Sl. No. :

DJPH/19

Register Number

2019

PHARMACY / PHARMACEUTICAL SCIENCES
(Degree Std.)

Time Allowed : 3 Hours] **[Maximum Marks : 300**

Read the following instructions carefully before you begin to answer the questions.

IMPORTANT INSTRUCTIONS

1. The applicant will be supplied with Question Booklet 15 minutes before commencement of the examination.
2. This Question Booklet contains **200** questions. Prior to attempting to answer, the candidates are requested to check whether all the questions are there in series and ensure there are no blank pages in the question booklet. **In case any defect in the Question Paper is noticed, it shall be reported to the Invigilator within first 10 minutes and get it replaced with a complete Question Booklet. If any defect is noticed in the Question Booklet after the commencement of examination, it will not be replaced.**
3. Answer **all** questions. **All** questions carry equal marks.
4. You must write your Register Number in the space provided on the top right side of this page. Do not write anything else on the Question Booklet.
5. An answer sheet will be supplied to you, separately by the Room Invigilator to mark the answers.
6. You will also encode your Question Booklet Number with Blue or Black ink Ball point pen in the space provided on the side 2 of the Answer Sheet. If you do not encode properly or fail to encode the above information, action will be taken as per Commission's notification.
7. Each question comprises *four* responses (A), (B), (C) and (D). You are to select ONLY ONE correct response and mark in your Answer Sheet. In case you feel that there are more than one correct response, mark the response which you consider the best. In any case, choose ONLY ONE response for each question. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.
8. In the Answer Sheet there are **four** circles Ⓐ, Ⓑ, Ⓒ and Ⓓ against each question. To answer the questions you are to mark with Blue or Black ink Ball point pen ONLY ONE circle of your choice for each question. Select one response for each question in the Question Booklet and mark in the Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. *e.g.* If for any item, Ⓑ is the correct answer, you have to mark as follows :

   Ⓐ ● Ⓒ Ⓓ

9. You should not remove or tear off any sheet from this Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the time of examination. After the examination is concluded, you must hand over your Answer Sheet to the Invigilator. You are allowed to take the Question Booklet with you only after the Examination is over.
10. **Do not make any marking in the question booklet except in the sheet before the last page of the question booklet, which can be used for rough work. This should be strictly adhered.**
11. Applicants have to write and shade the total number of answer fields left blank on the boxes provided at side 2 of OMR Answer Sheet. An extra time of 5 minutes will be given to specify the number of answer fields left blank.
12. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.

SEAL

SPACE FOR ROUGH WORK

1. Uses of 'Fuses' with less capacity prevents

(A) Mechanical hazard
(B) Chemical hazard
(C) Electrical hazard
(D) Dust hazard

2. The following tests are usually performed for rubber closure except

(A) Test for penetrability
(B) Extractive test
(C) Fragmentation test
(D) Dissolution test

3. Flow property of a drug can be determined by measurement of

(A) its angle of repose
(B) its partition coefficient
(C) its solubility
(D) its dissociation constant

4. The Henderson-Hasselbach equation is useful determination of

(A) pKa of a drug (dissociation constant of a drug)
(B) melting point of a drug
(C) boiling point of a drug
(D) amount of drug in a dosage form

5. Pre-formulation studies involve

(A) Development of suitable dosage form for a drug
(B) Determination of pharmacological action of a drug
(C) Determination of molecular structure of a drug
(D) Determination of adverse drug reaction

6. The sweatening agar commonly used in chewable tablet is

(A) Sucrose
(B) Honey
(C) Mannitol
(D) Saccharine

7. The maximum absorption is shifted to longer wavelengths, is

(A) Batho chromic shift
(B) Hypso chromic shift
(C) Hyper chromic shift
(D) Hypo chromic shift

8. In India GMP guidelines for manufacture of sterile products is given in

(A) Schedule M of Drugs and cosmetics act 1940
(B) Schedule MI of Drugs and cosmetics act 1940
(C) Schedule MII of Drugs and cosmetics act 1940
(D) Schedule MIII of Drugs and cosmetics act 1940

9. The following test are used for evaluation of parental except?

(A) Sterility test
(B) Friability test
(C) pyrogen test
(D) Clarity test

10. As per I.P, all blood products should pass

(A) The test for sterility
(B) Legale test
(C) Benedict's test
(D) Monlisch's test

11. Choose the correct statement

(A) Plasma substitutes should have viscosity similar to that of plasma
(B) Plasma substitutes should be immunogenic
(C) Plasma substitutes must be colourless
(D) Plasma substitutes must be retained by the human body

12. Which of the following influences the drug distribution in the body?

(A) Protein binding capacity of the drug (B) Weight of the individual

(C) First pass metabolism of the drug (D) Solubity of the drug

13. Which of the following parameter are evaluated by comparing curves of serum concentration versus time?

(A) peak concentration, biological half life and elimination rate constant

(B) biological half life, t_{max} and absorption rate constant

(C) peak concentration, t_{max} and total area under the curve

(D) adsorption rate constant, area under the curve and elimination rate constant

14. The time period for which the plasma concentration of drug remains aboves minimum therapeutic level is known as

(A) duration of action (B) maximum action time

(C) intensity action (D) termination of action

15. Which of the following methods is used to calculate the AUC of a drug from a blood level-time graph?

(A) rules of nines (B) law of diminishing returns

(C) trapezoidal rule (D) termination of action

16. The principle involved in the separation of components in column chromatography is _____ at the solid liquid interface.

(A) Adsorption (B) Partition

(C) Size exclusion (D) Differentiation

17. The type of Immunity produced by administration of Tetanus antitoxin is

(A) Naturally acquired active immunity

(B) Artificially produced passive immunity

(C) Artificially stimulated active immunity

(D) Naturally acquired passive immunity

18. Which chemical is used to kill Bordetella pertusis in the preparation of pertussis vaccine?

(A) Salicylic acid (B) Acetic acid

(C) Formalin (D) Chlorxylenol

19. BCG vaccine belongs to the class of

(A) Toxoids
(B) Live bacterial vaccine
(C) Killed bacterial vaccine
(D) Viral vaccine

20. The modified bacterial exotoxins to reduce or destroy the toxicity without changing immunologic property are called

(A) Toxins
(B) Toxoids
(C) Serums
(D) Antitoxins

21. Diptheria Antitoxin is a preparation containing the specific antitoxic globulins or their derivatives obtained by purification of hyper immune serum or plasma obtained from

(A) Healthy horses
(B) Healthy dogs
(C) Healthy mice
(D) Healthy frogs

22. Dragendorff's reagent is prepared from

(A) Saturated tannic acid solution
(B) Potassium Iodine and bismuth nitrate
(C) Saturated picric acid solution
(D) Saturated gelatin solution

23. Numerous, paracytic stomata are present in the powder of

(A) Senna
(B) Datura
(C) Clove
(D) Nux-Vomicu

24. Which compound of ergot is used as a specific analgesic in treatment of migraine?

(A) Ergotamine maleate
(B) Ergometrine maleate
(C) Ergotamine tartrate
(D) Ergocystine

25. Which of the following is employed to prevent darkening (browning) of explant in culture?

(A) Natural complex extracts
(B) Phytohormones
(C) Antioxidants and Adsorbants
(D) Aminoacids

26. One of the following is NOT used in surface sterilization process in plant cell culture. Identify it

(A) Gamma radiation
(B) Sodium hypochlorite
(C) Hydrogen peroxide
(D) Benzalkonium chloride

27. Which of the following is a micronutrient in plant tissue culture media?

(A) Nitrogen
(B) Sulphur
(C) Magnesium
(D) Manganese

28. In plant cell culture, the differentiation into shoot and root are achieved by providing appropriate levels of

(A) Cytokinins and Gibberillins
(B) Micro and Macro nutrients
(C) Auxins and Cytokinins
(D) Auxins and Gibberillins

29. Explain in plant tissue culture refers to

(A) Tissue used for subculture from previously cultured cells
(B) Any part of the plant that is used to establish a new culture
(C) Whole seed used to initiate culture
(D) The entire plant from which culture material is sourced

30. In batch fermentation the initial concentration of sugars should be limited to

(A) 11%
(B) 12%
(C) 13%
(D) 14%

31. Biotin is required for the growth of

(A) Saccharomyces cerevisiae
(B) Candida pseudotropicalis
(C) Zymomonas mobilis
(D) Bracibacterium flavum

32. In fermentation, the inoculated media is incubated at

(A) 25°C for 24 hrs
(B) 26°C for 12 hrs
(C) 27°C for 6 hrs
(D) 28°C for 48 hrs

33. Who is introduced the somatic embryo genesis in callus, cultured on a semisolid medium?

(A) Cocking
(B) Michel
(C) Rienert
(D) Steward

34. In ———————— herbal medicinal preparations are more in demand than the pharmaceutical preparations

(A) Japan
(B) China
(C) Korea
(D) Germany

35. As per WHO guidelines on GMP for herbal medicines, the term 'Calibration' does NOT refer to the relationship between

(A) Known values of reference standard and values indicated by an instrument

(B) Known values of reference standard and values indicated by system of measuring

(C) Known values of reference standard and values represented by material measure

(D) Known values and expected values

36. In residual solvent classification which is NOT the right / correct pair as per WHO guidelines for assessing quality of herbal medicines?

(A) Class 1 – Benzene

(B) Class 1 – Hexane

(C) Class 2 – Methanol

(D) Class 3 – Ethanol

37. WHO recommended limits for lead in herbal medicines is

(A) 1 mg / kg (1 mg per kg)

(B) 2 mg / kg (2 mg per kg)

(C) 5 mg / kg (5 mg per kg)

(D) 10 mg / kg (10 mg per kg)

38. Chorismic acid is an intermediate in which of the following amino acid pairs from shikimic acid pathway?

(A) L – Histidine and L-Tyrosine

(B) L – Phenyl alanine and L - Alanine

(C) L – Tyrosine and L – Tryptophan

(D) L – Tyrosine and L - Proline

39. Microbial contamination limits in herbal materials for internal use are prescribed. Select the limit which is WRONG from the following:

(A) Echerichia coli, maximum 5 per gram

(B) Aerobic bacteria, maximum 10^7 per gram

(C) Yeasts and moulds, maximum 10^4 per gram

(D) Other enterobacteria, maximum 10^3 per gram

40. The most appropriate order (not necessity consecutive) in the biosynthesis of cholesterol is

(A) Mevalonate → DMAPP → FPP → Squalene

(B) DMAPP → IPP → GPP → Farnesyl pyrophosphate

(C) Mevalonate → IPP → FPP → Geranyl pyrophosphate

(D) DMAPP → FPP → GPP → Squalene

41. The penalties prescribed for falsely claiming to be a registered pharmacist on fish conviction is

(A) A fine upto Rs. 1,500
(B) A fine upto Rs. 1,000
(C) A fine upto Rs. 500
(D) Imprisonment upto 6 months

42. The pharmacy act was passed in the year of

(A) 1940
(B) 1945
(C) 1948
(D) 1930

43. Which of the following is <u>not governed</u> under the Drugs and Cosmetics Act?

(A) Export
(B) Import
(C) Manufacture
(D) Sale

44. The cosmetics were not under the control of original statue Drugs Act 1910 but was brought under the regulatory provision in

(A) 1964
(B) 1970
(C) 1980
(D) 2000

45. The president of pharmacy council of India is

(A) elected by the members of the council
(B) elected by the executive committee of the council
(C) nominated by the Central Government
(D) nominated by the President of India

46. Which of the following <u>is not</u> a registrable qualification as pharmacist?

(A) Diploma in pharmacy
(B) Bachelor of pharmacy
(C) Doctor of pharmacy
(D) Degree in pharmaceutical chemistry

47. The original form of Drugs and Cosmetics Act as passed in 1940 is known as

(A) Drugs Act 1940
(B) Drugs and Cosmetics Act 1940
(C) Drugs Regulation Act 1940
(D) Drugs Control Act 1940

48. In which year Drugs Rule were framed under the Drugs Act 1940?

(A) 1940
(B) 1945
(C) 1960
(D) 2000

49. Which of the following statement is correct with respect to programmes (B.Pharm.) conducted by educational institutions?

(A) It is required to be approved by Pharmacy Council of India
(B) It is required to be approved by Pharmacy Council of India and AICTE
(C) The University conducting the programme need not take approval of Pharmacy Council of India
(D) The University conducting the programme need not take approval of either Pharmacy Council of India or AICTE

50. The primary functions of the pharmacy council of India is

(A) Select pharmacists for Central Government
(B) Frame Education Regulations
(C) Issue Drug Licence
(D) Selection of Drug Inspectors for Central Government

51. Lactoflavin is otherwise called as

(A) Vitamin B_2
(B) Vitamin B_6
(C) Vitamin B_{12}
(D) Vitamin D

52. Oestrone may be reduced to Oestradist by catalytic hydrogenation or by aluminium isopropoxide.

(A) Meerwein–Ponndorf–Verley reduction
(B) Birch reduction
(C) Clemenson's reduction
(D) Schmidt rearrangement

53. Atropine is the

(A) ester
(B) alcohol
(C) aldehyde
(D) ketone

54. Unit of viscosity is

(A) Curie
(B) Poises
(C) Nanometer
(D) Ohms

55. Which of the following methods used to determine the nitrogen?

(A) Rast method
(B) Kjeldahl method
(C) Oxygen flask combustion method
(D) Cryoscopic method

56. Acetic anhydride is used in the preparation of perchloric acid to render the mixture

(A) Anhydrous
(B) Alkaline
(C) Acidic
(D) Neutral

57. The passage of pure solvent into a solution through a semi permeable membrane is known as

(A) Viscosity
(B) Surface tension
(C) Refractive index
(D) Osmosis

58. ———— reduction is carried out by heating the carbonyl compound with zinc amalgam in hydrochloric acid.

(A) Clemmensen
(B) Brich
(C) Meerwin–Ponndrof
(D) Boureault-Blanc reduction

59. Which of the following compounds is the terpene derivatives?

(A) Saponins
(B) Pyridoxine
(C) Camphor
(D) Cholesterol

60. Molecular formula of cholesterol is

(A) $C_{27}H_{46}O$ (B) $C_{27}H_{48}$

(C) $C_{18}H_{24}O_2$ (D) $C_{30}H_{50}O_3$

61. ———— is used in the treatment of obstructive Jaundice.

(A) Vit. A (B) Vit. D

(C) Vit. E (D) Vit. K

62. It is an amino alkyl ethers

(A) Mepylamine Maleate

(B) Thonzylamine hydrochloride

(C) Diptenhydramine Hydrochloride

(D) Zolamine hydrochloride

63. It is a barbiturate sedatives.

(A) Glutethimide (B) Methyprylon

(C) Quinazolone (D) Thiopental

64. Starting material for the synthesis of procaine hydrochloride is

(A) P-acetamino benzoic acid

(B) P-acetyl benzoic acid

(C) P-amino benzoic acid

(D) P-nitro benzoic acid

65. Angiotensin-II is a

(A) Carbohydrate
(B) Eicosanoids
(C) Peptide
(D) Cardenolide

66. ———— is a serious and potential adverse effect of potassium sparing diuretics used as anti hypertensives.

(A) Hypokalemia
(B) Hyperkalemia
(C) Hypocalcemia
(D) Hypercalcemia

67. An antineoplastic agent acting by folate antagonism and having pteridine ring is

(A) Trimethoprim
(B) Mercaptopurine
(C) Methotrexate
(D) Folic acid

68. Which one of the following sulphonamide drug is used for treatment of various urinary tract infection?

(A) Sulfadiazine
(B) Dapsone
(C) Sulfafurazole
(D) Sulfa acetamide

69. ———— is prepared by the dehydration of molecule of p-amino benzoic acid and 2-hydroxy triethylamine, which on treatment with hydrochloric acid.

(A) Cyclomethycaine
(B) Procaine
(C) Tetracaine
(D) Eucaine

70. ———— prepared by the interaction of (4 test-butyl-2, 6-dimethyl phenyl) acetomitrile with ethylene diamine hydrochloride at an elevated temperature with loss of a mole of ammonia.

(A) Phenylpropanolamine
(B) Xylometazoline
(C) Naphazoline
(D) Oxymetazoline

71. In UV spectroscopy, the sample cells are made up of

(A) Metal
(B) Poly styrene
(C) Stainless steel
(D) Quartz

72. Commonly used source of light in a UV spectrophotometer is

(A) Hydrogen discharge lamp
(B) Mercury arc
(C) Tungsten lamp
(D) Deuterium lamp

73. Which is the most common mobile phase for gas chromatography?

(A) Oxygen
(B) Carbon dioxide
(C) Eltane
(D) Argon

74. The reversed phase TLC plates are produced by impregnating silica plates with

(A) water
(B) chloroform
(C) ether
(D) liquid paraffin

75. In 1H-NMR (PMR) spectra, the spin-spin splitting pattern for the compounds $CHCl_2-CHCl_2$ is ———— (the first number is each choice is signal appearing after TMS this is followed by second signal)

(A) 2,3
(B) 3,5
(C) 3,4
(D) 4,3

76. Fluorescence is favoured by molecules having

(A) Flexibility
(B) Rigidity
(C) Long chain compounds
(D) Short chain compounds

77. Which analytical technique used to separate analytes based on their ability to move through a conductive medium (buffer) in response to an applied electric field?

(A) Ion exchange chromatography
(B) Electrophoresis
(C) Super critical chromatography
(D) Size exclusion chromatography

78. Which absorbance property in quantitative UV spectroscopic analysis involving 2 or more compounds is used to estimate multiple compounds?

(A) Additivity
(B) Diminicity
(C) Multiplicity
(D) Logarthmicity

79. Which is the most important information obtained from 1H-NMR spectra regarding unknown molecule?

(A) Elemental composite
(B) Carbon – hydrogen – frame work of a organic molecule
(C) Molecular weight of a compound
(D) Functional group of a molecule

80. Dopamine receptor agonists is

(A) Ropinirole
(B) Selegiline
(C) Tolcapone
(D) Amantadine

81. Selective serotonin (5-HT) re-uptake inhibitor is

(A) Sulpiride
(B) Fluoxetine
(C) Raboxetine
(D) Pen fluridol

82. The most common side effect of nitroglycerine is

(A) Diarrhoea
(B) Headache
(C) Hypertension
(D) Sedasion

83. When the action of one drug is facilitated or increased by the other drug, the phenomenon is called

(A) Synergism
(B) Antagonism
(C) Tolerance
(D) Tachyphylaxis

84. Energy is required for the transport of drug by

(A) Facilitated diffusion
(B) Pinocytosis
(C) Active transport
(D) Passive diffusion

85. Cell mediated type of allergic reaction is

(A) Type I reaction
(B) Type II reaction
(C) Type III reaction
(D) Type IV reaction

86. All the following may be reasons for poor bioavailability EXCEPT

(A) High first pass metabolism
(B) Enterohepatic cycling
(C) Poorly soluable drug
(D) Poor disintegration of the tablet

87. Pure alpha two blocker is

(A) Prazosim
(B) Indoramim
(C) Metaraminol
(D) Yohimbine

88. The drug of choice in trigemeinal neuralgia

(A) Carbamazepine
(B) Phenystoin
(C) Sodium valproate
(D) Ethosuximide

89. Mife pristone is a

(A) Anti progestin drug
(B) Progesterone derivative
(C) Synthetic estrogen
(D) Anti estrogen drug

90. The following drugs are thiomide group of antithyroid drugs EXCEPT

(A) Thiourea
(B) Propylthiouracil
(C) Carbimazole
(D) Potassium perchlorate

91. Grave's disease is associated with

(A) Excessive secretion of adrenalin
(B) Excessive secretion of insulin
(C) Excessive secretion of serotonin
(D) Excessive secretion of thyroid hormones

92. The drug which is an inhibitor of intestinal α-glucosidases is

(A) Metformin
(B) Meglitinides
(C) Miglitol
(D) Glibenclamide

93. The human Insulin analogues are the following EXCEPT

(A) Lispro insulin
(B) Aspart insulin
(C) Glargine insulin
(D) Isophane insulin

94. The drug which increases uterine motility is

(A) Oxytocin
(B) Ritodrine
(C) Atosiban
(D) Nifedipine

95. Sumatriptan is a selective

(A) 5 – $HT_{1D/1B}$ receptor agonist
(B) 5 – $HT_{2A/2B}$ receptor agonist
(C) 5 – $HT_{3B/3D}$ receptor agonist
(D) 5 – HT_{4-7} receptor agonist

96. All the following drugs are anti emetics EXCEPT

(A) Metoclo pramide
(B) Promethazine
(C) Domperidone
(D) Apomorphine

97. Which proton pump inhibitor shows maximum bioavailability?

(A) Ameprazole
(B) Panta prazole
(C) Lansoprazole
(D) Rabe Prazole

98. The cytotoxic drug which acts by inhibiting topoisomerase – 2 is

(A) Topotecan
(B) Etoposide
(C) Paclitaxel
(D) Methotrexate

99. In pharma industry, storage of water at 80°C is done to

(A) Control microbes
(B) Prevent oxidation
(C) Prevent hydrolysis
(D) Prevent allergic reation

100. A "Travel Chart" is a record of

(A) Amount of Travel by the material in a process
(B) Amount of Travel of labourers in a process
(C) Amount of Travel of machines in a process
(D) Area of a Pharmaceutical plant

101. Which one of the following is not a primary factor for setting up a Pharma industry

(A) Raw materials
(B) Market for products
(C) Water supply
(D) Labour supply

102. Which one of the following is NOT a characteristics of fitter aid

(A) Porous
(B) Chemically active
(C) Recoverable
(D) Used to increase efficiency

103. Which one of the following dryer is known as fluidised

(A) Tray dryer
(B) Fluidised bed dryer
(C) Vacuum dryer
(D) Epiac dryer

104. The following equation are related to filtration except

(A) Poiseuille's equation
(B) Darcy's equation
(C) Kozney carman equation
(D) Fourier equation

105. Which one of the following is NOT a property of an inflammable liquid?

(A) Explosive range
(B) Flash point
(C) Ignition temperature
(D) Melting point

106. Tonicity is one of the formulation parameter in which of a following dosage form

(A) Emulsions
(B) Large volume parentirals
(C) Oral Liquids
(D) Topical Preparations

107. For a drug to be therapeutically efficacious it should have

(A) some aqueous solubility
(B) lipid solubility
(C) solubility in alcohol
(D) solubility in chloroform

108. The unit for surface tension is

(A) dynes/cm
(B) dynes/cm^2
(C) Newton & Meter
(D) Dynes & cm

109. 1–12B value of O/W emulsifing agent

(A) 0 to 3
(B) 3 to 7
(C) 8 to 18
(D) 26 to 28

110. The following methods are used for evaluation of suspensions except

(A) Sedimentation method
(B) Electrokinetic method
(C) Sterilisation method
(D) Micromeritic method

111. What concentration of procaine hydrochloride will yield a solution iso-osmotic with blood plasma (Freezing of 1% procaine hydrochloride solution is –0.122°C)

(A) 6.25% W/V
(B) 5.25% W/V
(C) 4.26% W/V
(D) 3.38% W/V

112. Human Immunoglobulin is the other name of

(A) Beta-globulin
(B) Gamma-globulin
(C) Prothrombin
(D) Fibrinogen

113. Even though the dried Human plasma can be stored for many years under ideal storage conditions. What is customary expiry date?

(A) 4 years form the date of production
(B) 5 years form the date of production
(C) 6 years form the date of production
(D) 3 years from the date of production

114. Choose the best condition in which concentrated Human RBC's can be administered.

(A) Haemorrhage
(B) Chronic anaemia
(C) Diabetes Mellitus
(D) Cancer

115. For donation blood is collected from

(A) Ear vein
(B) Median cubital vein
(C) Hepatic portal vein
(D) Any artery

116. The blood donation is not acceptable from which of the following categories of people?

(A) persons with hypertension
(B) healthy individuals
(C) non-pregnant women
(D) anaemic persons

117. Name the process by which the amount of active drug in the body is reduced after absorption into the systemic circulation

(A) First pass metabolism
(B) Distribution
(C) Metabolism
(D) Elimination

118. Schick test is used to identify

(A) Diptheria
(B) Percusis
(C) Typhoid
(D) Jaundice

119. Bacterial exotoxins are

(A) Protein in nature
(B) Carbohydrate in nature
(C) Lipids in nature
(D) Lipo polysaccharides in nature

120. In the evaluation of disinfectants by Ridel Walker test, the specified strain used is

(A) Streptomyces griseus
(B) Salmonella typhi
(C) Streptomyces aureus
(D) Streptomyces venezuelae

121. Toxoids belong to the class of immunological products which produce

(A) naturally acquired active immunity
(B) artificially stimulated active immunity
(C) naturally acquired passive immunity
(D) artificially produced passive immunity

122. Which of the following is a combined vaccine?

(A) DPT vaccine
(B) Hib vaccine
(C) Var vaccine
(D) Hepatitis B vaccine

123. Drug which gives orange colour when sprinkling on nitric acid is

(A) Codeine
(B) Papaverine
(C) Morphine
(D) Tropane alkaloid test

124. Fruit which are derived from the plants umbelliferrae are all the type

(A) Cremo carp
(B) Pericarp
(C) Epicarp
(D) Mesocarp

125. Which of the following generally do NOT require altitudes of 1000 meter or greater for cultivation?

(A) Tea
(B) Cinchona
(C) Camphor
(D) Clove

126. A soil is considered to be Poor when the organic matter just falls below

(A) 0.1%
(B) 0.5%
(C) 2.0%
(D) 5.0%

127. Which of the following is an adulterant of Senna?

(A) cassia acutifolia
(B) cassia angustifolia
(C) cassia obovata
(D) cassia marilandica

128. Which of the following is arranged in the increasing order of silica particle size?

(A) Sand, Gravel, Silt, Clay
(B) Clay, Sand, Silt, Gravel
(C) Clay, Silt, Sand, Gravel
(D) Silt, Clay, Sand, Gravel

129. Which plant prefers light (sandy) and medium (loamy) and requires well – drained soil?

(A) clove
(B) coffee
(C) tea
(D) dioscorea

130. _____ is the technique to produce entire plant from single individual by a sexual reproduction

(A) Biotransformation
(B) Immobilization
(C) Somaclonal variation
(D) Clonal propagation

131. _____ cultures are initiated from an explant of seedling or other plant tissue sources.

(A) shoot tip
(B) sub
(C) callus
(D) suspension

132. At present, chrysanthemum rosenm cultivation is carried out mainly in

(A) Japan
(B) Brazil
(C) Kenya
(D) Yugoslavia

133. The seedlings and young plants of Mentha pipertia, treated with NAA, gave an increased yield _____ of oil

(A) 20-40%
(B) 30-50%
(C) 10-20%
(D) 20-30%

134. When a desired rate of growth is maintained by adjusting the levels of nutrients by inflow of fresh medium, it is known as

(A) Chemostat
(B) Turbidostat
(C) Nutristat
(D) Hydrostat

135. Single cells can also be obtained from fresh plant organ

(A) Root
(B) Leaf
(C) Stem
(D) Seed

136. In surface sterilization of explant the tissue is washed with sterile water to remove

(A) Calcium hypochlorite
(B) Sodium hypochlorite
(C) Hydrogen peroxide
(D) Silver nitrate

137. Which is the 10 carbon units containing isoprenoid compound?

(A) Farnesyl pyrophosphate
(B) Geranyl pyrophosphate
(C) Isopentanyl pyrophosphate
(D) Geranyl pyrophosphate

138. Flavonoids are synthesized from which metabolic pathway?

(A) TCA cycle
(B) Mevalonic acid pathway
(C) Shikimic acid pathway
(D) Glycolysis

139. Which enzyme is involved in the conversion of Glutamic acid to α -ketoglutarate?

(A) Dehydrogenase
(B) Amino transferase
(C) Decarboxylase
(D) Carboxyl transferase

140. The leaves of digitalis lanata have ———— times greater activity than digitalis purpurea.

(A) 3-5
(B) 3-6
(C) 3-4
(D) 3-7

141. Indole Acetic Acid (IAA) is a ———— that occurs naturally in plants

(A) Cytokinin
(B) Gibberellin
(C) Growth Inhibitor
(D) Auxin

142. Keller – Killani test for mainly performer for

(A) Digitoxose
(B) Digitalose
(C) Digitoxin
(D) Ditoxigenin

143. A volatile oil used as mosquito repellent is

(A) Pyrethrum oil
(B) Lemon grass oil
(C) Sandal wood oil
(D) Rosemary oil

144. The main functions of central drugs laboratory is

(A) To analyse drugs and cosmetics
(B) To frame education regulations
(C) To Advise the central government
(D) To Advice the state government

145. The license issued for while sale of drugs other than those specified in schedule C, C_1 and X in form

(A) 20 A
(B) 20 B
(C) 21 A
(D) 21 B

146. Schedule 'P' of the drugs and cosmetic rules deals with

(A) Standard for cosmetics
(B) Life periods of drugs
(C) List of prescription drugs
(D) Standards for disinfectant fluids

147. The duration of practical training for diploma in pharmacy is specified as

(A) 100 hours
(B) 200 hours
(C) 300 hours
(D) 500 hours

148. The clinical trial details are given in

(A) Schedule A
(B) Schedule M
(C) Schedule K
(D) Schedule Y

149. Which of the following laboratory/organization in the Apex Laboratory (the function of Central Drugs Laboratory) for testing of oral polio vaccine?

(A) Pasteur institute of India, Cooner
(B) Veterinary Research Institute, Izatnagar
(C) Central drugs laboratory
(D) Central drugs testing laboratory

150. The minimum space requirement for retail sale licence of medicines including the medicine specified in schedule C and C1 is

(A) 10 sq. meter
(B) 15 sq. meter
(C) 20 sq. meter
(D) 25 sq. meter

151. Which of the following officers is <u>not designated</u> as central licence approving authority?

(A) Drugs Controller (India)
(B) Joint Drugs Controller (India)
(C) Deputy Drugs Controller (India)
(D) Assistant Drugs Controller (India)

152. Which of the following amendment brought Ayurvedic (including Siddha) and unani drugs under the control of Drugs and Cosmetics Act and Rules?

(A) Drugs rule (Amendment) Act 1945
(B) Drugs and Cosmetics (Amendment) Act 1964
(C) Drugs and Cosmetics (Amendment) Act 1972
(D) Drugs (Amendment) Act 1962

153. Folic acid is ———— derivative.

(A) Pyridine
(B) Pteridine
(C) Piperidine
(D) Thiazole

154. Estradiol is a

(A) Male sex hormone
(B) Female sex hormone
(C) Pituitary hormone
(D) Parathyroid hormone

155. Masking and demasking agents are used in ———— titrations.

(A) Acid-base
(B) Non-aqueous
(C) Complexometric
(D) Redox

156. Substance exists in more than one crystalline form are known as

(A) Isomorphous
(B) Polymorphism
(C) Enantiomers
(D) Cis-trans isomers

157. ———— consist in the addition of excess of a standard volumetric solution to a weighed amount of sample and determination of the excess (standard volumetric solution) not required by the sample.

(A) Back titration
(B) Blank titration
(C) Direct titration
(D) Precipitation titration

158. ———— is the compound in which a sugar residue is linked from C – 1 through Oxygen, Nitrogen or Sulphur moiety.

(A) Carbohydrate
(B) Proteins
(C) Fats
(D) Glycoside

159. Atropine alkaloid is an / a

(A) Acid
(B) Alcohol
(C) Ester
(D) Ketone

160. Sodium boro hydride, $NaBH_4$, selectively reduces

(A) Aldehydes and Ketones
(B) Carboxylic acids
(C) Alcohols
(D) Esters

161. ———— have in common a per hydro–1, 2-cyclopentano phenanthrene nucleus.

(A) Steroids
(B) Alkaloids
(C) Amino acids
(D) Proteins

162. Volatile oil belongs to the category of

(A) Steroids
(B) Terpenes
(C) Alkaloids
(D) Fixed oils

163. Terpenes have the molecular formula of

(A) $C_{10}H_{16}$
(B) $C_{15}H_{24}$
(C) $C_{20}H_{32}$
(D) $C_{30}H_{50}$

164. Antihistaminic drug, diphenhydramine comes under which classification?

(A) Ethylene diamines
(B) Thiophene
(C) Cyclic basic chain
(D) Amino alkyl ethers

165. Which of the following antineoplastic agents is comes under alkylating agents?

(A) Mercaptopurine
(B) Methotrexate
(C) Flurouracil
(D) Chlorambucil

166. Urea and Diethyl malonic ester are starting material for the synthesis of

(A) Procaine
(B) Barbitone
(C) Chlorpheniramine
(D) Paracetamol

167. Pyrimidine analog drug is used in cancer therapy.

(A) Vinblastine
(B) Thioguanine
(C) 5-Fluorouracil
(D) Metho trexate

168. The site of action of amphotericin-B in fungus

(A) Peptidoglycan portion of cell membrane
(B) Cell membrane of fungus binding to Ergosterol
(C) LAM portion of cell wall
(D) Demethylase enzyme

169. Penicillin V is

(A) Ampicillin
(B) Amoxycillin
(C) Phenoxy methyl penicillin
(D) Benzyl penicillin

170. ———— is synthesized by Grignard reaction of phenyl-2-pyridyl ketone with phenyl magnesium bromide followed by catalytic reduction.

(A) Pipradrol
(B) Captodiame
(C) Hydroxyzine
(D) Benactyzine

171. ———— is prepared by treating acetaldehyde with sulphur dioxide, hydrochloric acid or zinc chloride.

(A) Nitrazepam
(B) Paraldehyde
(C) Methohexital sodium
(D) Chloral hydrate

172. Interaction of aniline and acetic anhydride in the presence of sodium acetate yields.

(A) Phenacetin
(B) Acetanilide
(C) Aspirin
(D) Paracetamol

173. Type of sample required for analysing with gas chromatography

(A) thermally stable
(B) volatile without decomposition
(C) non volatile substances
(D) non volatile acids

174. Most commonly used adsorbent in column chromatography is

(A) Activated magnesia
(B) Activated charcoal
(C) Fuller's earh
(D) Silica gel

175. In standardisation of disoclium edetate ———————mixture is used as indicator

(A) Mordant black II and solochrome black

(B) Mordant black II and methanol

(C) Mordant black II and sodium chloride

(D) Pyridine and methanol

176. Thermal detectors are commonly used detector in ———————— instruments

(A) NMR (B) MARS

(C) IR (D) UV

177. Which of these equations in Ohm's law?

(A) $A = abc$ (B) $\Delta E = E_G - E_1$

(C) $A = \epsilon bc$ (D) $I = \frac{V}{R}$

178. R_f values in paper chromatography are usually

(A) Below 1 (B) Above 2

(C) 5 (D) Above 5

179. The standard reference substance that is used universally for NMR spectroscopy in

(A) Tri methyl silane

(B) Tetra methyl methane

(C) Hexa methyl silane

(D) Tetra methyl silane

180. The half life of Digoxin is

(A) 30 min
(B) 4 hours
(C) 40 hours
(D) 7 days

181. Quinidine acts as a

(A) Na^+ channel opener
(B) Na^+ Channel blocker
(C) Ca^{+2} channel blocker
(D) Ca^{+2} channel opener

182. High ceiling diuretic is

(A) Indapamide
(B) Clopamide
(C) Acetazolamide
(D) Torasemide

183. Example for tyrosine kinase receptor is

(A) Insulin receptor
(B) $GABA_A$ receptor
(C) Acetylcholine receptor
(D) Steroid receptor

184. The capacity of a drug to cause foetal abnormality is known as

(A) Carcinogenicity
(B) Teratogenicity
(C) Mutagenicity
(D) Photosensitivity

185. The predominant muscarinic receptor which mediates vagal bradycardia is

(A) M_1 (B) M_2

(C) M_3 (D) M_5

186. Pirenzepine produces its action by blocking which type of receptors

(A) N_M (B) N_N

(C) M_1 (D) M_2

187. Assertion (A) : β_2 agonists are used in the treatment of hyperkalemic familial periodic paralysis.

Reason (R) : β_2 agonists enhance K^+ uptake into muscles

(A) Both (A) and (R) are true and (R) is the correct reason for (A)

(B) Both (A) and (R) are true but (R) is not the correct reason for (A)

(C) (A) is true but (R) is false

(D) (A) is false but (R) is true

188. Consider the following statements:

Assertion (A) : Clozapine is an antipsychotic drug which shows few extra pyramidal symptoms

Reason (R) : Clozapine has a potent $5HT_2$ antagonistic effect

(A) Both (A) and (R) are true and (R) is the correct explanation for (A)

(B) Both (A) and (R) are true but (R) is not the correct explanation for (A)

(C) (A) is true but (R) is false

(D) (R) is true but (A) is false

189. Assertion (A) : Painful procedures can be carried out under the influence of thiopentone sodium anaeslacisia

Reason (R) : Thiopentone sodium is a poor analgesic

(A) Both (A) and (R) are true and (R) is the correct reason for (A)

(B) Both (A) and (R) are true but (R) is not the correct reason for (A)

(C) (A) is true but (R) is false

(D) (R) is true but (A) is false

190. The contra indications to the use of morphine are the following EXCEPT

(A) Respiratory insufficiency (B) Acute left ventricular failure

(C) Head injury (D) Undiagnosed acute abdominal pain

191. The amino glycoside which is too toxic for systemic use and hence used topically on the skin and eye is

(A) Framycetin
(B) Amikacin
(C) Sisomicin
(D) Tobramycin

192. The fourth generation cephalosporin is

(A) Cefactor
(B) Cefuroxime
(C) Cefoxitin
(D) Cefepime

193. Which bacterial enzyme is inhibited by Fluro quinolone derivative?

(A) DNA gyrase
(B) Folate synthase
(C) Topoisomerase II
(D) β lactamase

194. The following are luminal amoebicide drugs EXCEPT

(A) Diloxamide furoate
(B) Iodoquinol
(C) Tetracycline
(D) Emetine

195. The WHO regimen for treatment of Lepromatous leprosy is

(A) Dapsone + Clofazimine + Rifampicin
(B) Dapsone + Rifampicin + Minocyclin
(C) Dapsone + Ofloxacin + Clofazimine
(D) Dapsone + Ofloxacin + Clarithromycin

196. Peptic ulcer can be treated with

(A) H_1 antagonists
(B) H_2 antagonists
(C) D_2 antagonist
(D) 5HT antagonist

197. Sodium Pico sulfate is a

(A) Stimulant laxative
(B) Osmotic laxative
(C) Bulk laxative
(D) Emollient laxative

198. β –lactamase enzyme inactivates

(A) Sulphonamides
(B) Pencillins
(C) Tetracycline
(D) Streptomycin

199. Dapsone is used to treat

(A) Leprosy
(B) Malaria
(C) Typhoid
(D) Cancer

200. Mercury poisoning can be treated with

(A) Desferrioxamine
(B) Trientine
(C) Deferiprone
(D) Dimercaprol

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