



PART – A

1. Fill the appropriate pair from the following in the given blanks :

Wait _____ I come back and do the second sum _____ you finish the first one.

- A) before, when
B) till, after
C) since, before
D) up, after

2. What is incorrect in the following lines ?

When his turn came he mentally bowed to Saraswati the goddess of learning he began his address.

- A) tense
B) spelling
C) punctuation
D) clause

3. Choose the correct spelling from the following :

- A) Monteparnasse
B) Montparnasse
C) Montepernasse
D) Monteparnase

4. Find the appropriate indirect narration of the following sentence :

The teacher said, “The earth moves round the sun.”

- A) The teacher said that the earth moved round the sun.
B) The teacher told that the earth moved round the sun.
C) The teacher said that the earth moves round the sun.
D) The teacher said the earth moves round the sun.

5. Which one is the correct passive voice of the following sentence ?

Ram gave Radha an apple.

- A) An apple was given to Radha by Ram
B) Apple is given to Radha by Ram
C) An apple has been given to Radha by Ram
D) Apple had been given to Radha by Ram.

6. Pick up the correct synonym for Transcendental from the following :

- A) mundane
B) magnificent
C) mystical
D) mythic

7. From which drama of Shakespeare the poem “The Seven Ages of Man” has been extracted ;

- A) As You Like It
B) Hamlet
C) Richard II
D) Tempest



8. Which poem of Alexander Pope contains the following lines :
“Sol thro’ white curtains shot a tim’rous ray,/And oped those eyes that must eclipse
the day.”
- A) The Dunciad
B) An Epistle to Dr. Arbuthnot
C) The rape of the Lock
D) Pastorals
9. Who wrote the following lines and in which book ?
“The mind is its own place, and in itself can make a heaven of hell, a hell of heaven.”
- A) Pope in The Dunciad
B) Dryden in Absalom and Achitophel
C) Milton in Paradise Lost
D) Eliot in The Waste Land
10. Who is the author of “Elegy Written in a Country Churchyard ?”
- A) William Cowper
B) Thomas Gray
C) William Wordsworth
D) James Thomson
11. How many times has Brazil won the World Cup Football Championship ?
- A) Four times
B) Twice
C) Five times
D) Once
12. Jude Felix is a famous Indian player in which of the fields ?
- A) Volleyball
B) Tennis
C) Football
D) Hockey
13. Who built the Jama Masjid ?
- A) Sher Shah Suri
B) Ala-ud-din Khilji
C) Aurangzeb
D) Shahjahan
14. The Reserve Bank of India was established in
- A) 1920
B) 1930
C) 1935
D) 1940
15. The New Development Bank of BRIC countries is based at
- A) Beijing
B) Shanghai
C) St. Petersburg
D) Sao Paulo
16. If $x = 1 - q$ and $y = 2q + 1$, then for what value of q , x will be equal to y ?
- A) -1
B) 0
C) $\frac{1}{2}$
D) 2
17. If $P\%$ of P is 36 , then P is equal to
- A) 15
B) 60
C) 600
D) 3600



PART – B

26. The sweetening agent that is used in formulation of chewing tablet is
A) Sucrose
B) Cyclamate sodium
C) Saccharin sodium
D) Mannitol
27. Which conformation of acetyl choline interacts with muscarinic receptor ?
A) fully eclipsed
B) eclipsed
C) staggered
D) gauche
28. Which is the true statement ?
A) Morphine is an antimalarial agent
B) Catecholamines are biosynthesised from choline
C) Amantadine drug contains adamantane ring
D) Naphazoline does not contain imidazoline nucleus
29. Blue shift mainly occurs due to
A) Decrease in conjugation
B) Chromogenic agent
C) Dealkylation
D) Removal of double bond
30. The number of NMR signal expected for n-butraldehyde is
A) 3
B) 5
C) 2
D) 4
31. Arachidonic acid a precursor of prostaglandins, chemically is-
A) 5, 8, 11, 14-eicosa tetraenoic acid
B) 5, 8, 12, 14-eicosa tetraenoic acid
C) 5, 8, 13, 14-eicosa tetraenoic acid
D) 5, 9, 11, 14-eicosa tetraenoic acid
32. In hemorrhagic shock, the below mentioned treatment is used
A) Nifedipine
B) Nimodipine
C) Amyl nitrite
D) Hydralazine
33. Atropine, hyoscyamine and hyoscine are
A) Glycosides
B) Proteins
C) Monoterpenes
D) Tropane alkaloids
34. In intestine sulphasalazine is cleaved by
A) Amylase
B) Lipase
C) Choline esterase
D) Azoreductase



45. Cholesterol is
- A) 21 carbon chain with alcoholic group
 - B) 27 carbon chain with alcoholic group
 - C) 24 carbon chain with carboxylic group
 - D) 27 carbon chain with carboxylic group
46. Which of the following binding interactions is likely to be the most important *initial* interaction when a drug enters a binding site ?
- A) van der Waals interactions
 - B) hydrogen bond
 - C) ionic
 - D) induced dipole-dipole interactions
47. Ninhydrin reagent used to detect the
- A) Carboxylic acid
 - B) Amino acids
 - C) Unsaturated compounds
 - D) Saturated compounds
48. Which one is Karl Fisher reagent ?
- A) Bromine and potassium permanganate
 - B) Sodium thiosulphate and iodine
 - C) Sodium nitrite and HCl
 - D) Iodine and sulfur dioxide in pyridine and methanol
49. What term is used for a non-protein organic molecule that is required by some enzymes in order to catalyse a reaction on a substrate ?
- A) prosthetic group
 - B) cofactor
 - C) co-enzyme
 - D) modulator
50. From which amino acid adrenaline biosynthesized ?
- A) tyrosine
 - B) aspartic acid
 - C) asparagine
 - D) lysine
51. The Michaelis-Menton equation relates the rate of an enzyme-catalysed reaction to which of the following ?
- A) Substrate concentration
 - B) Product concentration
 - C) Activation energy
 - D) Inhibitory concentration
52. Which of the following is not a neurotransmitter ?
- A) Acetylcholine
 - B) Cyclic AMP
 - C) Noradrenaline
 - D) Dopamine



53. The yellow color of turmeric is due to
- A) Camphene
B) Curcumin
C) Zinbiberene
D) α -phellandrene
54. Which of the given ophthalmic products is sterilized by radiations ?
- A) Solution
B) Ointment
C) Suspension
D) All of these
55. Which of the following is not a G-protein coupled receptor ?
- A) the muscarinic receptor
B) the glycine receptor
C) the adrenergic receptor
D) the glutamate receptor
56. Which of the following drugs do not have a chiral centre in their chemical structure ?
- A) Adrenaline
B) Histamine
C) Ibuprofen
D) Naproxen
57. Diethylstilbesterol contains
- A) stilbene
B) epoxide
C) benzodiazepine
D) furan
58. When an agonist binds to a receptor for a long period of time, it can result in a phosphorylation reaction occurring, Which of the following terms is the most relevant description of the immediate effect ?
- A) Tolerance
B) Dependence
C) Sensitization
D) Desensitization
59. Some orally active drugs do not obey the rule of five. For example, some drugs with molecular weights greater than 500 are found to be orally active. Which of the following mechanisms is the most likely reason for this ?
- A) transport by transport proteins
B) passage through pores between the cells of the gut wall
C) pinocytosis
D) ion channels
60. Adrenalin and noradrenalin get metabolized chiefly by the enzyme
- A) HGPRT
B) MAO
C) Aldehyde Oxidase
D) LOX



71. An endoperoxide ring is present in
A) furesomide
B) amlodipine
C) artemisinin
D) insulin
72. A quaternary structure has been found in
A) Insulin
B) Hemoglobin
C) α -Chymotrypsin
D) Myoglobin
73. Which polymer is used as a film-former in nail polish ?
A) HPMC
B) Polyacetic acid
C) Nitrocellulose
D) Cellulose acetate phthalate
74. Choose the appropriate pair
A) IR-Lambert-Beer Law
B) UV-Hook's Law
C) Mass-Woodward rule
D) NMR-Pascal triangle
75. What is meant by docking ?
A) The process by which two different structures are compared by molecular modelling.
B) The process by which a lead compound is simplified by functional groups.
C) The process by which drugs are fitted into their target binding sites using molecular modelling.
D) The process by which a pharmacophore is identified.
76. What is meant by de novo drug design ?
A) The synthesis of a compound from simple starting materials.
B) The design of the synthesis required to generate a novel range of structures.
C) The design of a novel drug based on molecular modelling studies of a binding site.
D) The modification of a drug based on molecular modelling studies into how it binds to its target binding site.
77. What value does the regression coefficient have for a perfect fit of a drug with receptor ?
A) 0.1
B) 1
C) 10
D) 100
78. What does the symbol P represent in a QSAR equation ?
A) pH
B) plasma concentration
C) partition coefficient
D) prodrug



79. Which of the following is not linked with epigenetics ?
- A) Histone deacetylation B) DNA methylation
C) Histone modification D) Phosphorylation of tyrosine kinases
80. Which of the following antibiotics is responsible for Gray Baby Syndrome ?
- A) Chloramphenicol B) Doxycycline
C) Erythromycin D) Streptomycin
81. What are the two main targets currently used in anti-HIV therapy ?
- A) Reverse transcriptase and protease
B) Reverse transcriptase and integrase
C) Protease and integrase
D) The viral glycoproteins gp120 and gp41
82. Which of the following enzymes is responsible for processing HIV proteins during the production of new viruses ?
- A) Integrase B) Protease
C) Reverse transcriptase D) DNA polymerase
83. Mutarotation is
- A) change in specific rotation B) change in angle of repose
C) change in stereochemistry D) change in symmetry
84. What term is used to indicate the ability of a cancer to invade other parts of the body and to produce secondary tumours ?
- A) Carcinogenesis B) Apoptosis
C) Metastasis D) Mutagenesis
85. Cyclophosphamide is commonly used in anticancer therapy. Which of the following statements is not true of the above structure ?
- A) It is relatively non-toxic.
B) It acts as a prodrug.
C) It cannot be taken orally.
D) The structure is metabolised to release acrolein.
86. What is the term used to indicate the growth of new blood vessels ?
- A) Biosynthesis B) Angiogenesis
C) Apoptosis D) Metastasis



94. Alzheimer disease is a
- A) GIT disorder
B) Neurological disorder
C) COPD
D) PCOD
95. Nitric oxide is produced from
- A) L-arginine
B) alanine
C) glycine
D) leucine
96. Meerwein-Pondorf-Verely reduction is the reverse process of
- A) Wolff–Kishner reduction
B) Clemmensen reduction
C) Oxidative Phosphorylation
D) Oppenaur oxidation
97. Fructosazone and galactosazone are
- A) structurally similar
B) structurally different
C) both of above
D) none of above
98. QSTR is
- A) Quantitative structure toxicity relationship
B) Qualitative structure toxicology relationship
C) Quantum structure topology relationship
D) Quadrative structure topological relationship
99. Select the odd pair
- A) Vincristine-indole ring
B) Nifedipine-admantane ring
C) Primaquine-quinoline ring
D) Metronidazole-imidazole ring
100. One chlorine atom containing compound will have mass as
- A) $M+$
B) $M+$ and $M + 2$
C) $M - 1$
D) $M + 3$
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SPACE FOR ROUGH WORK