with its substrate to form a reversible ES complex
81. The number of moles of the substrate converted to product per second per mole of enzyme is known as
- (A) Turnover number
 - (B) Katal
 - (C) Kcat
 - (D) K_m
82. From the double reciprocal plot of an enzyme – catalyzed reaction, the 'y' intercept has been found to be 'c' and the slope has been found to be 'd'. The K_m value can be calculated by
- (A) d/c
 - (B) c/d
 - (C) cd
 - (D) $c-d$
83. Which amino acid residue at the active site of an enzyme is most effective as a participant in general acid base catalysis?
- (A) Aspartic acid
 - (B) Glutamic acid
 - (C) Histidine
 - (D) Cysteine
84. Which among the following is FALSE regarding reversible competitive inhibition?
- (A) The inhibitor is a substrate analogue
 - (B) The apparent K_m increases
 - (C) The V_{max} remains the same
 - (D) The slope of double reciprocal plot decreases
85. What is the name given to an enzyme inhibitor which is (1) a substrate analogue (2) possesses a highly reactive group that is not present on the natural substrate (3) covalently modifies a hyperactive amino acid residue at the active site?
- (A) Affinity label
 - (B) Mechanism – based inhibitor
 - (C) Suicide inhibitor
 - (D) Transition – state analogue
86. Allosteric enzymes are characterized by the following EXCEPT:
- (A) They inhibit the earliest functionally irreversible steps of metabolic pathways
 - (B) They are oligomeric proteins
 - (C) Their kinetics can be followed by Michaelis-Menten formalism
 - (D) They exhibit cooperativity

87. Covalent modification of enzyme activity DIFFERS from allosteric modification in which among the following aspects?
- (A) Provides short-term regulation of metabolic flow
 - (B) Does not alter gene expression
 - (C) Acts at an allosteric rather than a catalytic site
 - (D) Involves several proteins
88. Isozymes can differ in the following EXCEPT:
- (A) Kinetic constants
 - (B) Resistance to denaturing agents
 - (C) Susceptibility to inhibitors
 - (D) The biochemical reactions they catalyze
89. An example for ping pong reaction during enzyme catalysis is
- (A) Hexokinase
 - (B) Transaminase
 - (C) Malate dehydrogenase
 - (D) Creatine kinase
90. Which among following enzymes is the most sensitive index of early viral hepatitis?
- (A) GGT
 - (B) AST
 - (C) ALT
 - (D) Alkaline phosphatase
91. Which among the following is TRUE regarding plasma non-functional enzymes?
- (A) They are present in blood at higher concentrations than in tissues
 - (B) Their substrates are always present in blood
 - (C) Their plasma concentration can rise as a result of increased synthesis within cells
 - (D) They have specific functions to perform in the blood
92. Which among the following drug is an inhibitor of xanthine oxidase?
- (A) Dicoumarol
 - (B) Allopurinol
 - (C) Penicillin
 - (D) Trimethoprim
93. The unit of radioactivity one Curie (Ci) is equivalent to how many disintegrations per second (dps)?
- (A) 3.7×10^3
 - (B) 3.7×10^4
 - (C) 3.7×10^7
 - (D) 3.7×10^{10}

94. Which among the following radio isotopes is used in the Radio Immuno Assay of Hormones?
(A) ^{14}C (B) ^{32}P (C) ^{125}I (D) ^{131}I
95. Which among the following type of electrophoresis is useful for the determination of protein subunit molecular weight?
(A) Isoelectric focusing
(B) High voltage
(C) Sodium Dodecyl Sulphate Polyacrylamide Gel
(D) Capillary
96. Which form of chromatography is useful for the determination of protein molecular weight?
(A) Ion exchange (B) Gel filtration
(C) Affinity (D) Adsorption
97. Which among the following compounds is neither reabsorbed nor secreted by the renal tubules?
(A) Uric acid (B) Urea (C) Sodium (D) Creatinine
98. Balanced diet should contain calories from carbohydrate proteins and fat in the ratio of
(A) 40:30:30 (B) 50:30:20 (C) 60:20:20 (D) 70:20:10
99. Which among the following Clinical Biochemistry reports indicate Diabetes mellitus?
(A) Fasting plasma glucose is 125 mg/dl
(B) 2-hr post-glucose load value of oral glucose tolerance test is 205 mg/dl
(C) Random plasma glucose level is 190 mg/dl
(D) 1-hr post-glucose load value or oral glucose tolerance test is 180 mg/dl
100. Which among the following methods of protein estimation is based on scattering of light?
(A) Nephelometry
(B) Kjeldahl's
(C) Lowry's
(D) Enzyme linked immunosorbent assay