

NIPER JEE 2007

1. Anticancer taxol derivatives act by _____.

- A) Free radical generation
- B) Inhibition of tubulin polymerisation
- C) Inhibiting topoisomerase
- D) Enhancing tubulin polymerisation

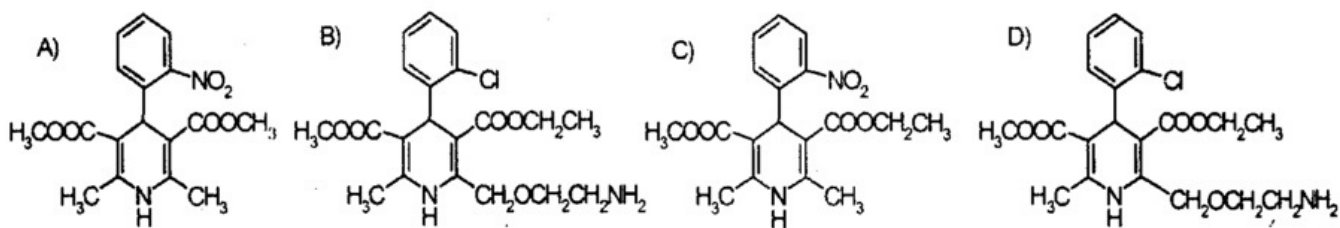
2. Which form of cyclodextrins is more soluble in water?

- A) α
- B) β
- C) γ
- D) δ

3. The largest cotton producer in the world is _____.

- A) India
- B) China
- C) USA
- D) Brazil
- E) Pakistan

4. Nifedipine is _____.



5. _____ is the Ca^{++} channel blocker:

- A) Benzodiazepine
- B) Verapamil
- C) Phenytoin
- D) Minoxidil

6. Glutathione is ———.

- A) A tripeptide of cysteine and glutamate and a detoxifier
- B) A non-essential amino acid, acts as an antioxidant
- C) Thiol-containing vitamin mainly used as an antioxidant in formulation
- D) A and B both

7. Phenytoin is used in or as ———.

- A) Supraventricular arrhythmias
- B) Ventricular arrhythmias
- C) Bradycardia
- D) Antiepileptic

8. Propranolol is contraindicated in ———.

- A) Asthma
- B) Angina
- C) Pregnancy
- D) All

9. The typically used ionisation energy for an EI mass spectrometer is ———.

- A) 0.7 eV
- B) 70 eV
- C) 700 eV
- D) 7000 eV

10. Theoretical yield = 1.5 gm, Practical yield = 2 gm. What is the percentage yield?

- A) 15%
- B) 20%
- C) 75%
- D) 125%

11. The Essar group of companies has been promoted by ———.

- A) Ambanis

- B) Ruías
- C) Goenkas
- D) Kanorias

12. One of the following is associated with the discovery of meningitis. Identify:

- A) Robert Whytt
- B) Robert Koch
- C) Simon Flexner
- D) Ian Flemming

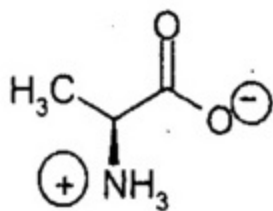
13. Hepatic toxicity in paracetamol is caused due to an active metabolite. It is ———.

- A) N-acyl-p-benzoquinoneimine (NAPQI)
- B) N-acetyl-p-benzoquinoneimine (NAPQI)
- C) N-aryl-p-benzoquinoneimine (NAPQI)
- D) N-alkyl-p-benzoquinoneimine (NAPQI)

14. _____ % of benzyl alcohol is used as a preservative:

- A) 0.1
- B) 0.5
- C) 1
- D) 5

15. Determine the correct conformation:



- A) R
- B) S
- C) E
- D) Z

16. Polypharmacy means ———.

- A) Use of multiple medications by a patient
- B) Use of a combination of drugs
- C) Medication in geriatric patients
- D) Science of polymorphism

17. Calculate the area of a rectangle, width = 5 cm, height = $\frac{1}{2}$ width:

- A) 2.5 cm^2
- B) 12.5 cm^2
- C) 1.25 cm^2
- D) 125 cm^2

18. Which of the following is a sentry drug?

- A) Carbidopa
- B) Levodopa
- C) Isoniazid
- D) Vitamin B

19. Which of the following is cardiotoxic?

- A) Doxorubicin
- B) Cisplatin
- C) Nifedipine
- D) All of the above

20. Synonym of solicitor is _____.

- A) Attorney-at-law
- B) Barrister
- C) Counselor
- D) All of the above

21. What is the synonym of macabre?

- A) Cadaverous
- B) Ghastly
- C) Deathly

D) All of the above

22. Benzopyran-2-one is _____.

A) Warfarin

B) Sitosterol

C) Coumarin

D) Benzoquinone

23. Calcium channels in the heart are of which type?

A) Ligand gated

B) Voltage gated

C) Enzyme gated

D) Ion gated

24. Receptors are made up of _____.

A) Carbohydrates

B) Proteins

C) Lipid

D) Amino acid

25. Serotonin is _____.

A) Monoamine

B) Chemical mediators

C) Neurotransmitter

D) All of these

26. Which of the following is/are second messenger systems?

A) Calcium

B) cAMP

C) cGMP

D) All the above

27. Which of the following alkaloids is present in cough syrup?

- A) Phenyl epinephrine
- B) Codeine
- C) Morphine
- D) Glycyrrhizin

28. Which statement is false about aspirin?

- A) It inhibits COX and thromboxane A₂
- B) It is safer in asthmatics
- C) It is a drug of choice for Reye's syndrome
- D) G-6-PD deficiency may enhance aspirin toxicity

29. In QSAR studies, the biological activity is expressed in terms of concentration C. The expression used is _____.

- A) C
- B) log C
- C) log 1/C
- D) Any of the above

30. Which of the following is used for the treatment of alopecia?

- A) Finasteride
- B) Minoxidil
- C) Cortisone
- D) All of the above

31. Which of the following is not a protogenic solvent?

- A) Water
- B) Acetic acid
- C) Sulfuric acid
- D) CCl₄

32. Enalapril acts by _____.

- A) ACE inhibition
- B) Renin inhibition

- C) Renin antagonism
- D) Aldosterone antagonism

33. Levodopa is used as —————.

- A) Anti-convulsion
- B) Anti-parkinsonian
- C) Anti-alzheimer's
- D) Anti-histamines

34. _____ is used in case of cerebral malaria:

- A) Primaquine
- B) Chloroquine
- C) Quinine
- D) Quinidine

35. What is H5N1 in the news in recent times?

- A) A new multi-purpose helicopter of the Indian Army
- B) The nearest galaxy to our own Milkyway
- C) A virus causing Bird Flu
- D) A virus causing Swine Flu

36. Persistent raspy cough is the side effect of —————.

- A) ACE inhibitors
- B) Renin inhibitors
- C) Renin antagonist
- D) Aldosterone antagonist

37. Rifampicin is used not only in TB but in _____ also:

- A) Steven Johnson syndrome
- B) Leishmaniasis
- C) Whooping cough
- D) Leprosy

38. Which of the following cytotoxic products is obtained from a marine source?

- A) Polymeric 3-alkylpyridinium
- B) Tentacles
- C) Bryostatin
- D) Paclitaxel

39. What do the letters XP stand for in the product Microsoft XP?

- A) Extended product
- B) Extra Pampering
- C) Experience
- D) Entry-level product

40. Betaine is an intermediate of the _____ reaction: <https://www.pyqonline.com>

- A) Wittig
- B) Favorskii
- C) Claisen
- D) Hoffman
- E) Curtis

41. Which is a novel histone deacetylase inhibitor used for cancer treatment?

- A) Romidepsin
- B) Rituximab
- C) Rotigaptide
- D) Ritanserin

42. Ring analogues of sugar are called as _____.

- A) Enantiomers
- B) Epimers
- C) Anomers
- D) Diastereoisomers

43. Which of the following is added to avoid crystallization of syrup?

- A) Propylene glycol

- B) Polyhydric alcohol
- C) Glycerol
- D) Lemon juice

44. Which microscopic technique is used for the identification of cellular structure?

- A) Electron Microscopy
- B) Dark Field Microscopy
- C) Phase Contrast Microscopy
- D) None

45. Metals and metalloids are identified by which spectroscopy method?

- A) ESR
- B) IR
- C) AES
- D) Fluorescence
- E) AAS

46. Luminescence, fluorescence, and phosphorescence are the types of ————.

- A) Absorption spectroscopy
- B) Emission spectroscopy
- C) Both A and B
- D) Transmittance

47. DOPP Test is used for the evaluation of efficiency of ————.

- A) Membrane Filters
- B) Seitz Filters
- C) G 3 Filters
- D) HEPA Filters

48. Nitrilase enzymes catalyze the hydrolysis of ————.

- A) Nitriles to carboxylic acids and ammonia
- B) Nitriles to amides
- C) Nitriles to amines

D) Nitriles to nitrates

49. Hydrogen bonding is determined by _____ spectroscopy:

A) Raman

B) NMR

C) IR

D) UV

50. The range of IR absorption for acid chloride is _____ cm^{-1} :

A) 1810

B) 1720

C) 1770

D) 1680

51. The range of IR absorption for lactam rings is _____ cm^{-1} :

A) 1810

B) 1720

C) 1770

D) 1680

52. Particle size obtained from a fluid energy mill is:

A) 10–30 μm

B) 30–60 μm

C) 60–90 μm

D) 90–120 μm

53. Morphine shows its action by acting on _____ receptor.

A) μ

B) μ and δ

C) κ and δ

D) γ and μ

54. Gallic acid is used as _____.

- A) Preservative
- B) Emulsifier
- C) Buffer
- D) Antioxidant

55. Eye drops differ from parenteral preparation by:

- A) Sterility
- B) Particulate matter
- C) Pyrogenicity
- D) Isotonicity

56. Green bones are used to manufacture _____ gelatin.

- A) Type A
- B) Type B
- C) A and B both
- D) Type G

57. If the hour hand of a clock at 12 noon is at the northeast, then at 1 pm, where will the hour hand of the clock be?

- A) South
- B) East
- C) North
- D) West

58. Biological source of Indian Ginseng is _____.

- A) Withania Somnifera
- B) Ginkgo biloba
- C) Andrographis peniculata
- D) None of the above

59. In many neurodegenerative diseases, there is a repeat of _____:

- A) GAC nucleotide triplet which encodes for aspartic acid
- B) ACG nucleotide triplet which encodes for threonine

- C) GCA nucleotide triplet which encodes for alanine
- D) CAG nucleotide triplet which encodes for the amino acid glutamine

60. Primaquine is used in _____ phase of the malarial cycle:

- A) Pre-erythrocytic
- B) Post-erythrocytic
- C) Both A and B
- D) None of the above

61. Which of the following is a dopamine agonist?

- A) Ropinirole
- B) Rotigotine
- C) Pramipexole
- D) All of the above

62. Statins are used as _____.

- A) Hyperlipidemic agents
- B) Hypolipidemic agents
- C) Antidiabetics
- D) Antiparkinson

63. Metoclopramide, an antiemetic, acts as _____.

- A) 5-HT₄, 5-HT₃ agonist and D₂ antagonist
- B) D₂, 5-HT₃ agonist and 5-HT₄ antagonist
- C) 5-HT₄, 5-HT₃ antagonist and D₂ agonist
- D) D₂, 5-HT₃ antagonist and 5-HT₄ agonist

64. Ondansetron is used for _____.

- A) Schizophrenia
- B) Parkinson's disease
- C) Anticancer agent-induced emesis
- D) All of the above

65. Most stable conformation in mono-substituted cyclohexane is ———.

- A) Equatorial
- B) Axial
- C) Both
- D) Cis

66. Tamoxifen acts as ———.

- A) Aromatase inhibitor
- B) Estrogen agonist
- C) Estrogen antagonist
- D) Progesterone antagonist

67. The prime approaches applied for the stabilization of amorphous substances are:

- A) Plasticization approach
- B) Storage at Tg-50K temperature conditions
- C) Devitrification approach
- D) All of these

68. Who among the following is known as the Father of Chemotherapy?

- A) Robert Koch
- B) Gallan
- C) Paul Ehrlich
- D) Alexander Fleming

69. Which of the following is a Free Trade Port in India?

- A) Kandla
- B) Tutikotin
- C) Cochin
- D) Madras

70. The primary requirement for the drug molecule to cross the BBB is ———.

- A) Hydrophilicity
- B) Lipophilicity

- C) Optimum HLB
- D) Biocompatibility

71. Nicotinic receptor is —————.

- A) Ligand gated ion channel
- B) Tyrosine kinase
- C) GPCR
- D) Nuclear type

72. Which of the following shows QT interval prolongation in ECG?

- A) Amlodipine
- B) Terfenadine
- C) Phenytoin
- D) Amphotericin B

73. Which of the following drug assays involves the back titration method?

- A) Paracetamol
- B) Acetazolamide
- C) Nifedipine
- D) N-acetyl salicylic acid

74. According to IP, the solubility range for a sparingly soluble substance is —————.

- A) 0 to 10
- B) 10 to 30
- C) 30 to 100
- D) 100–10000

75. The largest saffron cultivating Indian state is —————.

- A) Gujarat
- B) Bengal
- C) Kerala
- D) Jammu and Kashmir

76. Thyroid and steroid receptors are types of _____ receptors.

- A) Voltage gated
- B) Ligand gated
- C) Nuclear type
- D) GPCR

77. Two amide bonds are present in _____.

- A) Monopeptide
- B) Dipeptide
- C) Tripeptide
- D) Butapeptide

78. Cytokines are _____.

- A) Protein
- B) Polysaccharide
- C) Lipid
- D) Amino acid

79. Which of these is not a standards institution? <https://www.pyqonline.com>

- A) BIS
- B) ISO
- C) ASTM
- D) IDMA

80. $A+B=102$; $A-B=24$, then $A=?$

- A) $A=63$
- B) $A=38$
- C) $A=62$
- D) $A=38$

81. Podophyllotoxin is: _____.

- A) Lignin derivative
- B) Lignan derivative

- C) Diterpenoid
- D) Marine toxin

82. Volume capacity of '000' size capsule is _____ ml:

- A) 0.75
- B) 0.85
- C) 0.95
- D) 1.37

83. Absciscic acid is _____.

- A) Monoterpenoid
- B) Sesquiterpenoids
- C) Diterpenoid
- D) Triterpenoid

84. Which of the following herbs is considered as valuable 'Nutraceutical'?

- A) Senna
- B) Spirulina
- C) Vasaka
- D) Bael

85. Indole alkaloids are derived from _____.

- A) Tyrosine
- B) Phenylalanine
- C) Ornithine
- D) Tryptophan

86. What is the use of UV circular dichroism spectroscopy?

- A) Investigation of the conformation of secondary structure of proteins
- B) Peptide bond determination
- C) Structure elucidation of synthetic compound
- D) Determination of unsaturation in protein

87. Microbes are present in all of the following except —————.

- A) Ice
- B) Sea
- C) Water
- D) Distilled water

88. Squeezing of WBCs through the pores of blood capillaries is called as —————.

- A) Passive diffusion
- B) Diapedesis
- C) Chemotaxis
- D) Pinocytosis

89. Zafirlukast acts as antagonist of —————.

- A) Prostaglandin
- B) Leukotriene
- C) Interleukin
- D) COX II

90. Mulethi is:

- A) *Glycyrrhiza echinata*
- B) *Glycyrrhiza lepidota*
- C) *Glycyrrhiza glabra*
- D) *Glycyrrhiza uralensis*

91. Sigma blade mixers are commonly used in —————.

- A) Crude fiber mixing
- B) Powder mixing
- C) Dry granulation
- D) Wet granulation

92. Synonym of STRAFE is —————.

- A) To punish
- B) To strengthen

- C) To run away
- D) To work very hard

93. Thiomers are thiolated polymers. These have which of the following actions?

- A) Mucoadhesion
- B) Permeation enhancement
- C) Efflux pump, enzyme inhibition
- D) All of the above

94. Autoimmune disorder myasthenia gravis is caused by _____.

- A) Destruction of articular cartilage and ankylosis of the joints
- B) Circulating antibodies that block Ach receptors at the postsynaptic neuromuscular junction
- C) Antigen-antibody reaction which destruct the neuromuscular junction
- D) Deficiency of Ach at the neuronal junction

95. _____ can be used in colon-specific drug delivery systems:

- A) Glucose
- B) Mannose
- C) Lactulose
- D) Xylulose

96. Size exclusion chromatography uses _____ as a stationary phase:

- A) Polyacrylamide
- B) PEG
- C) Cepharse
- D) Agarose
- E) C and D both

97. Headspace analysis is done for _____ compound:

- A) Volatile organic
- B) Thermo labile
- C) Protein and peptide
- D) Carboxylic

98. Alternating arrangement of N-acetylmuramic acid and N-acetylglucosamine residues is present in:

- A) Peptidoglycans
- B) Lipopolysaccharides
- C) Phospholipids
- D) Cytoplasmic membrane

99. Alkaloid used in the treatment of gout is —————.

- A) Topotecan
- B) Colchicine
- C) Vincristine
- D) Etoposide

100. Chemical shift in NMR is expressed as —————.

- A) δ
- B) λ
- C) Hz
- D) Tesla

NIPER JEE 2007 ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.	Que.	Ans.	Que.	Ans.
1	D	21	D	41	A	61	D	81	B
2	B	22	C	42	C	62	B	82	D
3	B	23	B	43	B	63	D	83	B
4	A	24	B	44	C	64	C	84	B
5	B	25	D	45	E	65	A	85	D
6	A	26	D	46	B	66	C	86	A
7	D	27	B	47	D	67	E	87	D
8	A	28	C	48	B	68	C	88	B
9	B	29	C	49	C	69	A	89	B
10	C	30	D	50	A	70	B	90	D
11	B	31	D	51	C	71	A	91	D
12	A	32	A	52	A	72	B	92	A
13	B	33	B	53	A	73	D	93	D
14	C	34	C	54	D	74	C	94	B
15	B	35	C	55	C	75	D	95	D
16	A	36	A	56	B	76	C	96	E
17	B	37	D	57	B	77	C	97	A
18	A	38	C	58	A	78	A	98	A
19	D	39	B	59	D	79	A	99	B
20	D	40	A	60	C	80	A	100	A