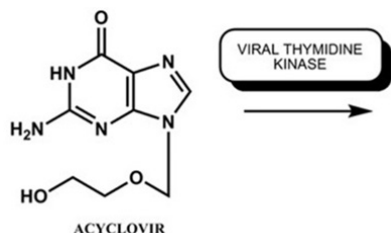


# GPAT-2026

## Section-A

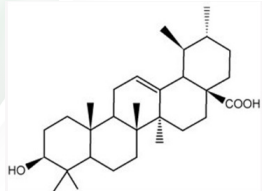
1. Identify the active metabolite of acyclovir which binds DNA polymerase. Also, mention the type of chemical reaction involved in its metabolism:



- (a) Acyclovir triphosphate; phosphorylation  
(b) Acyclovir diphosphate; phosphorylation  
(c) Acyclovir thymidyl trihydroxylate; hydroxylation  
(d) Acyclovir thymidyl hydroxylate; hydroxylation
2. If emission intensity doubles when concentration increases from 5 to 10 ppm, the relationship obeyed is:  
(a) Exponential relationship (b) Linear proportionality  
(c) Beer–Lambert law (d) Inverse proportionality
3. The quinoline containing local anaesthetic is:  
(a) Dibucaine (b) Benzocaine  
(c) Tetracaine (d) Prilocaine
4. The mechanism of action of acarbose is:  
(a)  $\alpha$ -glucosidase inhibition  
(b)  $\beta$ -glucosidase inhibition  
(c)  $\alpha$ -glucosidase inhibition  
(d)  $\beta$ -glucosidase inhibition
5. Which buffer system is most commonly used in ophthalmic preparations?  
(a) Phosphate buffer (b) Acetate buffer  
(c) Citrate buffer (d) Lactate buffer
6. During ampoule sealing, nitrogen flushing is used mainly to:  
(a) Sterilize the product (b) Improve clarity  
(c) Reduce oxidation of drug (d) Increase filling speed
7. Ginkgo biloba should be avoided with:  
(a) Anticoagulants (b) Antihistamines  
(c) Antidiabetics (d) Antacids
8. McCabe–Thiele method is primarily used to determine:  
(a) Vapour pressure of component  
(b) Number of theoretical plates in distillation  
(c) Column diameter in distillation  
(d) Heat duty of reboiler
9. Indicator used in EDTA titration of calcium and magnesium is:  
(a) Methyl Orange (b) Starch  
(c) Eriochrome Black T (d) Phenolphthalein
10. In-process tablet thickness variation is mainly influenced by:  
(a) Compression force (b) Die diameter  
(c) Lubricant concentration (d) Granule flow rate
11. The quantitative values determined for the identification of leaf drugs remain constant “throughout the life of the plant” EXCEPT: (Claimed Question)  
(a) Vein-islet number (b) Stomatal number  
(c) Stomatal index (d) Veinlet termination number
12. Naphthalene is best purified by which process:  
(a) Steam distillation (b) Sublimation  
(c) Crystallization (d) Distillation
13. WHO recommends the use of chromatographic techniques in herbal medicines mainly for:  
(a) Fingerprint profiling  
(b) Detection of moisture content  
(c) Detection of microbial load  
(d) Packaging analysis
14. Iodine is very sparingly soluble in water, that is about 1 part of iodine in \_\_\_\_\_ parts of water:  
(a) 100 (b) 4000 (c) 400 (d) 1000
15. If the pKa of phenobarbitone is 3.4, what fraction of drug would be ionized at pH 4.4?  
(a) 0.90 (b) 0.50 (c) 1.00 (d) 0.01
16. Presence of electron-withdrawing groups on the phenothiazine ring enhances antipsychotic activity by:  
(a) Reducing CNS penetration  
(b) Reducing hepatic metabolism  
(c) Increasing water solubility  
(d) Increasing dopamine receptor binding
17. In tube-dilution test for bactericidal agents, stainless steel cylinders are inoculated with test organism and exposed for:  
(a) Zone of inhibition  
(b) Colony count reduction  
(c) Minimum bactericidal concentration  
(d) Time-kill curve
18. In the light chain of immunoglobulin, the carboxy terminal half of the molecule i.e., Constant (C) region consists of two basic amino acid sequences named as:  
(a) Beta ( $\beta$ ) and Gamma ( $\gamma$ )  
(b) Alpha ( $\alpha$ ) and Beta ( $\beta$ )  
(c) Kappa ( $\kappa$ ) and Lambda ( $\lambda$ )  
(d) Delta ( $\delta$ ) and Theta ( $\theta$ )
19. Among the gaseous substances used for sterilization/disinfection, which of the following is not suitable for fumigation of rooms because of its explosive property?  
(a) Chlorine dioxide (b) Beta propiolactone  
(c) Formaldehyde (d) Ethylene oxide

20. Introduction of lipophilic substitutions on benzodiazepines mainly enhances:
- (a) Water solubility (b) Metabolic clearance  
(c) Renal excretion (d) CNS penetration
21. In pharmaceutical manufacturing, laminar airflow cabinets provide which class of clean air for aseptic processing:
- (a) Class 1000 (b) Class 10000  
(c) Class 10 (d) Class 100
22. A flowchart showing crop rotation, composting, and biological pest control represents:
- (a) Biodynamic agriculture  
(b) Conventional farming  
(c) Hydroponics  
(d) Integrated farming
23. Taxol is primarily semi-synthesized from which of the following precursors?
- (a) 7- $\beta$ -xylosyl-10-deacetyltaxol  
(b) Geranylgeranyl diphosphate  
(c) 10-deacetylbaccatin III  
(d) Taxadiene
24. The relationship between pH of the environment, pKa of the drug and the extent of ionization is given by:
- (a) Fick's law  
(b) Henderson-Hasselbalch equation  
(c) Law of mass action  
(d) Noyes-Whitney equation
25. In the apparatus of limit test for arsenic, the internal diameter of the glass tube is:
- (a) 7.5 mm (b) 6.5 mm (c) 5.5 mm (d) 8.5 mm
30. The technique of chromatography specific for high molecular mass species is:
- (a) Adsorption chromatography  
(b) Ion exchange chromatography  
(c) Partition chromatography  
(d) Gel chromatography
31. In the context of syrup preparation, what is the negative result of "Inversion" caused by excessive heat?
- (a) The viscosity increases until the syrup becomes solid  
(b) The syrup becomes susceptible to fermentation and darkens in color  
(c) The sucrose crystallizes out of the solution immediately  
(d) The syrup becomes less sweet
32. According to the Indian Pharmacopoeia, vitamin B12 standardization uses microbiological assay with which test organism:
- (a) *Leuconostoc mesenteroides*  
(b) *Streptococcus faecalis*  
(c) *Lactobacillus leichmannii*  
(d) *Lactobacillus plantarum*
33. Methylene blue is commonly used in which quality control procedure for closures/containers?
- (a) Self sealability test  
(b) Clarity test  
(c) Hydrolytic resistance test  
(d) Thermal shock test
34. Why does caffeine not give a precipitate in general alkaloidal tests?
- (a) Because it is an acridine derivative  
(b) Because it is an indole derivative  
(c) Because it is a purine derivative  
(d) Because it is an imidazole derivative

### Section – B

26. Phytosomes improve bioavailability by:
- (a) Increasing molecular weight  
(b) Enzyme inhibition  
(c) Complexing with phospholipids  
(d) Delaying absorption
27. Commercially gamma radiation is not used for sterilization of which of the following:
- (a) Heat labile liquids (b) Swabs  
(c) Metal foils (d) Syringes
28. Assertion (A): Non-Newtonian fluids do not obey Newton's law of viscosity.  
Reason (R): Their viscosity changes with applied shear rate.
- (a) A is true, R is false  
(b) Both A and R are true and R is the correct explanation  
(c) Both A and R are true but R is not the correct explanation  
(d) A is false, R is true
29. According to the United States Pharmacopoeia, if one part of solute requires 10 to 30 parts of the solvent, it is described as:
- (a) Sparingly soluble (b) Slightly soluble  
(c) Freely soluble (d) Soluble
35. Which of the following test of aloe is based upon fluorescence? (Claimed Question)
- (a) Cupraloin test (b) Borax test  
(c) Schouteten's test (d) Both (b) & (c)
36. Identify the class of compounds which contains the following ring structure:
- 
- (a) Isothiocyanate class  
(b) Terpenoids class  
(c) Steroid class  
(d) Anthraquinone class
37. According to the Indian Pharmacopoeia, which method is preferred for sterility testing of antibiotic-containing parenterals that inhibit microbial growth?
- (a) Direct inoculation  
(b) Most probable number  
(c) Pour plate method  
(d) Membrane filtration
38. The Wagner-Nelson method is used to determine which rate constant
- (a) Elimination rate constant ( $k_e$ )  
(b) Absorption rate constant ( $k_a$ )  
(c) Dissociation rate constant ( $k_d$ )  
(d) Fraction of dose absorbed

**39. Nephelometric analysis is based on:**

- (a) The measurement of the intensity of the scattered light as a function of the concentration of the dispersed phase
- (b) The measurement of the intensity of the absorbed light as a function of the concentration of the suspended particles
- (c) The measurement of the intensity of the scattered light as a function of the path travelled by light
- (d) The measurement of the intensity of the transmitted light as a function of the concentration of the suspended particles

**40. How many covalent bonds are present between the constituent atoms in the molecules of butane and hexane respectively?**

- (a) 10 and 16
- (b) 14 and 20
- (c) 13 and 19
- (d) 11 and 19

**41. The most reactive compound towards electrophilic substitution is:**

- (a) Pyridine
- (b) Pyrrole
- (c) Furan
- (d) Thiophene

**42. Lycopene, an antioxidant, is classified as:**

- (a) Hydroxycinnamates
- (b) Flavonoids
- (c) Carotenes
- (d) Xanthophylls

**43. The "Durham-Humphrey Amendment of 1951" primarily impacted the practice of pharmacy by:**

- (a) Creating the five schedules for controlled substances
- (b) Establishing a legal distinction between prescription (legend) and OTC drugs
- (c) Requiring drugs to be proven effective before marketing
- (d) Prohibiting the reimportation of drugs manufactured in the U.S.

**44. What is the effect of addition of 9 $\alpha$ -fluoro to hydrocortisone regarding its salt retention and anti-inflammatory action?**

- (a) Increases both
- (b) Decreases both
- (c) Increases salt retention & decreases anti-inflammation
- (d) Decreases salt retention & increases anti-inflammation

**45. Phenol reacts with bromine in CS<sub>2</sub> at low temperature to give:**

- (a) m-bromophenol
- (b) o- and p-bromophenol
- (c) p-bromophenol
- (d) 2,4,6-tribromophenol

**46. Which of the following is formed when benzene is oxidized by V<sub>2</sub>O<sub>5</sub> in the presence of air?**

- (a) Benzoic acid
- (b) Benzaldehyde
- (c) Maleic anhydride
- (d) Benzoic anhydride

**47. Which International Council for Harmonization (ICH) guideline focuses on reproductive toxicology?**

- (a) S7A
- (b) S1A
- (c) S3
- (d) S5

**48. Match the following:**

A. Tyndall effect	1. No Tyndall effect
B. Ultramicroscopy	2. Observation of colloidal particles
C. Visible light	3. Used for scattering phenomenon
D. True Solution	4. Light scattering

- (a) A-4, B-3, C-2, D-1
- (b) A-4, B-2, C-3, D-1
- (c) A-2, B-3, C-1, D-4
- (d) A-3, B-2, C-1, D-4

**49. Predict the number of fundamental vibrational modes in the hydrogen sulfide molecule:**

- (a) 4
- (b) 3
- (c) 2
- (d) 1

**50. The factor that most commonly limits batch size during manufacturing of soft gelatin capsule is:**

- (a) Encapsulation speed
- (b) Film coating
- (c) Mixing process
- (d) Capsule drying time

**Section – C**

**51. Which of the following carboxylic acids is the strongest acid:**

- (a) Acetic acid (CH<sub>3</sub>COOH)
- (b) Butanoic acid (CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>COOH)
- (c) Propanoic acid (CH<sub>3</sub>CH<sub>2</sub>COOH)
- (d) Formic acid (HCOOH)

**52. A first-line antitubercular drug showing an adverse effect on visual acuity and red-green color blindness is:**

- (a) Rifampin
- (b) Ethambutol
- (c) Streptomycin
- (d) Isoniazid

**53. Nerve impulse travels through:**

- (a) Axon terminal → axon → soma → dendrite
- (b) Dendrite → soma → axon → axon terminal
- (c) Dendrite → axon terminal → axon → soma
- (d) Axon → dendrite → soma → axon terminal

**54. A negative value of Hammett constant indicates the presence of which of the following chemical group:**

- (a) Hydrophilic
- (b) Electron donor
- (c) Hydrophobic
- (d) Electron acceptor

**55. Match the given drugs and their major mechanism of action: (Claimed Question)**

Drug	Mechanism of action
1. Sumatriptan	(a) 5HT <sub>1</sub> agonist;
2. Ketanserin	(b) 5HT <sub>2</sub> antagonist;
3. Ondansetron	(c) 5HT <sub>3</sub> antagonist;
4. Cisapride	(d) 5HT <sub>4</sub> agonist

**Correct match:**

- (a) 1-A, 2-B, 3-D, 4-A
- (b) 1-A, 2-B, 3-C, 4-D
- (c) 1-B, 2-C, 3-A, 4-D
- (d) 1-C, 2-D, 3-B, 4-A

**56. Beckmann rearrangement converts:**

- (a) Acid → amide
- (b) Alcohol → alkene
- (c) Oxime → amide
- (d) Aldehyde → ketone

**57. Which cycloalkane is considered the most strained according to the Baeyer strain theory:**

- (a) Cyclopropane
- (b) Cyclohexane
- (c) Cyclobutane
- (d) Cyclopentane

**58. Dakin reaction is mainly used for preparation of:**

- (a) Phenol
- (b) Diaryl ether
- (c) Benzaldehyde
- (d) Benzoic acid

59. The number of asymmetric centers in oxytetracycline is:  
(a) 6 (b) 5 (c) 7 (d) 4
60. Children with severe acute malnutrition (SAM) aged between six months and fifty-nine months can be identified by measuring their mid-upper-arm circumference (MUAC). A child with SAM has a MUAC measurement of:  
(a) Less than 15.5 cm (b) Less than 12.5 cm  
(c) Less than 14.5 cm (d) Less than 13.5 cm
61. Of the four asymmetric centers in quinine, the absolute configuration around C-8 and C-9 is:  
(a) 8S, 9R (b) 8S, 9S (c) 8R, 9R (d) 8R, 9S
62. Select the correct statement about the mechanism of action of Quinidine and Procainamide as an antiarrhythmic drug:  
(a) They are muscarinic blockers  
(b) Blocks L-type  $\text{Ca}^{2+}$  channels  
(c) Blocks  $\text{Na}^+$  channels present in open state  
(d) Blocks inactivated  $\text{Na}^+$  channels
63. For the priorities of surveillance, the National Programme for Control and Treatment of Occupational Diseases includes the following:  
(a) Burnout syndrome  
(b) Traffic-related injuries from commuting  
(c) Musculoskeletal disorders related to prolonged use of computers  
(d) Silicosis
64. Which type of necrosis is typically associated with bacterial infections and pus formation:  
(a) Caseous necrosis (b) Coagulative necrosis  
(c) Liquefactive necrosis (d) Fat necrosis
65. The maximum volume of air contained in the lung by a full forced inhalation is called:  
(a) Tidal volume (b) Total lung capacity  
(c) Inspiratory capacity (d) Vital capacity
66. Which of the following is a vector index used for the quantitative assessment of malaria transmission:  
(a) Human blood index  
(b) Annual blood examination rate  
(c) Annual parasite incidence  
(d) Slide positivity rate
67. U-PHC is meant for a population of around:  
(a) 5,00,000 (b) 10,000  
(c) 2,50,000 (d) 50,000
68. Which drug can be given by intravenous route for paroxysmal supraventricular tachycardia:  
(a) Prazosin (b) Dobutamine  
(c) Nifedipine (d) Adenosine
69. Which of the following vaccines is indicated for prevention of pneumonia infection:  
(a) BCG vaccine (b) Dukoral vaccine  
(c) Hib vaccine (d) Rotavirus vaccine
70. The receptor on human epithelial cells to which *Neisseria gonorrhoeae pili* bind is:  
(a) CD14 (b) CD4 (c) CD46 (d) CD55
71. Which document specifies stepwise methods to perform routine operations and ensure consistency:  
(a) Standard Operating Procedure (SOP)  
(b) Master batch record  
(c) Training matrix  
(d) Quality manual
72. Cyproheptadine increases appetite mainly via antagonism of which receptors:  
(a) Muscarinic  $\text{M}_3$  receptors  
(b) 5-HT<sub>2</sub> serotonin receptors  
(c) Beta-adrenergic receptors  
(d) Dopamine  $\text{D}_2$  receptors
73. Phosphate buffer consists of \_\_\_\_ as an acidic member:  
(a) Disodium hydrogen phosphate  
(b) Sodium dihydrogen phosphate  
(c) Disodium dihydrogen phosphate  
(d) Sodium hydrogen phosphate
74. Which of the following is a rapid acting insulin preparation/analogue:  
(a) Insulin detemir (b) Insulin glulisine  
(c) Insulin regular (d) Human NPH
75. Nalidixic acid, a synthetic antibacterial agent, belongs to which of the following class of heterocyclic chemical group:  
(a) Naphthyridine-4-one  
(b) Pyrrolopyrimidine-3-one  
(c) Quinoline-4-one  
(d) Quinoline-3-one

## Section – D

76. The theory of filtration is explained by:  
(a) Stefan-Boltzmann equation  
(b) Darcy's equation  
(c) Stoke's equation  
(d) Dalton's equation
77. NRDC is described as an agency promoting commercialization of technologies from public to private sectors. Which of the following best reflects its functional role:  
(a) Monitoring import/export of pharmaceuticals  
(b) Facilitating transfer of inventions, patents and processes  
(c) Regulating GMP for pharmaceutical plants  
(d) Issuing licenses for drug manufacturing
78. A benzodiazepine lacking an electron-withdrawing group at C-7 shows reduced anxiolytic activity due to:  
(a) Enhanced hepatic metabolism  
(b) Reduced GABA-A receptor affinity  
(c) Increased plasma protein binding  
(d) Reduced oral bioavailability
79. Calculate the wave number of stretching vibration of a carbon-carbon double bond.  
( $k = 10 \times 10^5 \text{ dynes cm}^{-1}$ )  
(a)  $1820 \text{ cm}^{-1}$   
(b)  $1537 \text{ cm}^{-1}$   
(c)  $1762 \text{ cm}^{-1}$   
(d)  $1680 \text{ cm}^{-1}$

- 80. SAR studies of fluoroquinolones revealed that the following drastically reduces its antimicrobial activity:**
- Presence of 4-keto group
  - Reduction of 2,3 double bond
  - Fluoro substitution at C-7
  - Fluoro substitution at C-8
- 81. The most active estrane derivative is:**
- Estrone
  - Estradiol
  - Androstane
  - Progesterone
- 82. The purpose of DEC provocation test in filariasis is to:**
- Assess drug resistance
  - Increase antibody levels
  - Induce microfilariae into peripheral blood
  - Kill adult worms
- 83. During preformulation, a drug shows 6% moisture uptake at 75% RH but 0.5% uptake at 40% RH. Which packaging is most suitable for long-term stability:**
- HDPE bottle with silica gel
  - PVC blister
  - Alu-Alu blister
  - Amber glass bottle without desiccant
- 84. Cyclosporine produces immunosuppression mainly by:**
- TNF- $\alpha$  neutralization
  - Depletion of B lymphocytes
  - Blocking IL-2 transcription via calcineurin inhibition
  - Inhibition of DNA synthesis
- 85. The mechanism of action of the following drug is mediated through the generation of reactive oxygen species (ROS) which is attributed to its mutagenic potential:**
- Metronidazole
  - Thiabendazole
  - Nitazoxanide
  - Albendazole
- 86. Phase I trials are critical because they are specifically designed to determine:**
- Safety and maximum tolerated dose
  - Long-term adverse event profiles
  - Superior efficacy compared to standard therapy
  - Post-marketing risk in special populations
- 87. A 15-year-old boy develops cough, wheezing, and bronchoconstriction after dust exposure and his sputum contains eosinophils. Which hypersensitivity mechanism is involved:**
- Cell-mediated hypersensitivity
  - Immune complex-mediated hypersensitivity
  - IgG-mediated cytotoxic hypersensitivity
  - IgE-mediated hypersensitivity
- 88. A clinical trial conducted in parallel has shown that there is a 60% chance for any given patient to respond to Drug A, and a 50% chance to respond to Drug (B) Given that 20% of patients will respond to both drugs, what is the probability of any randomly selected patient responding to at least one drug:**
- 0.50
  - 1.10
  - Not possible to determine as the events are dependent
  - 0.90
- 89. To compare experimental observations from more than two sets of experiments in which data are not distributed normally, the appropriate test is:**
- Wilcoxon signed rank test
  - Kruskal-Wallis test
  - One-way ANOVA
  - Friedman test
- 90. Which statement is CORRECT regarding Kick's law**
- Energy required is proportional to the size reduction ratio
  - Energy required is proportional to the new surface area created
  - Energy required is proportional to the product hardness
  - Energy required is proportional to the reciprocal of particle size
- 91. What are orphan drugs:**
- Drugs which are used to treat rare diseases
  - Orphan drugs are essential drugs
  - Drugs which satisfy a large population
  - Drugs which are used for the treatment of orphan children
- 92. The most stable conformation of ethane is:**
- Skew
  - Gauche
  - Staggered
  - Eclipsed
- 93. Which microorganism is generally used in industrial biotechnological production of Vitamin B<sub>12</sub>:**
- Saccharomyces cerevisiae
  - Streptococcus acidogenes
  - Escherichia coli
  - Pseudomonas denitrificans
- 94. A calcium channel blocker with dihydropyridine nucleus is:**
- Verapamil
  - Bepridil
  - Amlodipine
  - Diltiazem
- 95. A surfactant shows a decrease in surface tension with concentration until a plateau is reached. This plateau relates to:**
- Cloud point
  - Critical micelle concentration
  - Kraft point
  - Hydrophilic-lipophilic balance
- 96. Delayed fracture healing in an elderly patient is most directly related to reduced activity of which bone cell:**
- Osteoclasts
  - Osteoblasts
  - Chondrocytes
  - Osteocytes
- 97. The interaction between methotrexate and sulphonamides (such as sulfamethoxazole or sulfasalazine) is clinically significant and potentially dangerous. Which of the following options explains the mechanism of this interaction:**
- Displacement of methotrexate from plasma protein binding sites and reduced renal clearance
  - Increased absorption of methotrexate in the gastrointestinal tract
  - Direct antagonism of methotrexate at the folate receptor
  - Enhanced hepatic metabolism of methotrexate via enzyme induction
- 98. Which form is required to apply for a registration certificate to import cosmetics into India under the Drugs and Cosmetics Rules, 1954:**

- (a) Form 41 (b) Form 43  
(c) Form 40 (d) Form 42

**99. Schedule E of the Drugs and Cosmetics Act, 1940; Rules, 1945 to which category of substances:**

- (a) List of poisonous substances under Ayurvedic, Siddha and Unani medicines  
(b) List of prescription drugs requiring medical supervision  
(c) List of cosmetics permitted for import into India  
(d) List of biological products like vaccines and sera

**100. Potassium permanganate acts as a self-indicator because:**

- (a) It has intense purple colour (b) It is colourless  
(c) It requires starch indicator (d) It forms precipitate

**Section – E**

**101. Ultrafiltration is preferred over precipitation for concentration of recombinant proteins because it:**

- (a) Is only for small proteins  
(b) Avoids chemical additives  
(c) Denatures proteins  
(d) Removes endotoxins

**102. Assertion (A): Estrogen-containing oral contraceptives increase the risk of venous thromboembolism.**

**Reason (R): Estrogens increase clotting factors/fibrinogen, not mainly plasminogen**

- (a) Assertion is false, reason is true  
(b) Both assertion and reason are false  
(c) Assertion is true, reason is false  
(d) Both assertion and reason are true

**103. Chemical penetration enhancer used in transdermal formulations is:**

- (a) Chitin (b) Poloxamer F64 (c) HPMC (d) DMSO

**104. Which one of the following drugs is used to prevent cyclophosphamide-induced hemorrhagic cystitis:**

- (a) Dexrazoxane (b) Leucovorin  
(c) Allopurinol (d) MESNA

**105. Which type of enzyme immobilization method is carrier-free:**

- (a) Cross-linking method of enzyme immobilization  
(b) Entrapment method of enzyme immobilization  
(c) Adsorption method of enzyme immobilization  
(d) Covalent on support technique

**106. The ability of long bones to withstand bending stress is mainly due to the arrangement of:**

- (a) Spongy bone trabeculae  
(b) Epiphyseal cartilage  
(c) Bone marrow sinusoids  
(d) Compact bone osteons

**107. The diuretic action of triamterene at the distal tubule and collecting duct is based on inhibition of:**

- (a) Sodium ion channels  
(b) Chloride ion channels  
(c) Potassium ion channels  
(d) Calcium ion channels

**108. In a rising film evaporator, liquid movement occurs due to:**

- (a) Mechanical agitation (b) Vapor lift effect  
(c) External pump (d) Gravity flow

**109. Hemolytic anemia and methemoglobinemia are common adverse effects associated with:**

- (a) Ethionamide (b) Clofazimine  
(c) Dapsone (d) Rifampicin

**110. Haloperidol is a typical antipsychotic drug that acts primarily by:**

- (a) Activating GABA receptors  
(b) Inhibiting serotonin reuptake  
(c) Blocking dopamine D<sub>2</sub> receptors  
(d) Blocking NMDA receptors

**111. A patient with hypoalbuminemia experiences increased effects of a highly protein-bound drug because:**

- (a) Hepatic metabolism is increased  
(b) Drug distribution is limited to plasma  
(c) Renal excretion is blocked  
(d) More drug is present in its free active form

**112. The formula for renal clearance is:**

- (a) CIR = Excretion rate / plasma concentration  
(b) CIR = Total clearance + plasma concentration  
(c) CIR = Absorption rate + plasma concentration  
(d) CIR = Absorption rate / plasma concentration

**113. Which of the following option best describes the HLB value of a solubilizing agent:**

- (a) 0–3 (b) 16–18 (c) 9–12 (d) 3–8

**114. A lesion affecting myelin in peripheral nerves will primarily reduce nerve conduction by impairing:**

- (a) Synaptic vesicle release  
(b) Saltatory conduction  
(c) Neurotransmitter synthesis  
(d) Action potential generation at axon hillock

**115. The central compartment in a two-compartmental model represents one of the following organs:**

- (a) Tendons (b) Heart  
(c) Ligaments (d) Bone

**116. Creaming in an emulsion is best described as:**

- (a) Formation of multiple emulsions  
(b) Reversible phase separation due to density difference  
(c) Chemical degradation of emulsifier  
(d) Irreversible coalescence of droplets

**117. A patient on long-term NSAID therapy develops edema and raised blood pressure due to:**

- (a) Direct sodium channel blockade  
(b) Activation of sympathetic nervous system  
(c) Inhibition of renal prostaglandin synthesis  
(d) Increased aldosterone secretion

**118. The Central Drugs Standard Control Organization (CDSCO) in India functions under the control of:**

- (a) NITI Aayog  
(b) Ministry of Health and Family Welfare  
(c) Ministry of Home Affairs  
(d) Ministry of Chemicals and Fertilizers

**119. The complication associated with the use of clozapine as an antipsychotic includes:**

- (a) Blood dyscrasias
- (b) Extrapyramidal symptoms
- (c) Hepatotoxicity
- (d) Hemolytic anemia

**120. The hormone that works with estrogen to prepare the endometrium for implantation of a fertilized egg is:**

- (a) Gonadotropic hormone
- (b) Progesterone hormone
- (c) Luteinizing hormone
- (d) Follicle stimulating hormone

**121. The refractory period of an action potential ensures unidirectional propagation along a nerve fiber mainly because:**

- (a) Potassium channels close rapidly after repolarization
- (b) The sodium–potassium pump reverses its direction
- (c) The neuronal membrane becomes completely impermeable to ions
- (d) Voltage-gated sodium channels remain in an inactivated state

**122. Impulses (action potentials) pass from one neuron to another at a microscopic gap called a synapse, where they trigger release of chemical signal molecules called:**

- (a) Prostaglandins
- (b) Leukotrienes
- (c) Hormones
- (d) Neurotransmitters

**123. Equilibrium distillation is also known as:**

- (a) Simple distillation
- (b) Azeotropic distillation
- (c) Molecular distillation
- (d) Flash distillation

**124. Ritodrine and isoxsuprine used as tocolytics are:**

- (a) Parasympatholytics
- (b) Parasympathomimetics
- (c) Sympatholytics
- (d) Sympathomimetics

**125. Endocrine cells in the intestinal mucosa secrete:**

- (a) Secretin and cholecystokinin
- (b) Pepsin and secretin
- (c) Somatostatin and cholecystokinin
- (d) Gastrin and pepsin

**Answer Key**

1-a	2-b	3-a	4-c	5-a	6-c	7-a	8-b	9-c	10-a
11-b	12-b	13-a	14-b	15-a	16-d	17-c	18-c	19-d	20-d
21-d	22-a	23-c	24-b	25-b	26-c	27-a	28-b	29-d	30-d
31-b	32-c	33-a	34-c	35-d	36-b	37-d	38-b	39-a	40-c
41-b	42-c	43-b	44-a	45-b	46-c	47-d	48-b	49-b	50-c
51-d	52-b	53-b	54-b	55-d	56-c	57-a	58-a	59-a	60-b
61-a	62-c,d	63-d	64-c	65-b	66-a	67-d	68-d	69-c	70-c
71-a	72-b	73-b	74-b	75-a	76-b	77-b	78-b	79-d	80-b
81-b	82-c	83-c	84-c	85-a	86-a	87-d	88-d	89-b	90-a
91-a	92-c	93-d	94-c	95-b	96-b	97-a	98-d	99-a	100-a
101-b	102-c	103-d	104-d	105-a	106-d	107-a	108-b	109-c	110-c
111-d	112-a	113-b	114-b	115-b	116-b	117-c	118-b	119-a	120-b
121-d	122-d	123-d	124-d	125-a					



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