

226/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Alpha-Naphthol solution is used to identify which of the following bio molecule?
(A) Carbohydrates (B) Lipids
(C) Fats (D) All of the above
2. Which of the following is not an hydrolases enzyme?
(A) Pseudocholine esterase (B) Aldolase
(C) Trypsin (D) Lipase
3. Heavy metals cause which of the following enzyme activity?
(A) Competitive inhibition
(B) Feedback inhibition
(C) Non-Competitive inhibition
(D) Irreversible Non-competitive inhibition
4. Synthesis of Nitrazepam can be done from :
(A) 2-Amino-5-nitro benzophenone (B) 2-Amino-5-nitro cyclohexanone
(C) 2-Nitro-2-chloro acetophenone (D) 2-Bromo-5-amino benzophenone
5. Which of the following is a phenyl acetic derivative?
(A) Mefanamic acid (B) Diflunisal
(C) Diclofenac (D) Flurbiprofen
6. The solvent used in Diazepam I.V injection is :
(A) Propylene Glycol (B) Sorbitol
(C) Water for injection (D) All of the above
7. Parent ring structure of chlorpromazine hydrochloride is :
(A) Benzodiazepine (B) Butyrofenone
(C) Benzylaminehydrochloride (D) Phenothiazine

8. A skeletal muscle relaxant is :
- (A) Butacaine Sulphate (B) Thiopentone Sodium
(C) Dextromehorphan (D) Mephesisin
9. Ash value indicates the presence of which of the following?
- (A) Heavy metals (B) Minerals
(C) Both (A) and (B) (D) None of the above
10. Which of the following acts as a surfactant in infant's lungs?
- (A) Fatty acids (B) Glycolipids
(C) Sphingomyelins (D) Dipalmitoyl Lecithin
11. Geometrical isomer of Geraniol is :
- (A) Nerol (B) Linalool
(C) Citronellol (D) Citronellal
12. Abietic acid is a tricyclic diterpenoid present in which of the following?
- (A) Asafoetida (B) Colophony
(C) Balsam of Peru (D) Myrrh
13. Ocimene is :
- (A) Bicyclic monoterpenoid (B) Monocyclic monoterpenoid
(C) Acyclic monoterpenoid (D) Sesquiterpene
14. Azovan blue is an azodye used to measure which of the following?
- (A) Blood volume (B) Liver function
(C) Creatinine clearance (D) None of these
15. Klieberman - Buchard test is used for :
- (A) Glycoside (B) Sterols and Diterpenes
(C) Gums and Mucilage (D) Fixed Oil and Fats

16. Castor oil belongs to which of the following family?
- (A) Leguminosae (B) Linaceae
(C) Malvaceae (D) Euphorbiaceae
17. Zellweger syndrome is a disorder in the biogenesis of which of the following functional Organelle?
- (A) Peroxisomes (B) Hydrolase
(C) Lysosome (D) Golgi bodies
18. In the L.T for iron the std.iron solution contains which of the following limit?
- (A) 10ppm (B) 30ppm
(C) 20ppm (D) 40ppm
19. Which one of these is the ingredient of liquid anti perspirant?
- (A) Sodium Lauryl Sulphate (B) Propylene Glycol
(C) Cetyl Alcohol (D) Aluminium Chlorohydrate
20. Name the anthranilic acid derivative NSAID from the following :
- (A) Diclofenac (B) Diflunisal
(C) Mefenamic acid (D) Indomethacin
21. The presence of Arsenic in its limit test can be determined by which one of the following reactions?
- (A) Oxidation of Arsenic complex (B) Reduction of Arsenic complex
(C) Neutralisation of Arsenic complex (D) Hydrolysis of Arsenic complex
22. Cathartic activity of Anthraquinone glycoside is due to the presence of :
- (A) Glycons (B) Anthronones
(C) Anthranols (D) Aglycone
23. Name the parent ring present in Buspirone :
- (A) Pyridine and Pyrimidine (B) Pyrazine and Pyrimidine
(C) Piperidine and Pyrimidine (D) Pyridiazine and Pyrimidine

24. The term used in disinfectant activity is :
- (A) R_f value (B) Solubility
(C) pH value (D) R_w coefficient
25. What happens to antihistaminic activity if branching occurs at 2-amino alkyl side chain?
- (A) Increases (B) Loss of activity
(C) Decreases (D) None of the above
26. Name the local anesthetic with tropane skeleton :
- (A) Bezocaine (B) Phenacaine
(C) Lignocaine (D) Cocaine
27. pH range of Methyl Red indicator is :
- (A) 5.2 to 6 (B) 6.3 to 7.1
(C) 3.1 to 4.4 (D) 6.8 to 10
28. All of the following except one are examples for mutation :
- (A) Transition (B) Transduction
(C) Transposition (D) Transversion
29. Titanium dioxide is commonly present in :
- (A) Sunscreen cream (B) Foundation Cream
(C) Vanishing cream (D) Ophthalmic cream
30. Hager's test is used to test :
- (A) Proteins (B) Glycosides
(C) Alkaloids (D) Steroids
31. The sulphonyl urea acts through which one of these ion channels?
- (A) Calcium channel (B) Sodium channel
(C) Potassium channel (D) Chloride channel

32. In alcohol addicts which one of the opioid antagonist is used for relapsing therapy :
- (A) Naloxone (B) Methyl naltrexone
(C) Alvimopan (D) Naltrexone
33. All of the following statements related to selective COX-2 inhibitor (NSAID) are true except :
- (A) Decrease the risk of MI and stroke
(B) Analgesic, Antipyretic and anti inflammatory
(C) Tolerated by peptic ulcer patients
(D) Do not inhibit platelet aggregation
34. Verapamil is contraindicated in :
- (A) Patient receiving β adrenergic drug (B) Patient receiving Statin
(C) Patient receiving Digoxin (D) All of the above
35. Which one of the following antihypertensive is used orally in pregnancy?
- (A) Nifedipine (B) Methyl dopa
(C) Hydralazine (D) Sodium Nitroprusside
36. Select the structure of protein that relates to degree of polymerization :
- (A) 4° structure (B) 2° structure
(C) 3° structure (D) 1° structure
37. Measurement of blood pyruvic acid is carried out to establish the deficiency of which vitamin?
- (A) Vit B₁₂ (B) Vit B₂
(C) Vit B₁ (D) Vit B₆
38. Aminotransferases require which of the following for their activity?
- (A) Biotine (B) Pyridoxal Phosphate
(C) Inositol (D) Niacin
39. Monosaccharide is not reactive with :
- (A) Tollen's reagent (B) Hydroxyl Amine
(C) Acetic Anhydride (D) Sodium bisulphate solution

40. The major isomer present in glucose solutions is :
- (A) β -D-Glucose (B) α -D-Glucose
(C) Both (A) and (B) (D) None of the above
41. ΔE for free expansion process of an ideal gas is:
- (A) +ve (B) -ve
(C) zero (D) none of these
42. Fentons reagent is :
- (A) $\text{FeSO}_4/\text{H}_2\text{O}$ (B) $\text{FeSO}_4/\text{H}_2\text{O}_2$
(C) $\text{FeSO}_4/\text{OH}^-$ (D) $\text{H}_2\text{O}_2/\text{OH}^-$
43. Oil of bitter almonds is :
- (A) Salicylic acid (B) Benzaldehyde
(C) Glycerol (D) $(\text{CH}_3)_3\text{CCl}$
44. Chloroplatinic acid is used for the estimation of :
- (A) acids (B) chloride
(C) bases (D) nitrogen
45. Allyl alcohol on treatment with MnO_2 gives :
- (A) acrylic acid (B) allylic acid
(C) acrolein (D) none of these
46. Trioxane is a trimer of :
- (A) HCHO (B) HCOOH
(C) CH_3CHO (D) CH_3OH
47. Ethanal reacts with Fehlings solution to give a precipitate of :
- (A) Cu (B) CuO
(C) Cu_2O (D) none of these
48. Urotropine is chemically :
- (A) $(\text{CH}_2)_6\text{N}_4$ (B) HCHO
(C) $(\text{C}_6\text{H}_5)_2\text{C}(\text{OH})(\text{COOH})$ (D) HCONMe_2

49. Which of the following behaves as an acid in H_2SO_4 ?
- (A) HCl (B) HNO_3
(C) H_3PO_4 (D) HClO_4
50. Lowest unoccupied molecular orbital of CO is a :
- (A) π orbital (B) σ orbital
(C) n orbital (D) π^* orbital
51. Which of the following is used in air conditioning plants to regulate humidity?
- (A) NaCl (B) KCl
(C) CsCl (D) LiCl
52. Lightest metal is :
- (A) Li (B) K
(C) Al (D) Na
53. Fusion mixture is a mixture of :
- (A) $\text{Na}_2\text{CO}_3 + \text{K}_2\text{CO}_3$ (B) $\text{NaHCO}_3 + \text{K}_2\text{CO}_3$
(C) $\text{CaCO}_3 + \text{K}_2\text{CO}_3$ (D) $\text{MgCO}_3 + \text{Na}_2\text{CO}_3$
54. Select the polar aprotic solvent from the following :
- (A) DMF (B) DMSO
(C) THF (D) All of these
55. IR spectrum for CO_2 shows _____ fundamental absorption peaks.
- (A) 1 (B) 2
(C) 3 (D) 4
56. Unit of rate constant for zero order reaction is :
- (A) s^{-1} (B) $\text{mol}^{-1} \text{l s}^{-1}$
(C) $\text{mol}^2 \text{l}^{-2} \text{s}^{-1}$ (D) $\text{mol l}^{-1} \text{s}^{-1}$
57. Reaction of KI and I_2 with thiosulphate gives :
- (A) $\text{S}_2\text{O}_6^{2-}$ (B) $\text{S}_4\text{O}_6^{2-}$
(C) SO_3^- (D) $\text{S}_2\text{O}_4^{2-}$

58. Determination of CFSE of transition metal complexes can be done using _____ spectroscopy.
- (A) Electronic (B) Rotational
(C) ESR (D) NMR
59. Metal content in haemocyanin is :
- (A) Fe (B) Cu
(C) Mg (D) Co
60. C^{14} isotope is a _____ emitter.
- (A) Beta (B) Alpha
(C) Positron (D) Gamma
61. Oxidation state of Fe in methaemoglobin is :
- (A) 2 (B) 3
(C) 0 (D) none of these
62. Only non metal which conducts electricity is :
- (A) Graphite (B) Caborundum
(C) Diamond (D) None of these
63. Element with maximum electron affinity is :
- (A) F (B) Cl
(C) O (D) None of these
64. Gun metal is an alloy of :
- (A) Cu, Ni & Sn (B) Ag, Ni & Cu
(C) Ag and Ni (D) Cu, Zn & Sn
65. Metal oxide used to impart blue colour to glass is that of :
- (A) Cu (B) Co
(C) Ni (D) None of these
66. F centres are the consequence of _____ defect.
- (A) Schottky (B) Metal deficiency
(C) Metal excess (D) None of these

67. Decomposition of ozone can be catalysed by :
- (A) CO (B) N_2O
(C) SO_2 (D) Cl
68. Variation of enthalpy of a reaction with temperature is given by _____ equation.
- (A) Kirchoffs (B) Clausius
(C) Arrhenius (D) Gibbs
69. Hybridisation in $SnCl_2$ is :
- (A) sp (B) sp^3
(C) sp^2 (D) dsp^3
70. Tick out the correct sequence of Lewis acidity :
- (A) $BF_3 > BCl_3 > BBr_3 > BI_3$ (B) $BCl_3 > BF_3 > BBr_3 > BI_3$
(C) $BF_3 > BI_3 > BBr_3 > BCl_3$ (D) $BF_3 < BCl_3 < BBr_3 < BI_3$
71. Redox indicators are generally colourless in their _____ state.
- (A) Reduced (B) Solid
(C) Oxidised (D) All of these
72. Radioactive disintegrations follow _____ order kinetics.
- (A) zero (B) first
(C) second (D) third
73. Variation of rate constant of a reaction with temperature is given by _____ equation.
- (A) Kirchoffs (B) Clausius
(C) Arrhenius (D) Gibbs
74. Acetyl salicylic acid is commonly known as :
- (A) Phenacetin (B) Ibuprofen
(C) Aspirin (D) None of these
75. Metal this does not form carbides :
- (A) U (B) Sn
(C) La (D) Ti