

NIPER-JEE PYQ 2018

1. Bromhexine produce its effects by

- (a) Blocking the cough center
- (b) Depolymerization of the mucopolysaccharides
- (c) Desensitizing the lung's stretch receptors
- (d) Reflexly increase the bronchial secretion and by irritating the gastric mucosal surface

Correct Answer : (b) Depolymerization of the mucopolysaccharides

2. When is the 'World Diabetes Day' celebrated

- (a) 14 November
- (b) 1 December
- (c) 10 October
- (d) 4 February

Correct Answer : (a) 14 November

3. Identify the incorrect statement(s) about furan

- (a) Furan gives electrophilic substitution reaction faster than benzene
- (b) Furan does not gives Diels-Alder reaction
- (c) Furan is less aromatic then benzene
- (d) Furan gives poly bromination with Br_2 , in non-alcoholic solvents

Correct Answer : (b) Furan does not gives Diels-Alder reaction

4. When 3-iodo-3-ethylpentane is treated with sodium methoxide in methanol, the major organic product is an alkene that is generated through an E2 mechanism.

- (a) ether, SN_2
- (b) ether, SN_1
- (c) alkene, E2
- (d) alkene, E1

Correct Answer : (c) alkene, E2

5. The NMR signal from a proton that has three proton neighbours, equivalent to each other but different from itself, will be split into a

- (a) doublet
- (b) triplet

(c) quartet

(d) quintet

Correct Answer : (c) quartet

6. Mitochondria

(a) utilize the Calvin-Benson cycle

(b) utilize the citric acid cycle

(c) reduce organic compounds to CO_2

(d) all of the above

Correct Answer : (b) utilize the citric acid cycle

7. How many signals would the propene give in a proton NMR spectrum

(a) 2

(b) 3

(c) 4

(d) 5

Correct Answer : (c) 4

8. Who discovered oxygen

(a) Henry Cavendish

(b) Joseph Priestley

(c) Daniel Rutherford

(d) Joseph Black

Correct Answer : (b) Joseph Priestley

9. Which one of the following substituents is meta directing in electrophilic aromatic substitution reactions

(a) CN

(b) OH

(c) CH_3

(d) Br

Correct Answer : (a) CN

10. Mercury poisoning antidote is all of the following EXCEPT

(a) DMSA

- (b) D-penicillamine
- (c) dimercaprol
- (d) thiomersal

Correct Answer : (d) thiomersal

11. Which of the following enzyme is required to release the tension imposed by uncoiling of strands?

- (a) Endonuclease
- (b) DNA ligase
- (c) DNA gyrase
- (d) DNA helicase

Correct Answer : (c) DNA gyrase

12. The reservoir for Nipah virus is

- (a) Bat
- (b) Swine
- (c) Hen
- (d) rat

Correct Answer : (a) Bat

13. Which of the following bonds gives rise to an absorbance at approximately $2700-3300\text{ cm}^{-1}$ in the infrared spectrum?

- (a) C - C
- (b) C = O
- (c) C = C
- (d) C - H

Correct Answer : (c) C = C

14. Production of antibiotics is most likely to take place in the _____ phase.

- (a) death
- (b) stationary
- (c) exponential
- (d) lag

Correct Answer : (b) stationary

15. What is the mechanism of Saroglitazar, a novel first in class drug?

- (a) dual PPAR agonist
- (b) DPP IV inhibitor
- (c) GLP-1 receptor agonists
- (d) Aldose reductase inhibitors

Correct Answer : (a) dual PPAR agonist

16. Which of the following is the highest capacity vector?

- (a) Cosmid
- (b) Yeast artificial chromosomes
- (c) Yeast integrative vector
- (d) Bacteriophage vector

Correct Answer : (b) Yeast artificial chromosomes

17. The drug against schistosomal infection is

- (a) Ivermectin
- (b) Mebendazole
- (c) Praziquantel
- (d) Suramin

Correct Answer : (c) Praziquantel

18. Match the entries in Group I with that in Group II.

Group I

- P. Fehling's test
- Q. Ninhydrin reaction
- R. Biuret reaction
- S. Nitroprusside reaction

Group II

- 1 α -Amino acid.
- 2. Reducing sugar group
- 3. Sulfhydryl
- 4. Peptide linkage

- (a) P-1, Q-2, R-3, S-4
- (b) P-3, Q-4, R-1, S-2
- (c) P-2, Q-1, R-4, S-3
- (d) P-4, Q-1, R-2, S-3

Correct Answer : (c) P-2, Q-1, R-4, S-3

19. Which one of the following compounds will display only two bands, both singlets, in its ^1H NM spectrum

- (a) m-cresol
- (b) o-dinitrobenzene
- (c) p-xylene
- (d) p-dichlorobenzene

Correct Answer : (c) p-xylene

20. What is the angle (degree) between minute and hour hand at 4.20 AM?

- (a) 0
- (b) 5
- (c) 10
- (d) 15

Correct Answer : (c) 10

21. Which of the following identified the causative agents of such deadly diseases as anthrax as tuberculosis? <https://www.pyqonline.com>

- (a) John Snow
- (b) Robert Koch
- (c) Ignaz Semmelweis
- (d) Joseph Lister

Correct Answer : (b) Robert Koch

22. A typical hard capsule gelatin type A specification with respect to pH is :

- (a) 3.5-4.5
- (b) 4.5-5.5
- (c) 5.5-6.5
- (d) 6.5-7.5

Correct Answer : (a) 3.5-4.5

23. Ramelton acts as

- (a) GABA_A potentiator
- (b) Opiate receptor agonist
- (c) Melatonin receptor agonist
- (d) Benzodiazepine receptor agonist

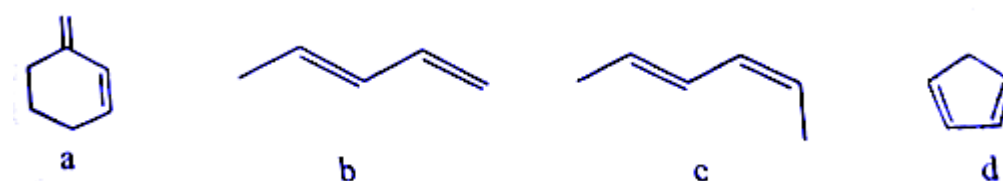
Correct Answer : (c) Melatonin receptor agonist

24. Rilmenidine, an antihypertensive drug, acts as

- (a) Agonist of imidazoline receptors
- (b) Antagonist of β_1 receptors
- (c) Antagonist of α_1 receptors
- (d) Antagonist of imidazoline receptors

Correct Answer : (a) Agonist of imidazoline receptors

25. Which of the following dienes is the most reactive in a Diels-Alder reaction



Correct Answer : (d)

26. Which of the following functional groups is likely to be present in a molecule that has peaks the IR at strong, broad peak at $1630-1820\text{ cm}^{-1}$ but does not have peaks at $3200-3650$ or $1000-1250\text{ cm}^{-1}$?

- (a) alcohol
- (b) aldehyde or ketone
- (c) ether
- (d) ester

Correct Answer : (b) aldehyde or ketone

27. Which of the following is the ligand that opens the ligand-gated Ca^{++} channel in the endoplasmic reticulum

- (a) DAG
- (b) IP3
- (c) cAMP
- (d) beta-gamma complex

Correct Answer : (b) IP3

28. The precursor for penicillin-G biosynthesis during fermentation process is

- (a) Phenylacetic acid

- (b) Acetic acid
- (c) Phenoxy acetic acid
- (d) None of the above

Correct Answer : (c) Phenoxy acetic acid

29. 2',3'-dideoxy-5-fluoro-3'-thiacytidine, a nucleoside reverse transcriptase inhibitor is

- (a) Emtricitabine
- (b) Efavirenz
- (c) Tenofovir
- (d) Nevirapine

Correct Answer : (a) Emtricitabine

30. The most widely used program for multiple sequence alignment is

- (a) FASTA
- (b) BLAST
- (c) RASMOL
- (d) CLUSTAL

Correct Answer : (d) CLUSTAL

31. Which is the first plant modified by biotechnology?

- (a) Tobacco
- (b) Cotton
- (c) Brinjal
- (d) Rice

Correct Answer : (a) Tobacco

32. In PMR spectrum, two signals occur at 2.1 and 2.3 ppm by a spectrometer operating at 200 MHz. What is the frequency difference between their resonances in Hz?

- (a) 0.2 Hz
- (b) 40 Hz
- (c) 200 Hz
- (d) 400Hz

Correct Answer : (b) 40 Hz

33. The Bt rice (Golden rice) is rich in which vitamin

- (a) beta-carotene
- (b) beta-cetosterol
- (c) Pantothenic acid
- (d) Vitamin E

Correct Answer : (a) beta-carotene

34. α -Amino ketones can be prepared by treatment of ketoximetosylates and base via

- (a) Beckmann rearrangement
- (b) Schmidt Reaction
- (c) Lossen rearrangement
- (d) Neber rearrangement

Correct Answer : (d) Neber rearrangement

35. B.C. Roy award is related to which field

- (a) Sports
- (b) Engineering
- (c) Medical
- (d) Economics

Correct Answer : (c) Medical

36. PCR requires all of the following EXCEPT

- (a) Primers
- (b) DNA ligase
- (c) DNA polymerase
- (d) DNA of interest

Correct Answer : (b) DNA ligase

37. The metal present at the active site of the protein carboxypeptidase A such as renin is

- (a) Zinc
- (b) Copper
- (c) Magnesium
- (d) Cobalt

Correct Answer : (a) Zinc

38. The SGLT-2 inhibitors are

- (a) -glitazar
- (b) -glinides
- (c) -gliflozins
- (d) -glitazones

Correct Answer : (c) -gliflozins

39. In a magnetic field, nuclear dipoles (nuclear spins with a spin quantum number of $1/2$)

- (a) precess around the magnetic field direction randomly
- (b) are motionless along the direction of the magnetic field
- (c) do not exist
- (d) precess around the magnetic field direction at the Larmor frequency

Correct Answer : (d) precess around the magnetic field direction at the Larmor frequency

40. Which of the following quantities is not changed at a different magnetic field strength

- (a) Chemical shift (in hertz)
- (b) Nuclear spin population in an energy state
- (c) J coupling constant
- (d) Energy difference between two energy states of nuclei with non-zero spin quantum number

Correct Answer : (c) J coupling constant

41. The purpose of shimming is to

- (a) stabilize the static magnetic field
- (b) obtain homogeneity of the B1 field
- (c) find the lock frequency
- (d) obtain homogeneity of the static magnetic field

Correct Answer : (d) obtain homogeneity of the static magnetic field

42. Aroma in rice is due to

- (a) Acetyl choline
- (b) 4-benzyl pyrroline
- (c) 2-ethyl pyrroline
- (d) 2-acetyl-1-pyrroline

Correct Answer : (c) 2-ethyl pyrroline

43. Independently folded functional unit of a protein is called a

- (a) motif
- (b) fold
- (c) domain
- (d) module

Correct Answer : (c) domain

44. Why is the infrared absorption for the stretching motion of internal alkynes rarely observed

- (a) They do not form cations
- (b) C = C stretching does not change the dipole moment
- (c) They are too strong
- (d) The force constant for stretching of C = C is too high

Correct Answer : (b) C = C stretching does not change the dipole moment

45. One part per million is the same as

- (a) 1 μ g/g
- (b) 1 mg/kg
- (c) 1ng/mg
- (d) All of the above are correct

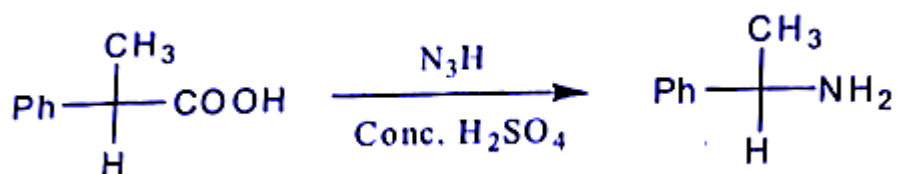
Correct Answer : (c) 1ng/mg

46. Pomato is a _____ plant

- (a) genetically modified
- (b) somatic hybrid
- (c) cloned
- (d) rDNA plant

Correct Answer : (b) somatic hybrid

47. The above reaction is known as



- (a) Schmidt reaction
- (b) Curtius reaction

(c) Hofmann rearrangement

(d) Lossen rearrangement

Correct Answer : (a) Schmidt reaction

48. In a HPLC, a RI detector is a ———— detector and is limited to ——— elution

(a) universal, gradient

(b) temperature sensitive, gradient

(c) solvent selective, isocratic

(d) universal, isocratic

Correct Answer : (d) universal, isocratic

49. Bischler-Napieraski reaction is used for the synthesis of

(a) Quinoline

(b) Isoquinoline

(c) Substituted pyrrole

(d) 2-Methyl quinoline

Correct Answer : (b) Isoquinoline

50. Carboxylic acids and amides have in general higher boiling points than esters and anhydrides because of which property

(a) dispersion forces

(b) resonance stabilization

(c) conjugated functional groups

(d) hydrogen bonding

Correct Answer : (d) hydrogen bonding

51. Polymethyl methacrylate (PMMA) is known as

(a) Perspex

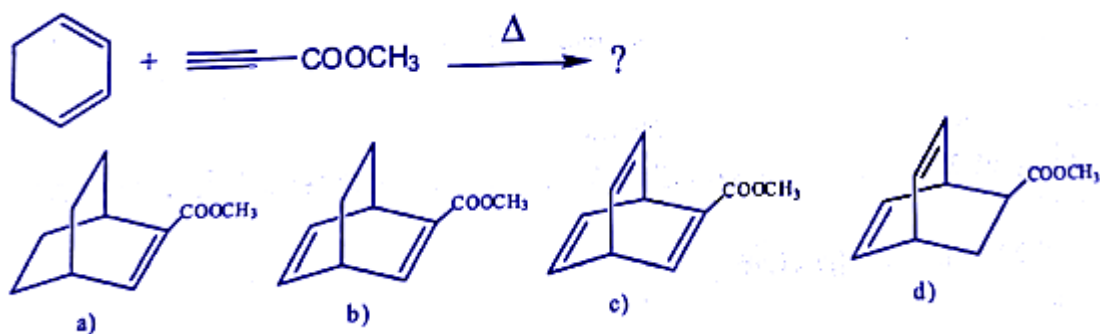
(b) Bakelite

(c) Teflon

(d) Nylon-6

Correct Answer : (a) Perspex

52. Provide the structure of the major organic product in the following reaction



Correct Answer : (c)

53. Which of the following cell types is unlikely to be infected by viruses

- (a) Nerve cell
- (b) Red blood cell
- (c) Liver cell
- (d) White blood cell

Correct Answer : (b) Red blood cell

54. Normal microbiota is helpful to human as they produce

- (a) Vitamin A
- (b) Vitamin C
- (c) Vitamin K
- (d) Vitamin E

Correct Answer : (c) Vitamin K

55. Which of the following might cause an increase in the fluorescence properties of a molecule

- (a) decrease the temperature of sample
- (b) increasing the temperature of sample
- (c) addition of O_2
- (d) decreasing the viscosity of the sample

Correct Answer : (a) decrease the temperature of sample

56. A mixture contains alcohol and water in the ratio 4:3. If 5 liters of water is added to the mixture, the ratio becomes 4:5. Find the quantity of alcohol in the given mixture

- (a) 10
- (b) 12
- (c) 15

(d) 18

Correct Answer : (a) 10

57. In response to DNA damage, p53 can mediate

- (a) cell cycle arrest only
- (b) either cell cycle arrest or apoptosis
- (c) apoptosis only
- (d) cell division

Correct Answer : (b) either cell cycle arrest or apoptosis

58. Which of the following is a distinguishing test between monosaccharides and disaccharides

- (a) Bial's test
- (b) Seliwanoff's test
- (c) Barfoed's test
- (d) Hydrolysis test

Correct Answer : (c) Barfoed's test

59. Guduchi or amrita or giloy is a common name of

- (a) *Chrysopogon zizanioides* (Poaceae)
- (b) *Desmodium gangeticum* (Fabaceae)
- (c) *Centella asiatica* (Umbelliferae)
- (d) *Tinospora cordifolia* (Menispermaceae)

Correct Answer : (d) *Tinospora cordifolia* (Menispermaceae)

60. Zydis, oral disintegrating tablet, is produced by lyophilizing or freeze-drying the drug in a matrix, usually of <https://www.pyqonline.com>

- (a) Gelatin
- (b) Macrogol
- (c) Sodium croscarmellose
- (d) None of the above

Correct Answer : (a) Gelatin

61. Which enzyme is responsible for carboxylation reaction (transfer of CO₂)

- (a) Biotin
- (b) Folic acid

- (c) Riboflavin
- (d) Ascorbic acid

Correct Answer : (a) Biotin

62. The co-receptor responsible for the entry of HIV into the host cell is

- (a) CCR1
- (b) CCR5
- (c) CXCR3
- (d) CXCR7

Correct Answer : (b) CCR5

63. Cope rearrangement involves

- (a) [1,5]-sigmatropic rearrangement
- (b) [4+2]-cycloaddition reaction
- (c) [3,3]-sigmatropic rearrangement
- (d) 6π -electrocyclisation reaction

Correct Answer : (c) [3,3]-sigmatropic rearrangement

64. Which is the only genetically modified crop/food plant approved in India

- (a) Golden rice
- (b) Bt brinjal
- (c) Bt cotton
- (d) Bt tomato

Correct Answer : (c) Bt cotton

65. Azulene is an isomer of

- (a) Naphthalene
- (b) Quinoline
- (c) Anthracene
- (d) Acridine

Correct Answer : (a) Naphthalene

66. Identify a neuraminidase inhibitor

- (a) Abacavir
- (b) Oseltamivir

- (c) Tenofovir
- (d) Stavudine

Correct Answer : (b) Oseltamivir

67. The reaction in which phenolic esters can be rearranged by heating with aluminium chloride or boron trifluoride to o-and p-acylphenols is known as

- (a) Friedel Craft's rearrangement
- (b) Favorski rearrangement
- (c) Gabriel rearrangement
- (d) Fries rearrangement

Correct Answer : (d) Fries rearrangement

68. A compound that shows positive iodoform test is

- (a) 1-pentanal
- (b) 2-Pentanone
- (c) 3-Pentanone
- (d) 3-Pentanol

Correct Answer : (b) 2-Pentanone

69. An aromatic molecule satisfies Huckel's rule $4n + 2$ where n is

- (a) number of double bonds
- (b) number of π electrons
- (c) an integer
- (d) number of conjugated double bonds

Correct Answer : (c) an integer

70. What will be the operating frequency for ^{13}C NMR if ^1H NMR operating frequency is 300 MHz for 7 Tesla instrument

- (a) 50 MHz
- (b) 70 MHz
- (c) 100 MHz
- (d) 300 MHz

Correct Answer : (b) 70 MHz

71. Alkenes can be obtained from aldehydes or ketones by

- (a) Wittig reaction
- (b) Clemensons reduction
- (c) Wittig rearrangement
- (d) Claisen rearrangement

Correct Answer : (a) Wittig reaction

72. Elvitegravir, an antiretroviral drug, is

- (a) histonedeacetylase inhibitor
- (b) integrase inhibitor
- (c) protease inhibitor
- (d) reverse transcriptase inhibitor

Correct Answer : (b) integrase inhibitor

73. Doebner-Miller reaction is the organic reaction of ——— to form quinoline

- (a) aniline with α - β -unsaturated carbonyl compound
- (b) aniline with alkoxymethylenemalonic ester or acyl malonic ester
- (c) 2-aminobenzaldehydes with ketone
- (d) aniline with glycerol in H_2SO_4 + nitrobenzene

Correct Answer : (a) aniline with α - β -unsaturated carbonyl compound

74. Which one is the first drug developed with application of structure-based drug design

- (a) Dorzolamide
- (b) Vigabatrin
- (c) Saralasin
- (d) Sibutramine

Correct Answer : (a) Dorzolamide

75. Sequesterpeniod ring is present in

- (a) Taxol
- (b) Artemesinin
- (c) Esorelin
- (d) Saxitoxin

Correct Answer : (b) Artemesinin

76. Which of the following properties is NOT a characteristic of microemulsions

- (a) high surfactant content
- (b) droplet size greater than 1 μm
- (c) transparent systems
- (d) thermodynamically stable

Correct Answer : (b) droplet size greater than 1 μm

77. What would be the drug plasma concentration immediately after an intravenous dose of 2 m with volume of distribution (V_D) of 20L is given to a 65-kg male patient? ($V_D = \text{dose}/C_{P0}$)

- (a) 0.1 $\mu\text{g}/\text{dL}$
- (b) 1 $\mu\text{g}/\text{dL}$
- (c) 10 $\mu\text{g}/\text{dL}$
- (d) 100 $\mu\text{g}/\text{dL}$

Correct Answer : (c) 10 $\mu\text{g}/\text{dL}$

78. Reasons for capping in tablet formulations are all EXCEPT

- (a) excessive force of compression
- (b) insufficient binder
- (c) entrapment of air during processing
- (d) excessive lubricant

Correct Answer : (d) excessive lubricant

79. Which of the following agents would produce a long-term inhibition of reduced gastric acid secretion through an irreversible mechanism

- (a) Pantoprazole
- (b) Cimetidine
- (c) Fexofenadine
- (d) Loratidine

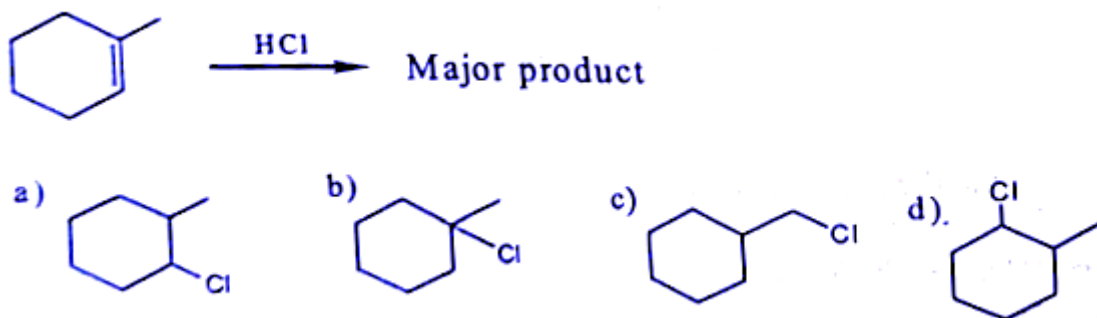
Correct Answer : (a) Pantoprazole

80. Fomivirsen is an example of which of the following biological products

- (a) A liposomal formulation
- (b) An antisense oligonucleotide
- (c) An siRNA molecule
- (d) A monoclonal antibody

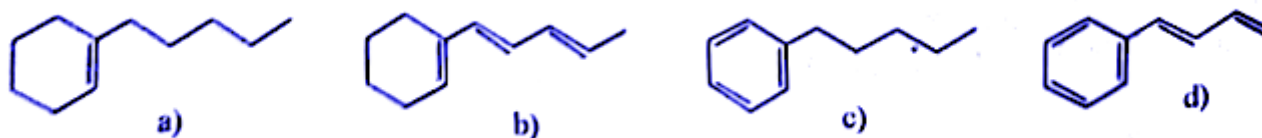
Correct Answer : (b) An antisense oligonucleotide

81. The major product for the following reaction is



Correct Answer : (b)

82. Which one of the following compounds is expected to have the longest wavelength absorbance (λ_{max})



Correct Answer : (d)

83. Match the famous brand names with API

- | | |
|------------|-------------------------------|
| 1. Avil | P. Diphenoxylate and atropine |
| 2. Lomotil | Q. Hydroxyzine hydrochloride |
| 3. Atarax | R. Ranitidine hydrochloride |
| 4. Zantac | S. Pheniramine maleate |

- (a) 1-Q, 2-S, 3-R, 4-P
(b) 1-S, 2-P, 3-Q, 4-R
(c) 1-R, 2-P, 3-S, 4-Q
(d) 1-R, 2-S, 3-P, 4-O

Correct Answer : (b) 1-S, 2-P, 3-Q, 4-R

84. In the famous rDNA experiment to produce humulin, the substance was produced attached with another protein called

- (a) beta-galactosidase
- (b) beta-galactoside
- (c) Chaperonin
- (d) C-peptide

Correct Answer : (a) beta-galactosidase

85. All of the following rearrangements form isocyanate as intermediate EXCEPT

- (a) Wolf rearrangement
- (b) Hoffmann rearrangement
- (c) Lossen rearrangement
- (d) Schmidt rearrangement

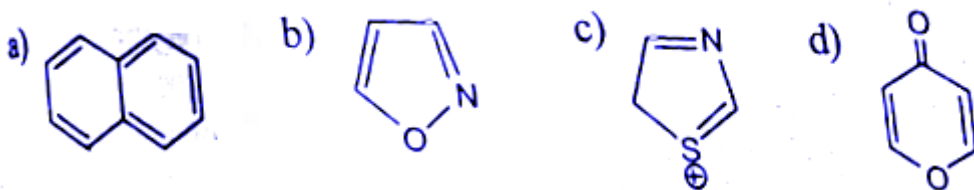
Correct Answer : (a) Wolf rearrangement

86. Which of the following are literature database

- (a) Medline and PDB
- (b) PubMed and PDB
- (c) Medline and PubMed
- (d) Medline and PDS

Correct Answer : (c) Medline and PubMed

87. Which of the following heterocycle is not aromatic



Correct Answer : (c)

88. In p-nitrophenyl acetate where will the C=O stretching bond appear in IR spectrum

- (a) 1700 cm^{-1}
- (b) 1725 cm^{-1}
- (c) 1740 cm^{-1}
- (d) 1765 cm^{-1}

Correct Answer : (d) 1765 cm^{-1}

89. Which is the only organ which is capable of producing fructose in humans

- (a) liver
- (b) pancreas
- (c) seminal vesicles
- (d) muscles

Correct Answer : (c) seminal vesicles

90. At which pH phenolphthalein is pink coloured

- (a) 1-4
- (b) 4-8
- (c) 8-12
- (d) 13-14

Correct Answer : (c) 8-12

91. In reverse phase HPLC, molecules with lower _____ polarity elute first, and molecules with _____ polarity elute last

- (a) lower, higher
- (b) varies with solutes
- (c) higher, lower
- (d) same

Correct Answer : (c) higher, lower

92. Histones, the proteins that bind to DNA, are rich in which amino acids

- (a) arginine, lysine
- (b) cysteine, methionine
- (c) glutamate, aspartate
- (d) isoleucine, leucine

Correct Answer : (a) arginine, lysine

93. Which of the following are ambident nucleophiles

- (a) $-\text{SCN}$, CN , $-\text{CH}_2\text{C}(\text{O})\text{CH}_3$
- (b) $-\text{OH}$, $-\text{OR}$, $-\text{OCOR}$
- (c) $-\text{Cl}$, $-\text{Br}$, $-\text{F}$
- (d) BF_3 , AlCl_3 , SOCl_2

Correct Answer : (a) $-\text{SCN}$, CN , $-\text{CH}_2\text{C}(\text{O})\text{CH}_3$

94. Identify the soft acids

- (a) Na^+ , K^+ , Li^+ , Mg^{2+}
- (b) Ca^{2+} , Mn^{2+} , Sr^{2+} , Al^{3+}
- (c) RPO^{2+} , ROPO^{2+} , RSO^{2+} , ROSO^{2+}
- (d) Cu^+ , Ag^+ , Hg^+ , CO^+

Correct Answer : (d) Cu^+ , Ag^+ , Hg^+ , CO^+

95. D-glucose reacts with 3 moles of phenylhydrazine to form osazone. Which of the following carbohydrate will have the osazone with different melting point

- (a) L-glucose
- (b) D-mannose
- (c) D-fructose
- (d) D-galactose

Correct Answer : (d) D-galactose

96. Monoclonal antibody

- (a) has antigen-combining sites that are not identical
- (b) may belong only to the IgM, IgA, or IgG classes
- (c) may be present in patients' serum with multiple myeloma
- (d) shows a lower level of specificity than the polyclonal antibody

Correct Answer : (c) may be present in patients' serum with multiple myeloma

97. Lantus (Insulin glargine) is a product of

- (a) Novartis
- (b) Pfizer
- (c) Sanofi-Aventis
- (d) Novo Nordisk

Correct Answer : (c) Sanofi-Aventis

98. Glucagon-like peptide-1 receptor agonists is

- (a) Semaglutide
- (b) Repaglinide
- (c) Glyburide
- (d) Glasdegib

Correct Answer : (a) Semaglutide

99. Curry leaves commonly used in Indian cuisine is

- (a) *Coccinia indica*
- (b) *Murrayako eingii*
- (c) *Allium cepa*
- (d) *Syzigium cumini*

Correct Answer : (b) *Murrayako eingii*

100. Antipsychotic drug with 7 member ring

- (a) Risperidone
- (b) Haloperidole
- (c) Olanzapine
- (d) fluoxetine

Correct Answer : (c) Olanzapine

101. Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl

- (a) Nephew
- (b) Brother
- (c) Uncle
- (d) Son-in-law

Correct Answer : (b) Brother

102. β -isobutyl GABA is

- (a) Pregabalin
- (b) Vigabatrin
- (c) Gabapentin
- (d) Baclofen

Correct Answer : (a) Pregabalin

103. Antonym of Unambiguous is

- (a) Certain
- (b) Clear
- (c) Questionable

(d) Definite

Correct Answer : (c) Questionable

104. Chloroquine and other quinoline antimalarials are

- (a) hemazoin inhibitors
- (b) Pyruvate dehydrogenase inhibitor
- (c) P-gp inhibitor
- (d) DHFR inhibitors

Correct Answer : (a) hemazoin inhibitors

105. Zika virus infection is spread by mosquitos. Its infection during pregnancy causes

- (a) Microcephaly
- (b) Abortion
- (c) Megalencephaly
- (d) Spina bifida

Correct Answer : (a) Microcephaly

106. Identify amino acids with more than one chiral center

- (a) Isoleucine, threonine
- (b) Valine, glutamine
- (c) Serine, cysteine
- (d) Glycine, phenylalanine

Correct Answer : (a) Isoleucine, threonine

107. Which structure is involved in processing of emotional content of the incoming stimulus

- (a) Cerebellum
- (b) Hippocampus
- (c) Amygdala
- (d) Medulla oblongata

Correct Answer : (c) Amygdala

108. DNN, FPP, HRR, ————, LVV

- (a) GRR
- (b) GSS
- (c) JTT

(d) ITT

Correct Answer : (c) JTT

109. 40% of deaths in hospital may be attributed to terminal illness. The number of degrees needed to represent this as a slice of a pie chart is

- (a) 96
- (b) 144
- (c) 160
- (d) 216

Correct Answer : (b) 144

110. Indian frankincense is

- (a) *Boswellia sacra*
- (b) *Boswellia serrate*
- (c) *Commiphora myrrha*
- (d) *Ferula gummosa*

Correct Answer : (b) *Boswellia serrate*

111. A part of nucleic acid used to find a gene by hybridization is called

- (a) Vector
- (b) Clone
- (c) Probe
- (d) Cybrid

Correct Answer : (c) Probe

112. What is the angle between hour hand and minute hand in clock at 4:20

- (a) 0
- (b) 5
- (c) 10
- (d) None of the above

Correct Answer : (c) 10

113. Match the types of stomata with families they are found

- | | |
|----------------|--------------------|
| 1. Actinocytic | P. Caryophyllaceae |
| 2. Anisocytic | Q. Ebenaceae |
| 3. Diacytic | R. Rubiaceae |
| 4. Paracytic | S. Solanaceae |

- (a) 1-S, 2-P, 3-R, 4-Q
- (b) 1-S, 2-R, 3-Q, 4-P
- (c) 1-R, 2-S, 3-Q, 4-R
- (d) 1-Q, 2-S, 3-P, 4-R

Correct Answer : (d) 1-Q, 2-S, 3-P, 4-R

114. Treatment must eliminate parasites from both liver and erythrocytes

- (a) P vivax and P. ovale
- (b) P. malariae and P. falciparum
- (c) P. falciparum and P.knowelsi
- (d) P. falciparum

Correct Answer : (a) P vivax and P. ovale

115. Which of the following is a NMDA receptor blocker

- (a) Raloxifene
- (b) Risedronate
- (c) Memantine
- (d) Alendronate

Correct Answer : (c) Memantine

116. Which of the following anti-Parkinson drug may cause peripheral vasospasm

- (a) Ropinirole
- (b) Amantadine
- (c) Bromocriptine
- (d) Carbidopa

Correct Answer : (c) Bromocriptine

117. At pH 5.0, the ratio of the protonated to unprotonated forms of morphine (a weak base containing an ionizable amine group, $pK_a = 7.0$) would be

- (a) 1:100

- (b) 1:10
- (c) 1:1
- (d) 100:1

Correct Answer : (d) 100:1

118. Orphan drugs are

- (a) Drugs for orphans
- (b) Drug for treating rare diseases
- (c) Rare drugs for treating common diseases
- (d) Drugs that are used very rarely

Correct Answer : (b) Drug for treating rare diseases

119. Adrenergic receptor having lipolysis property in fat cells

- (a) Beta-1
- (b) Beta-2
- (c) Beta-3
- (d) Alpha-1

Correct Answer : (c) Beta-3

120. A common adverse effect of valproic acid are all except

- (a) carcinogen
- (b) low platelet count
- (c) polycystic ovaries
- (d) Hyperandrogenism

Correct Answer : (a) carcinogen

121. Antiemetic effect of metoclopramide is mainly due to its action as

- (a) 5HT₃ antagonist
- (b) D-2 antagonist
- (c) M-3 antagonist
- (d) 5HT₃ agonist

Correct Answer : (b) D-2 antagonist

122. The drug used for treatment of peptic ulcer

- (a) Clozapine

- (b) Cetirizine
- (c) Olanzepine
- (d) Pirenzepine

Correct Answer : (d) Pirenzepine

123. The antidote to atropine is

- (a) Pilocarpine
- (b) Pralidoxime
- (c) Benzotropine
- (d) Adrenaline

Correct Answer : (a) Pilocarpine

124. The maximum number of drugs approved by USFDA in last five years are ——— in nature

- (a) Small organic molecules
- (b) Protein monoclonal antibodies
- (c) Protein growth hormones
- (d) Carbohydrates

Correct Answer : (b) Protein monoclonal antibodies

125. A 30-membered ring macrolide antibiotic that contains O, N and containing 4 trans double bonds, three of which are conjugated is

- (a) Rapamycin
- (b) Hamycin
- (c) Azithromycin
- (d) Telethromycin

Correct Answer : (a) Rapamycin

126. Hirudin is obtained from the transgenic plant

- (a) Brassica napus
- (b) Hibiscus rosasinesis
- (c) Raphanus sativus
- (d) Vinca rosea

Correct Answer : (a) Brassica napus

127. Which of the following statements applies to the E2 mechanism

- (a) It occurs with inversion of stereochemistry
- (b) It occurs with racemization of stereochemistry
- (c) It proceeds through the more stable carbocation intermediate
- (d) The C-H and C-X bonds that break must be anti

Correct Answer : (d) The C-H and C-X bonds that break must be anti

128. Isoniazid is

- (a) Isonicotinic acid hydrazide
- (b) Nicotinic acid hydrazide
- (c) Isonicotinic acid azide
- (d) Isonicotinic acid semicarbazide

Correct Answer : (a) Isonicotinic acid hydrazide

129. Following intravenous administration, drugs are distributed fastest to the

- (a) Skin, kidney, and brain
- (b) Liver, adipose, and brain
- (c) Liver, kidney, and brain
- (d) Liver, kidney, and adipose

Correct Answer : (c) Liver, kidney, and brain

130. Drug used in pulmonary hypertension

- (a) Bosentan
- (b) Amlodipine
- (c) Enalapril
- (d) Furosemide

Correct Answer : (a) Bosentan

131. Protein binding of drugs helps to maintain _____ for absorption of drugs

- (a) Nonsink condition
- (b) Sink condition
- (c) Biological condition
- (d) None of the above

Correct Answer : (b) Sink condition

132. Eukaryotic ribosomal subunits are

- (a) 30S and 50S
- (b) 30S and 50S
- (c) 40S and 60S
- (d) 30S and 60S

Correct Answer : (c) 40S and 60S

133. Identify the incorrect statement about cannabidiol

- (a) It is soluble in water but insoluble in organic solvents
- (b) It is oxidized to a quinone
- (c) It cyclizes to THC under acidic conditions
- (d) It is approved for the treatment of epilepsy

Correct Answer : (a) It is soluble in water but insoluble in organic solvents

134. In a double-stranded DNA, which of the following ratios is/are always equal to 1? A, T, G, and C denote the number of bases

- (a) $(A + T) / (G + C)$
- (b) $(A + G) / (T + C)$
- (c) A / G
- (d) $(G + T) / (A + C)$

Correct Answer : (b) $(A + G) / (T + C)$

135. Cyclophosphamide is converted into which active form

- (a) Diazonium ion
- (b) Aziridine ring
- (c) Methyl cation
- (d) Nitrosourea

Correct Answer : (b) Aziridine ring

136. Which heterocyclic ring system is present in hydralazine

- (a) Quinazoline
- (b) Quinazoline
- (c) Phthalazine
- (d) Pteridine

Correct Answer : (c) Phthalazine

137. When 3-iodo-3-ethylpentane is treated with sodium methoxide in methanol, the major organic product is an ____ that is generated through an ____ mechanism

- (a) Ether, SN1
- (b) Ether, SN2
- (c) Alkene, E1
- (d) Alkene, E2

Correct Answer : (d) Alkene, E2

138. Zanamivir resembles

- (a) Salicylic acid
- (b) Neuraminic acid
- (c) Muramic acid
- (d) Mycolic acid

Correct Answer : (b) Neuraminic acid

139. Kalmegh is

- (a) Hepatoprotective
- (b) Cardioprotective
- (c) Immunoprotective
- (d) Neuroprotective

Correct Answer : (a) Hepatoprotective

140. Which of the following is 5HT₁ receptor agonist used as antimigraine agents

- (a) Serod
- (b) Triptan
- (c) Anserin
- (d) Setron

Correct Answer : (b) Triptan

141. Which schedule is related to the shelf life of drug formulations

- (a) U
- (b) V
- (c) W
- (d) S

Correct Answer : (c) W

142. Lysol is a

- (a) Sterilent
- (b) Disinfectant
- (c) Antiseptic
- (d) Antifungal agent

Correct Answer : (c) Antiseptic

143. The biosynthetic precursor for tropane alkaloid is

- (a) Lysine
- (b) Ornithine
- (c) Tyrosine
- (d) Tryptamine

Correct Answer : (b) Ornithine

144. 1-methyl-2-(2,6-xyloxy)-ethylamine is the IUPAC name for

- (a) Lidocaine
- (b) Mexiletine
- (c) Encainide
- (d) Flecainide

Correct Answer : (c) Encainide

145. Which of the following oils gives a positive result for Badouin's test

- (a) Sesame oil
- (b) Olive oil
- (c) Peanut oil
- (d) Almond oil

Correct Answer : (d) Almond oil

146. The presence of alkaloid in plant material can be tested by the following reagents

- (a) 3-dinitrobenzoic acid in NaOH
- (b) Potassium-mercury iodide solution
- (c) 2,4-dinitrophenylhydrazine solution
- (d) Aluminum trichloride in alcohol

Correct Answer : (b) Potassium-mercury iodide solution

147. Gemfibrozil should be discontinued if a patient complains of

- (a) Weight gain
- (b) Constipation
- (c) Diarrhoea
- (d) Muscle pain

Correct Answer : (d) Muscle pain

148. Chemical shifts originate from

- (a) Magnetic momentum
- (b) Electron shielding
- (c) Free induction decay
- (d) Scalar coupling (J-coupling)

Correct Answer : (b) Electron shielding

149. Gossypol is

- (a) Triterpenoid aldehyde
- (b) Triterpenoid ketone
- (c) Diterpenoid aldehyde
- (d) Sesquiterpenoid aldehyde

Correct Answer : (a) Triterpenoid aldehyde

150. Headquarters of IPC commission is at

- (a) Ghaziabad
- (b) New Delhi
- (c) Gurugram
- (d) Mumbai

Correct Answer : (a) Ghaziabad

151. The Indian Pharmacopoeia 2018 is _____ edition

- (a) Sixth
- (b) Seventh
- (c) Eighth
- (d) Ninth

Correct Answer : (c) Eighth

152. Financial feasibility analysis can be done by comparing _____ with the estimated sales figure

- (a) Cash flow statement
- (b) Balance sheet
- (c) Break-even point
- (d) Profit and loss statement

Correct Answer : (c) Break-even point

153. Definition of 'Startup' includes all of the following EXCEPT

- (a) More than five years have not lapsed from the date of its incorporation or registration
- (b) The turnover for any of the financial years, within five years of its incorporation or registration, did not exceed rupees twenty-five crores
- (c) It is working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property
- (d) Even after expiration of five years turnover is less than 5 crores

Correct Answer : (d) Even after expiration of five years turnover is less than 5 crores

154. Abciximab is a chimeric monoclonal antibody used as antiplatelet. It acts against

- (a) CD 20
- (b) Glycoprotein IIb/IIIa
- (c) Vascular endothelial growth factor
- (d) TNF- α

Correct Answer : (b) Glycoprotein IIb/IIIa

155. Match the trade names with the drugs:

- P) Humira 1) Basiliximab
Q) Herceptin 2) Etanercept
R) Simulect 3) Adalimumab
S) Enbrel 4) Trastuzumab

- (a) a) P-1, Q-2, R-3, S-4
- (b) b) P-1, Q-2, R-4, S-3
- (c) c) P-2, Q-1, R-4, S-3
- (d) d) P-3, Q-4, R-1, S-2

Correct Answer : (b) b) P-1, Q-2, R-4, S-3

156. Nobel Prize 2018 of medicine was awarded on the research related to

- (a) Structure and functions of ribosomes
- (b) Optical tweezers and their application to biological systems
- (c) Inhibition of negative immune regulation
- (d) Directed evolution of enzymes

Correct Answer : (c) Inhibition of negative immune regulation

157. Shweta musli is

- (a) Chlorophytum borivilium
- (b) Plectranthus barbatus
- (c) Ipomoea hederacea
- (d) Commiphora mukula

Correct Answer : (a) Chlorophytum borivilium

158. Which vitamin or other agent is often given along with a calcium supplement to aid in its absorption <https://www.pyqonline.com>

- (a) Thiamine
- (b) Vitamin E
- (c) Ascorbic acid
- (d) Vitamin D

Correct Answer : (d) Vitamin D

159. Which medication may result in a 'disulfiram-like reaction' when taken with alcohol

- (a) Tetracycline
- (b) Metronidazole
- (c) Amoxicillin
- (d) Clindamycin

Correct Answer : (b) Metronidazole

160. Body surface area (BSA) is used in calculating chemotherapy doses because

- (a) It is an indicator of tumor cell mass
- (b) It correlates with cardiac output
- (c) It correlates with GI transit time
- (d) The FDA requires that it be used

Correct Answer : (b) It correlates with cardiac output

161. Which of the following prostaglandin analogs is used specifically for the treatment of glaucoma

- (a) Alprostadil
- (b) Latanoprost
- (c) Carboprost
- (d) Dinoprostone

Correct Answer : (b) Latanoprost

162. Which of the following acids has the highest degree of ionization in an aqueous solution

- (a) Aspirin
- (b) Indomethacin
- (c) Warfarin
- (d) Ibuprofen

Correct Answer : (c) Warfarin

163. The most active form of thyroid hormone in the stimulation of oxygen use is

- (a) Thyroxine
- (b) Thyroglobulin
- (c) Triiodothyronine
- (d) Reverse triiodothyronine

Correct Answer : (c) Triiodothyronine

164. As per DPCO 2013, what is the method of drug pricing

- (a) Cost based pricing
- (b) Market based pricing
- (c) Patient affordability
- (d) Manufacturing expenses + Maximum Allowable Post Manufacturing Expenses

Correct Answer : (b) Market based pricing

165. The requirement and guidelines for contract research comes in which Schedule

- (a) Sch M
- (b) Sch Y
- (c) Sch C
- (d) Sch X

Correct Answer : (b) Sch Y

166. Which of the following is the weakest intermolecular force

- (a) Hydrogen bonding
- (b) Dipole-Dipole
- (c) Dipole-Induced dipole
- (d) Induced dipole-Induced dipole

Correct Answer : (d) Induced dipole-Induced dipole

167. Which of the following is fluoroquinolone derivative

- (a) Nitrofurantoin
- (b) Ciprofloxacin
- (c) Cephalosporin
- (d) Lumefantrene

Correct Answer : (b) Ciprofloxacin

168. The evidence which indicates that a drug is stored extravascularly is

- (a) Small clearance
- (b) Small apparent volume of distribution
- (c) Large apparent volume of distribution
- (d) Large clearance

Correct Answer : (c) Large apparent volume of distribution

169. Sensory cortex is located in the following lobe of the cerebral cortex

- (a) Frontal lobe
- (b) Parietal lobe
- (c) Occipital lobe
- (d) Temporal lobe

Correct Answer : (a) Frontal lobe

170. Strings used for tying blood vessels during surgery is called

- (a) Ligature
- (b) Suture
- (c) Catgut
- (d) Fibers

Correct Answer : (a) Ligature

171. How many carbons are present in geranyl pyrophosphate

- (a) 8
- (b) 9
- (c) 10
- (d) 11

Correct Answer : (c) 10

172. Very weak bases having $pK_a < 5$

- (a) Are ionized in the entire pH range of GIT
- (b) Show absorption, which is pH dependent
- (c) Are unionized at all pH values
- (d) None of the above

Correct Answer : (c) Are unionized at all pH values

173. The most widely used theory for calculating zeta potential from experiments was developed by

- (a) Smoluchowski
- (b) Rayleigh
- (c) Tyndall
- (d) Jablonski

Correct Answer : (a) Smoluchowski

174. Reynold's number is defined as the ratio of inertia force to

- (a) Gravity force
- (b) Pressure force
- (c) Elastic force
- (d) Viscous force

Correct Answer : (d) Viscous force

175. Colloidal aluminium hydroxide is used in treating patients with chronic renal failure because

- (a) Competes with sodium for excretion in urine
- (b) Causes alkalosis
- (c) Increases phosphate loss through urine

(d) Decreases phosphate loss through urine

Correct Answer : (d) Decreases phosphate loss through urine

176. Exenatide is

- (a) Glucagon agonist
- (b) GLP agonist
- (c) Amylin agonist
- (d) Heparin agonist

Correct Answer : (b) GLP agonist

177. Peyer's patches are seen in

- (a) Intestine
- (b) CNS
- (c) Lungs
- (d) Liver

Correct Answer : (a) Intestine

178. Arginine on decarboxylation gives

- (a) Ornithine
- (b) Agmatine
- (c) Spermine
- (d) Putrescine

Correct Answer : (b) Agmatine

179. A catalyst

- (a) Participates in the reaction
- (b) Always increases the rate of reaction
- (c) Always decreases the rate of reaction
- (d) Does not affect a reaction energy

Correct Answer : (a) Participates in the reaction

180. Global warming is due to increase of

- (a) Methane & CO
- (b) Sulphur & CO
- (c) CO & CO₂

(d) Methane & CO₂

Correct Answer : (d) Methane & CO₂

181. A number consists of two digits. The sum of the digits is 9. If 45 is subtracted from the number, its digits are interchanged. What is the number

(a) 63

(b) 72

(c) 81

(d) 90

Correct Answer : (b) 72

182. The words that best fill the blanks in the given sentence are: Going by the ____ that many hands make light work, the school ____ involved all the students in the task

(a) Principle, principal

(b) Principal, principle

(c) Principle, principle

(d) Principal, principal

Correct Answer : (b) Principal, principle

183. Hydrolysis of a peptide involves cleavage of the bond between the atoms

(a) N and C alpha

(b) C and O

(c) C alpha and C

(d) N and C

Correct Answer : (d) N and C

184. Tollen's test is negative for

(a) Mannose

(b) Maltose

(c) Glucose

(d) Sucrose

Correct Answer : (d) Sucrose

185. C₆H₇BrNO shows peaks in PMR (δ , ppm) as 9.89 (s, 1H), 7.88 (s, 1H, J = 7.2 Hz), 7.45 (d, 1H, J = 7.2 Hz), 1.77 (m, 1H, J = 7.0 Hz), 7.12 (d, 1H, J = 7.0 Hz), 2.06 (s, 3H). It is

- (a) m-bromo acetanilide
- (b) o-bromo acetanilide
- (c) p-bromoacetanilide
- (d) None of the above

Correct Answer : (a) m-bromo acetanilide

186. Antispermato-genic component is present in

- (a) Senna leaves
- (b) Cotton seed
- (c) Chebulic myrobalan
- (d) Common walnut

Correct Answer : (b) Cotton seed

187. The highest dustability is observed for

- (a) Lycopodium powder
- (b) Talcum powder
- (c) Potato starch
- (d) Charcoal

Correct Answer : (a) Lycopodium powder

188. WITEPSOL is a trade name of

- (a) Fatty bases for suppositories
- (b) Emulsifier
- (c) Polymer for micells
- (d) Solubilizer

Correct Answer : (a) Fatty bases for suppositories

189. The first commercialized product from genetic engineering was

- (a) Vaccines
- (b) Human insulin
- (c) Interferon
- (d) Vitamin C

Correct Answer : (b) Human insulin

190. Pith and cortex can not be differentiated in

- (a) Monocot stem
- (b) Dicot stem
- (c) Monocot root
- (d) Dicot root

Correct Answer : (a) Monocot stem

191. Which of the following is NOT a hallucinogen

- (a) LSD
- (b) Methylphenidate
- (c) Mescaline
- (d) Phencyclidine, Psilocybin

Correct Answer : (b) Methylphenidate

192. The metabolites of amphetamine can be detected in urine of a person taking it upto

- (a) 2 days
- (b) 7 days
- (c) 2 weeks
- (d) 1 month

Correct Answer : (a) 2 days

193. Two monochromators positioned at right angles is a characteristic of which instrument

- (a) Flame photometer
- (b) Atomic Absorption Spectrophotometer
- (c) Fluorometer
- (d) Colorimeter

Correct Answer : (c) Fluorometer

194. To which of the following groups do the active agents of Ginkgo folium belong

- (a) Biflavons, Diterpenes
- (b) Diterpenes, Hydroquinones
- (c) Naphtoquinones, Diterpenes
- (d) Naphtoquinones, Hydroquinones

Correct Answer : (a) Biflavons, Diterpenes

195. Hashish is the _____ of Cannabis sativa

- (a) Gum of the male flowers
- (b) Resin of the female flowers
- (c) Gum of the male and female flowers
- (d) Pressed juice of the leaves

Correct Answer : (b) Resin of the female flowers

196. Which of the following structural features is characteristic of saponins

- (a) Skeleton built up with 10, 15, 20 or 30 carbon atoms
- (b) Mineral salts of fatty acids
- (c) Glycosides with aromatic rings
- (d) Triterpene glycosides

Correct Answer : (d) Triterpene glycosides

197. Azelaic acid, used in treatment of skin pigmentation is

- (a) 1,7-Heptanediocarboxylic acid
- (b) 5-Hydroxy-2-(hydroxymethyl)-4H-pyran-4-one
- (c) Hydroquinone β -D-glucopyranoside
- (d) Aminoadipic acid

Correct Answer : (a) 1,7-Heptanediocarboxylic acid

198. Parkinson's is associated with

- (a) Somal spheres
- (b) A β plaques
- (c) Lewy bodies
- (d) Neurofibrillary Tangles

Correct Answer : (c) Lewy bodies

199. VIVASOL® is

- (a) Croscarmellose sodium
- (b) Soy Polysaccharides
- (c) Sodium starch glycolate
- (d) Polyethylene glycol 400

Correct Answer : (a) Croscarmellose sodium

200. Tizanidine is a(n) _____ used to treat spasticity and which rarely has the adverse effect of inducing hypotension

- (a) Centrally acting alpha-adrenergic agonist
- (b) NET inhibitor
- (c) GABA antagonist
- (d) Serotonin agonist

Correct Answer : (a) Centrally acting alpha-adrenergic agonist