

DI EXAM 2015

1. Zero order kinetics is seen in all except:

- (a) Salicylates
- (b) Barbiturates
- (c) Phenytoin
- (d) Ethanol

2. Which one of the following is not a prodrug?

- (a) Chloral hydrate
- (b) Diazepam
- (c) Enalapril
- (d) Oxcarbazepine

3. Which one of the following drugs does not cross the placental barrier?

- (a) Morphine
- (b) Lithium
- (c) Warfarin
- (d) Heparin

4. 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

5. Which one among the following drugs can be given safely during pregnancy?

- (a) Tetracycline
- (b) Chloroquine
- (c) Thalidomide
- (d) Primaquine

6. Lignocaine is used in the treatment of :

- (a) Atrial Flutter
- (b) Atrial Fibrillation
- (c) PSVT
- (d) Ventricular tachycardia

7. Which one among the following drugs is used in AV block?

- (a) Isoprenaline
- (b) Propranolol
- (c) Dopamine
- (d) Disopyramide

8. Mineralocorticoids cause:

- (a) Gluconeogenesis
- (b) Glycogen synthesis
- (c) Lipolysis
- (d) Sodium reabsorption

9. In UV spectrophotometer, the light source is:

- (a) Tungsten lamp
- (b) Sodium lamp
- (c) Deuterium lamp
- (d) None of these

10. The principle of infrared spectra is based upon:

- (a) Electronic excitation
- (b) Resonance
- (c) Dissociation
- (d) Molecular vibrations

11. Williamson Synthesis is used for the preparation of:

- (a) Aldehydes
- (b) Alcohols
- (c) Ethers
- (d) Amides

12. Ketoconazole structure contains :

- (a) Imidazole ring
- (b) Triazole ring
- (c) Tetrazole ring
- (d) Thiazole ring

13. Vitamin containing steroidal moiety is:

- (a) Vitamin D
- (b) Vitamin A
- (c) Vitamin E
- (d) Vitamin B12

14. Dragendorff's reagent is employed for the identification of :

- (a) Carbohydrates
- (b) Alkaloids
- (c) Flavonoids
- (d) Proteins

15. In which one among the following is Pteridine ring system present?

- (a) Ascorbic acid
- (b) Thiamine

(c) Pyridoxine

(d) Folic acid

16. Aminophylline is a combination of:

(a) Theophylline and dimethylamine

(b) Caffeine and theophylline

(c) Theophylline and ethylenediamine

(d) Caffeine and ethylenediamine

17. Purine ring system is a fusion of:

(a) Pyridine and imidazole

(b) Pyrimidine and imidazole

(c) Piperidine and pyrazole

(d) Piperidine and imidazole

18. Furosemide contains the following heterocycle:

(a) Furan

(b) Thiophene

(c) Pyrrole

(d) Imidazole

19. Term of every patent in India (under Indian Patent Act) from the date of filing is:

(a) 10 years

(b) 14 years

(c) 20 years

(d) 24 years

20. Raloxifene is indicated for use in:

(a) Rickets

(b) Hypoparathyroidism

(c) Postmenopausal osteoporosis

(d) Intestinal osteodystrophy

21. Immunoglobulin gamma (Ig G) is a:

(a) Deoxyribonucleic acid

(b) Ribonucleic acid

(c) Protein

(d) Lipid

22. Schedule 'X' of the Drugs and Cosmetics Act and Rules deals with:

(a) List of drugs which are habit forming and likely to be misused

(b) Standards for ophthalmic preparations

(c) Requirements for the Good Manufacturing Practices

(d) Life period of drugs

23. Creatinine clearance is used as a measurement of:

(a) Renal excretion rate

(b) Active renal secretion

(c) Glomerular filtration rate

(d) Tubular reabsorption

24. Which one of the following is an enteric polymer?

(a) Hydroxypropyl cellulose phthalate

(b) Sodium carboxymethyl cellulose

(c) Ethyl cellulose

(d) Starch

25. Ingredient that may be used as a suspending agent is:

(a) Sodium lauryl sulphate

(b) Lactose

(c) Methyl cellulose

(d) Cellulose acetate phthalate

26. Mifepristone is used in the management of:

(a) Breast carcinoma

(b) Prostatic carcinoma

(c) Medical termination of pregnancy

(d) Dysfunctional uterine bleeding

27. Which one of the following drugs is an antagonist at NK1 receptors and is used to prevent or reduce chemotherapy-induced nausea and vomiting?

(a) Ondansetron

(b) Aprepitant

(c) Bosentan

(d) Metoclopramide

28. Aldosterone is secreted by:

(a) Adrenal Medulla

(b) Zona glomerulosa of adrenal cortex

(c) Zona fasciculata of adrenal cortex

(d) Zona reticularis of adrenal cortex

29. Biguanides act by the following mechanisms except:

(a) Increased glycolysis

(b) Increased insulin release from pancreas

(c) Decreased gluconeogenesis

(d) Increased insulin binding to its receptors

30. Long acting insulin is:

(a) Glargine

(b) Lispro

- (c) Aspart
(d) Glulisine
31. Thyroxine is synthesized from:
(a) Cysteine
(b) Tyrosine
(c) Arginine
(d) Alanine
32. Misoprostol is a :
(a) Prostaglandin E1 analogue
(b) Prostaglandin E2 analogue
(c) Anti progestin
(d) Prostaglandin antagonist
33. CPCSEA deals with:
(a) Good Laboratory Practice
(b) Good Clinical Practice
(c) Good Manufacturing Practice
(d) Ethical issues of use of laboratory animals
34. Serendipity is:
(a) Serious adverse events
(b) Toxicity
(c) Observation by chance
(d) Anaphylactic shock
35. Once a week administration of which one of the following drugs has prophylactic activity against bacteraemia caused by Mycobacterium avium complex in AIDS patients ?
(a) Clarithromycin
(b) Azithromycin
(c) Rifabutin
(d) Isoniazid
36. Clinical trials for the import and manufacture of new drugs are to be carried out as per:
(a) Schedule C and C1
(b) UGC guidelines
(c) Schedule Y
37. Phase IV of clinical trial is performed:
(a) Before drug approval
(b) After drug approval
(c) During pharmacological screening
(d) During pharmacokinetic study
38. Good Laboratory Practice (GLP) works on the basis of:
(a) WHO guidelines
(b) OECD guidelines
(c) Ministry of Chemicals and Fertilizers, Government of India guidelines
(d) ISO guidelines
39. As per GLP certification, the responsibility of archiving the data and samples in a Clinical Trial is with:
(a) Test Facility Management
(b) Study Director
(c) Principal investigator
(d) QA department
40. Which one of the following drugs is useful in the prophylaxis of migraine?
(a) Ergotamine
(b) Sumatriptan
(c) Propranolol
(d) Domperidone
41. Which one of the following drugs is not primarily eliminated through kidney?
(a) Cefotaxime
(b) Cefoperazone
(c) Gentamicin
(d) Benzyl penicillin
42. Which one of the following antihistaminics does not prolong QTc interval?
(a) Terfenadine
(b) Mizolastine
(c) Astemizole
43. Which one of the following drugs is used to treat bradycardia or heart block during anaesthesia?
(a) Atropine
(b) Ipratropium
(c) Propantheline
(d) Glycopyrrolate
44. Which one of the following antibacterial drugs will remain in body for longest duration after single dose administration?
(a) Benzathine penicillin
(b) Ethambutol

- (c) Azithromycin
- (d) Kanamycin

45. Which one of the following must be given to a pregnant lady to prevent 'spina bifida'?

- (a) Vitamin E
- (b) Folic acid
- (c) Thiamine
- (d) Iron

46. For the eradication of P.vivax malaria, which one of the following drugs is used?

- (a) Mefloquine
- (b) Sulphadoxine
- (c) Primaquine
- (d) Pyrimethamine

47. Morphine administration produces all of the following effects except:

- (a) Diarrhoea
- (b) Miosis
- (c) Bradycardia
- (d) Respiratory depression

48. The drug of choice for filariasis is:

- (a) Piperazine
- (b) Diethylcarbamazine
- (c) Albendazole
- (d) Ivermectin

49. Parenteral products with an osmotic pressure less than that of blood or 0.9% sodium chloride are referred to as:

- (a) Isotonic solutions
- (b) Hypertonic solutions
- (c) Hypotonic solutions
- (d) Neutral solutions

50. Micro dosing studies are done before the start of which one of the following phases of a Clinical Trial ?

- (a) Phase I
- (b) Phase II
- (c) Phase III
- (d) Phase IV

51. All of the following are serious adverse events (SAEs) in Clinical Trials except:

- (a) Death
- (b) Prolongation of hospitalization

- (c) Permanent disability
- (d) ECG changes

52. Sulphasalazine is a prodrug that is activated in the intestine by bacterial enzymes. The enzyme responsible is :

- (a) Methyl transferase
- (b) Acetyl transferase
- (c) Azoreductase
- (d) Pseudo cholinesterase

53. The process of sterilization can be best defined as:

- (a) Total destruction or elimination of all living microorganisms
- (b) Elimination of pyrogens only
- (c) Elimination of pathogenic microorganisms
- (d) Elimination of pyrogens and carbon dioxide

54. Which one of the following best describes a cofactor that is firmly bound to an apoenzyme?

- (a) Holoenzyme
- (b) Coenzyme
- (c) Prosthetic group
- (d) None of these

55. Schedule 'S' of the Drugs and Cosmetics Act, 1940 applies to:

- (a) Requirement of factory premises
- (b) List of poisons
- (c) Life period of drugs
- (d) Standard for cosmetics

56. All fungi are:

- (a) Chemoheterotrophs
- (b) Chemoautotrophs
- (c) Photoheterotrophs
- (d) Photoautotrophs

57. Which one of the following is an anaerobic media?

- (a) Soyabean casein digest media
- (b) Fluid thioglycollate media
- (c) Eosin-methylene blue agar media
- (d) Mannitol salt agar media

58. Eudragits are:

- (a) Phthalate polymers
- (b) Cellulose polymers
- (c) Acrylate polymers
- (d) Amide polymers

59. USP Dissolution Apparatus-I is:

- (a) Paddle type
- (b) Reciprocating cylinder
- (c) Basket type
- (d) Paddle over disc

60. Dew point is defined as the temperature to which a given mixture of:

- (a) Air and water must be cooled to become unsaturated
- (b) Air and water vapour must be heated to become saturated
- (c) Air and water must be heated to become unsaturated
- (d) Air and water vapour must be cooled to become saturated

61. All of the following statements are true about Sitagliptin except:

- (a) It is an inhibitor of dipeptidyl peptidase -4 (DPP-4), the enzyme that degrades incretin.
- (b) It increases circulating levels of GLP-I and GIP.
- (c) It has short half life and low oral bioavailability.
- (d) It decreases postprandial glucose excursions by increasing glucose mediated insulin secretion and decreasing glucagon levels.

62. Ball mill works on the principle of :

- (a) Impact and attrition
- (b) Impact only
- (c) Shearing and friction
- (d) Crushing and friction

63. The mixer used for the purpose of mixing solid powder in ointment base is:

- (a) Turbine
- (b) Triple roller mill
- (c) Planetary
- (d) Agitator

64. Darcy's law is related to:

- (a) Sedimentation
- (b) Filtration
- (c) Centrifugation
- (d) Viscosity

65. Distillation of two immiscible liquids is done by:

- (a) Fractional distillation

(b) Steam distillation

- (c) Destructive distillation
- (d) Distillation under reduced pressure

66. For a drug that obeys first order kinetics and fits into one-compartment model of elimination, which one of the following is not correct?

- (a) Its rate of elimination is proportional to its plasma concentration
- (b) After stopping the I.V. infusion of the drug, the plasma concentration declines exponentially
- (c) The composition of drug products excreted is independent of dose
- (d) The elimination half life is proportional to the dose administered

67. Which one of the following drugs is not used in the treatment of chronic alcoholism?

- (a) Naltrexone
- (b) Acamprosate
- (c) Disulfiram
- (d) Fomepizole

68. Which one of the following drugs does not produce its effect through action on GABA- benzodiazepine receptor complex?

- (a) Phenobarbitone
- (b) Zopiclone
- (c) Chlordiazepoxide
- (d) Clozapine

69. The Clinical Trial Registry in India is maintained by:

- (a) World Health Organization, Delhi Office
- (b) Indian Council of Medical Research, New Delhi
- (c) Institute of Clinical Research, New Delhi
- (d) Central Drugs Standard Control Organization, New Delhi

70. The licence to import drug for the purpose of examination and test of analysis is issued on which one of the following Forms?

- (a) Form 11
- (b) Form 20
- (c) Form 21
- (d) Form 29

71. The Drugs and Magic Remedies (Objectionable Advertisements) Act 1954 applies to all except:

- (a) Dadra & Nagar Haveli
(b) Jammu & Kashmir
(c) Andaman & Nicobar Islands
(d) Puducherry
72. Drying of blood products and enzyme based preparation is carried out by:
(a) Vacuum drying
(b) Fluidized bed drying
(c) Lyophilization
(d) Tunnel drying
73. The mode of action of ethylene oxide as a sterilization agent is by:
(a) Oxidation
(b) Reduction
(c) Alkylation
(d) Protein precipitation
74. The term used to describe unequal distribution of colour on a tablet is:
(a) Chipping
(b) Mottling
(c) Double impression
(d) Lamination
75. Which one of the following functional groups is most susceptible to hydrolysis?
(a) R-CO-R
(b) R-COOR
(c) R-O-R
(d) R-COOH
76. Dienostrol is synthesized from:
(a) 4-amino acetophenone
(b) 4-chloro butyrophenone
(c) 4-bromo propiophenone
(d) 4-hydroxy propiophenone
77. Any enzyme that cleaves deoxyribonucleic acid (DNA) at a specific site is called:
(a) Restriction endonuclease
(b) Restriction ribonuclease
(c) Interleukin
(d) Trypsin
78. Aspirin ($pK_a = 3.49$) will be most soluble at pH
(a) 1.0
(b) 2.0
(c) 6.0
(d) 3.5
79. The drug pioglitazone was banned by Government of India due to:
(a) Increased risk of bladder cancer only
(b) Risk of heart failure and increased risk of bladder cancer
(c) Risk of heart failure only
(d) Risk of decrease in mobility
80. Which of the following is used in nuclear medicine imaging?
(a) Alpha radiations
(b) Gamma radiations
(c) Beta radiations
(d) None of these
81. Schedule 'T' of the Drugs and Cosmetics Act prescribes GMP specifications for manufacture of :
(a) Ayurvedic, Siddha and Unani medicines
(b) Ophthalmic preparations
(c) Parenteral preparations
(d) Allopathic medicines
82. Drugs (Price Control) Order 1995 and related orders from time to time are enforced by:
(a) NPPA
(b) CSIR
(c) DBT
(d) ICMR
83. The characteristics of non-linear pharmacokinetics include:
(a) Area under the curve is proportional to the dose
(b) Elimination half-life remains constant
(c) Area under the curve is not proportional to the dose
(d) Amount of drug excreted remains constant
84. Inulin is used as marker for measurement of :
(a) Glomerular filtration rate
(b) Active renal secretion
(c) Active renal reabsorption
(d) Passive renal absorption
85. Which one of the following enzymes is most likely to be deficient in "Gray Baby Syndrome"?
(a) Azoreductase
(b) Methyl transferase

- (c) Glucuronyl transferase
(d) Acetyl transferase
86. The absorption rate constant is calculated by:
(a) Rate of excretion method
(b) Wagner Nelson method
(c) Michaelis Menten equation
(d) Sigma Minus plot
87. The loading dose of a drug is determined on the basis of:
(a) Area under the plasma drug concentration versus time curve
(b) Total body clearance
(c) Fraction of drug excreted unchanged in the urine
(d) Apparent volume of distribution and desired drug concentration in plasma
88. How long after the drug administration is 75% of the drug eliminated from the patient's body if the elimination half life is 4 hours?
(a) 12 hours
(b) 8 hours
(c) 16 hours
(d) 10 hours
89. An antibiotic was given at a dose of 10 mg/kg by a single intravenous bolus injection to a 62 year old woman who weighed 80 kg. The antibiotic followed the pharmacokinetics of a one- compartment model and has an elimination half-life of 4 hours. The apparent volume of distribution is 0.50 L/kg. What is the initial plasma drug concentration in the woman?
(a) 1600 mg/L
(b) 20 mg/L
(c) 0.2 mg/L
(d) 160 mg/L
90. A drug is 55% bound to plasma proteins. The concentration of drug in a patient's body after 10 hours was found to be 20 mg/L. The apparent volume of distribution was found to be 0.60 kg/L for an 80 kg patient. What is the total amount of drug present in the patient's body after 10 hours?
(a) 120 mg
(b) 960 mg
(c) 1.5 mg
(d) 20 mg
91. Which one of the following is a solid dosage form excipient which can play the role of a diluent, a disintegrant, a glidant, a lubricant and a pore/channel former?
(a) Lactose
(b) Microcrystalline cellulose
(c) Ethyl cellulose
(d) Eudragit RL 100
92. Which one of the following techniques is used to determine glass transition temperature?
(a) X-ray diffractometry
(b) Raman spectroscopy
(c) Differential scanning calorimetry
(d) Thermogravimetric analysis
93. For increased production of penicillin by fermentation, the pH is maintained between:
(a) 1 to 4
(b) 4.8 to 5.2
(c) 6.8 to 7.4
(d) 6 to 7
94. Newer insulins are:
(a) Acidic
(b) Neutral
(c) Alkaline
(d) Monomers
95. Which one of the following classes exists inside a certified horizontal or vertical laminar air flow hood?
(a) Class 1000
(b) Class 100
(c) Class 10
(d) Class 1
96. Which one of the following treatments should be instituted immediately in a child presenting to medical emergency with severe acute lead poisoning with signs and symptoms of encephalopathy?
(a) Succimer
(b) Penicillamine
(c) Deferoxamine
(d) EDTA
97. MRT is defined as the ratio of:
(a) AUC to AUMC
(b) AUMC to AUC

- (c) AUC to Vd
- (d) AUMC to Vd

98. The proteins which are ATP dependent pumps and facilitate the efflux of drug molecules from the cell are known as:

- (a) Cytochrome P 450 3 A4
- (b) P-glycoproteins
- (c) Cytochrome P 450
- (d) Carrier for active transport

99. Ion-exchange chromatography is used for the separation of:

- (a) Aldehydes
- (b) Aminoacids
- (c) Fatty acids
- (d) Hydrocarbons

100. Which one of the following techniques is used to mill camphor?

- (a) Attrition
- (b) Levigation
- (c) Trituration
- (d) Pulverization by intervention

101. Blood and blood products are governed by which Schedule of the Drug and Cosmetics Act, 1940?

- (a) Schedule B
- (b) Schedule C and C1
- (c) Schedule G
- (d) Schedule W

102. Live attenuated vaccines are better immunizing agents because:

- (a) Live attenuated vaccines require multiple doses
- (b) Live attenuated vaccines can be given to immunocompromised persons
- (c) Replication of organism in a live attenuated vaccine increases the stimulation of the immune system and a lower dose is often required.
- (d) All of these

103. The Chairman of Drug Technical Advisory Board is:

- (a) Drug Controller General of India, Government of India
- (b) Director General, Indian Council of Medical Research, Government of India
- (c) Director General of Health Services, Government of

India

(d) President, Pharmacy Council of India, Government of India

104. In quantitative TLC, radioactive material can be studied by:

- (a) Gravimeter
- (b) Geiger counter
- (c) Densitometer
- (d) Visual comparison

105. Which one of the following is not a correct statement?

- (a) DNA polymerase is an enzyme that cleaves DNA at sequence-specific site.
- (b) Recombinant DNA is a hybrid DNA that is formed when pieces of DNA from different sources are joined
- (c) Interferon is a glycoprotein produced by animal cells in response to viral infection.
- (d) Hybridoma is a hybrid cell produced by the fusion of a myeloma cell and a specific antibody produced B-lymphocyte

106. Which one of the following drugs has low first pass metabolism?

- (a) Verapamil
- (b) Morphine
- (c) Propranolol
- (d) Isosorbide mononitrate

107. When the investigators and relevant governing bodies (such as Institutional Review Board) approve a protocol deviation before initiating the study, it is called:

- (a) Minor protocol deviation
- (b) Major protocol deviation
- (c) Minor protocol violation
- (d) Protocol exception

108. All of the following are true about active transport except:

- (a) Active transport utilises energy.
- (b) Active transport is a carrier mediated transport process.
- (c) The carrier system is not saturated at high drug concentration.
- (d) In active transport, drug molecules move against a concentration gradient.

109. In case of clinical trial injury, who decides the quantum of compensation?
(a) Sponsor
(b) Investigator
(c) Licensing Authority
(d) Medical Superintendent of the hospital where injury occurs

110. Pharmacovigilance Programme of India (PvPI) is under the control of:
(a) Ministry of Chemicals and Fertilizers, Government of India
(b) Ministry of Health and Family Welfare, Government of India
(c) Ministry of Law and Justice, Government of India
(d) Central Bureau of Investigation, Government of India

111. All are viral vaccines except:
(a) Pertussis
(b) Mumps
(c) Poliomyelitis
(d) Rabies

112. Centchroman belongs to which category of drugs?
(a) Oral anticoagulant
(b) Oral contraceptive
(c) Oral antidiabetic
(d) Oral haematinic

113. Which one of the following drugs can be used in a patient who develops severe thrombocytopenia in response to treatment with unfractionated heparin and still requires parenteral anticoagulation?
(a) Vitamin K1
(b) Abciximab
(c) Cilostazol
(d) Lepirudin

114. Heterocyclic rings present in pilocarpine are:
(a) Imidazole and dihydrofuran
(b) Imidazole and quinoline
(c) Imidazole and thiazole
(d) Quinoline and phenanthrene

115. Precursor for the biosynthesis of Tropane group of alkaloids is:
(a) Leucine
(b) Lysine

(c) Tyrosine
(d) Ornithine

116. All the following drugs induce cytochrome P 450 except:
(a) Ketoconazole
(b) Phenobarbitone
(c) Rifampicin
(d) Alcohol

117. Febuxostat is:
(a) Anticoagulant agent
(b) Antiplatelet agent
(c) Xanthine oxidase inhibitor
(d) Contraceptive pill

118. Which one of the following drugs is not used in the treatment of MAC complex?
(a) Roxithromycin
(b) Rifabutin
(c) Ethambutol
(d) INH

119. According to Kozeny Carmen equation, a 10% change in porosity can produce:
(a) Three fold change in rate of flow
(b) Two fold change in rate of flow
(c) Ten fold change in rate of flow
(d) Hundred fold change in rate of flow

120. A drug of low water solubility when given orally is absorbed up to 90% of the administered dose. The drug belongs to which class according to BCS classification?
(a) Class III
(b) Class I
(c) Class II
(d) Class IV

121. Pregnancy test kits are designed to detect:
(a) Estrogen
(b) Human chorionic gonadotropin
(c) Follicle-stimulating hormone
(d) Luteinizing hormone

122. Which one of the following facts is not true about Clomiphene Citrate?
(a) Decreases the risk of ovarian tumour
(b) Acts as a pure estrogen antagonist in all human tissues

- (c) Renders benefit in males with oligospermia
- (d) Enhances the risk of multiple pregnancy

- (c) suddenly
- (d) and hardly

123. Which one of the following is not a penetration enhancer?

- (a) Sodium taurocholate
- (b) Tween 80
- (c) Sodium chloride
- (d) Caprylic acid

130. Which part of the sentence 'This latest machine is more efficient than any other equipments in the laboratory.' is incorrect?

- (a) this latest machine
- (b) is more efficient
- (c) than any other equipments
- (d) in the laboratory

124. Somatostatin inhibits all except:

- (a) Growth hormone
- (b) Epinephrine
- (c) Insulin
- (d) Thyroxine

125. Which one of the following is not effective in the treatment of anaerobic infections?

- (a) Clindamycin
- (b) Erythromycin
- (c) Metronidazole
- (d) Chloramphenicol

126. Which part of the sentence 'Please tell to him to do his work.' is incorrect?

- (a) please
- (b) tell to him
- (c) to do
- (d) his work

127. Which part of the sentence 'His friends blamed him for being a coward person.' is incorrect?

- (a) his friends
- (b) blamed him
- (c) for being
- (d) a coward person

128. Which part of the sentence 'If I was knowing why he was absent, I would have informed you.' is incorrect?

- (a) if I was knowing
- (b) why he was absent
- (c) I would have
- (d) informed you

129. Which part of the sentence 'The robber hit Mahesh suddenly and hardly.' is incorrect?

- (a) the robber
- (b) hit Mahesh