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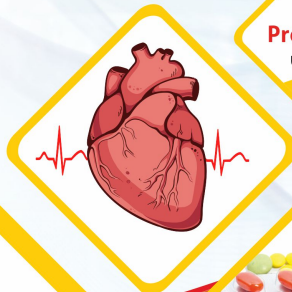
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Examination

by

GDC EDITORIAL BOARD





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PREFACE

In today's era of intense competition, success in competitive examinations is a common aspiration among students. One such highly sought-after goal for pharmacy students is to become a Drug Inspector - a prestigious and respected position within the pharmaceutical field. Due to its significance and career prospects, the competition for this post is exceptionally high.

This book, "**Objective Drug Inspector at Your Fingertips**," is thoughtfully crafted to support aspirants preparing for Drug Inspector examinations, particularly those based on multiple-choice questions. It serves as a comprehensive tool designed to enhance preparation through topic-wise, previous year solved papers. Organized meticulously, this book allows for effective and efficient revision, helping students master key topics relevant to the exam.

With a collection of around 10,000 multiple-choice questions drawn from 50 previous Drug Inspector exam papers and with GDC Practice MCQs, along with answer keys, this resource is invaluable for candidates appearing in exams conducted by UPSC, TNPSC, OPSC, HPPSC, APPSC, GPSC, KPSC, SSC, MPSC, DCO, and various other state and central agencies.

Although the syllabus for Drug Inspector exams may vary across different states and organizations, this book covers the essential subjects and core topics that are frequently tested, providing a solid foundation for any variation in exam pattern. In addition, it can serve as a useful reference for GPAT and other pharmacy-related competitive exams.

The book has been carefully structured to provide clarity on exam patterns and subject-wise key concepts, making it easier for aspirants to navigate the complex requirements of these examinations. With regular practice and thorough study of the content provided, students will gain the confidence and readiness needed to tackle any Drug Inspector exam successfully.

We sincerely hope that "**Objective Drug Inspector at Your Fingertips**" becomes a valuable companion in your journey, offering you clarity, speed in practice, and the confidence to achieve your goals.

Dr. PEEYUSH JAISWAL
Director, GDC

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PHARMACEUTICS

PHYSICAL PHARMACY

States of Matter

- Interface does not exist between/is not possible between** [GUJARAT DI - 2021]
(a) Gas-Gas (b) Gas-Liquid
(c) Liquid-Liquid (d) Solid-Liquid
- At a given temperature and pressure a known amount of gas has fixed volume keeping the temperature and the amount constant is ___ law** [TN DI - 2018]
(a) Boyle's law (b) Avogadro's law
(c) Charles law (d) Gay Lussac's law
- Gibbs phase rule is expressed as** [JK DI - 2013, MP DI - 2022]
(a) $F = C - P + 2$ (b) $F = C + P - 2$
(c) $F = C + P + 2$ (d) None of these
- When menthol and camphor are mixed together, they will form** [UPSC DI - 2019]
(a) Positive mixture (b) Eutectic mixture
(c) Solid mixture (d) Colloidal solution
- The Sulphur system is an example of** [HP DI - 2021]
(a) Three component system
(b) Two component system
(c) One component system
(d) Four component system
- Choose the WRONG statement from the following with regard to Amorphous solids** [GDC PRACTICE MCQ]
(a) Usually they are anisotropic
(b) They tend to flow when subjected to sufficient pressure
(c) Considered as super cooled fluids
(d) They do not have definite melting point
- The equation $dP/dT = pH_{vap}/RT^2$ is known as** [GDC PRACTICE MCQ]
(a) Clausius equation
(b) Clapeyron equation
(c) Clausius-Clapeyron equation
(d) Boltzmann-Planck equation
- Dipole - induced dipoles are also known as** [GDC PRACTICE MCQ]
(a) London forces (b) Keesom forces
(c) Debye forces (d) Hydrogen bonding
- Dipole-dipole weak interactions are also called as** [GDC PRACTICE MCQ]
(a) London forces
(b) Debye interactions
(c) Electrovalent forces
(d) Keesom forces
- The phenomenon in which a substance exists in more than one crystalline forms is known as** [GDC PRACTICE MCQ]
(a) Polymorphism (b) Crystallinity
(c) Anisotropy (d) Polycrystallinity
- Three types of Van der Waals forces are** [GDC PRACTICE MCQ]
[P] London [Q] Covalent
[R] Keesom [S] Debye
(a) [Q] and [R] (b) [P], [Q] and [R]
(c) [P], [R] and [S] (d) [Q] and [S]

140. In a mechanical model of a viscoelastic material, showing both viscosity of liquid state and elasticity of solid state combined in series is termed as [GDC PRACTICE MCQ]

- (a) Voigt Element (b) Creep Element
(c) Maxwell Element (d) Retardation Element

141. Unit of viscosity is [GDC PRACTICE MCQ]

- (a) Dynes (b) Poise
(c) Cm (d) Gram/cc

142. Materials possessing plastic flow are also called as [GDC PRACTICE MCQ]

- (a) Bingham bodies (b) Black body
(c) Floccs (d) Micelles

143. Plastic flow curve intersect the shearing stress axis at a particular point referred to as the [GDC PRACTICE MCQ]

- (a) Diffusion coefficient
(b) Fick's constant
(c) Elimination constant
(d) Yield value

144. The slope of rheogram is termed as [GDC PRACTICE MCQ]

- (a) Mobility (b) Degradation constant
(c) Yield value (d) Heat of fusion

145. At equilibrium, the thixotropic behaviour of a pseudoplastic system exhibit the state of [GDC PRACTICE MCQ]

- (a) Gel (b) Paste
(c) Sol (d) Wax

146. Creep test is applied to evaluate the viscoelastic properties of [GDC PRACTICE MCQ]

- (a) Ointments (b) Suspensions
(c) Emulsions (d) Lotions

147. The reciprocal of mobility is known as [GDC PRACTICE MCQ]

- (a) Apparent viscosity (b) Plastic viscosity
(c) Dynamic viscosity (d) Kinematic viscosity

148. An emulsion of o/w type has the viscosity [GDC PRACTICE MCQ]

- (a) Greater than that of the internal phase
(b) Greater than that of the vehicle
(c) Less than that of the internal phase
(d) Less than that of the vehicle



149. The growth of large particles at the expense of smaller ones, as a result of a difference in the solubility of the particles of varying sizes, is termed as [TNDI - 2024]

- (a) Partitioning
(b) Erosive formulation
(c) Oswald ripening
(d) Interfacial phenomenon

150. One of the following apparatus is used to determine the particle size by the gravity sedimentation method [GUJARAT DI - 2021, GUJARAT DI - 2024]

- (a) Pycnometer (b) Ostwald viscometer
(c) Andreasen pipette (d) Coulter counter

151. Structured vehicle is included in the formulation of a suspension in order to [GUJARAT DI - 2024]

- (a) Prevent sedimentation
(b) Decrease interfacial tension
(c) Prevent cake formation
(d) All of the above

152. Diffusion is facilitated in suspensions via Brownian movement when the Suspensions are [UPSC DI - 2023]

- (a) Deflocculated with particle size in sub-micrometre range
(b) Deflocculated with particle size in macrometre range
(c) Flocculated with particle size in sub-micrometre range
(d) Flocculated with particle size in macrometre range

153. Which of the following is NOT the characteristic of deflocculated suspensions [BIHAR DI - 2023]

- (a) The rate of sedimentation is slow
(b) The supernatant is clear
(c) The suspension is difficult to redisperse
(d) The sediment is very compact

154. Fill in the blank with the CORRECT option. Zeta potential determination is a significant characterization technique of nanocrystals employed for understanding the stability of nanosuspensions [MP DI - 2022]

- (a) Chemical (b) Physical
(c) Organic (d) Inorganic

239. Units for rate constant (K) for second order kinetics [GDC PRACTICE MCQ]

- (a) S^{-1} (b) Moles /liter. S
(c) Moles $^{-1}$.liter. S^{-1} (d) Moles.Liter $^{-1}$. S^{-1}

240. Which of the following mechanisms is most frequently responsible for chemical degradation [GDC PRACTICE MCQ]

- (a) Oxidation (b) Photolysis
(c) Hydrolysis (d) Decarboxylation

241. As the temperature increases, the degradation of drug [GDC PRACTICE MCQ]

- (a) Increases (b) Decreases
(c) Remains constant (d) Stops

242. The rate of a zero order reaction is [GDC PRACTICE MCQ]

- (a) Independent of reactants
(b) Dependent on the concentration of one reactant
(c) Dependent on the concentration of both reactants
(d) Dependent on the residual concentration of the reactants

243. The accelerated stability studies are valid only when energy of activation of the chemical reaction is [GDC PRACTICE MCQ]

- (a) Less than 10 kcal/mol
(b) 10 to 30 kcal/mol
(c) 30 to 70 kcal/mol
(d) More than 70 kcal/mol

244. The solid state decomposition of Aspirin in presence of moisture follows the order [GDC PRACTICE MCQ]

- (a) First (b) Pseudo first
(c) Second (d) Zero

245. Which one of the following dosage forms exhibit faster rate of reaction under normal conditions [GDC PRACTICE MCQ]

- (a) Emulsions (b) Ointments
(c) Solutions (d) Suspensions



246. The Henderson Hasselbach equation is useful determination of [TN DI - 2019]

- (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

247. The temperature at which two conjugate solutions merge into one another to form one layer is called [GUJARAT DI - 2024]

- (a) Upper consolute temperature
(b) Critical saturation temperature
(c) Distillation temperature
(d) Partition temperature

248. Upper and lower consolute temperatures are noticed in [JK DI - 2013]

- (a) Nicotine -water system
(b) Triethylamine-water system
(c) Phenol-water system
(d) None of these

249. What is NOT a factor that affects the solubility of drugs [MP DI - 2022]

- (a) Amount of force between solute and solvent
(b) Electronic factors
(c) Steric factors
(d) Usage of the drugs

250. Solubility of unionized drug increases with [MP DI - 2012]

- (a) Always with increase in temperature
(b) Always with increase in pressure
(c) Majority of time with increase in temp
(d) Always with increase in pH



1. Auristillae is the Latin term for [GUJARAT DI - 2024]

- (a) Eye drop (b) Ear drop
(c) Nasal drop (d) Spray solution

2. The Latin term "Omnihora" means [UK DI - 2024]

- (a) Every minute (b) Every hour
(c) Every day (d) Every week

3. **What is the Latin term used in prescription writing for 'before meals'** [TELANGANA DI - 2023]
 (a) Ante cibum (b) Charta
 (c) Applicandus (d) Auristillae
4. **Translate Statim into English** [GUJARAT DI - 2021]
 (a) A Drop (b) According to the art
 (c) Immediately (d) Bed Time
5. **In a prescription 'PC' means** [AP DI - 2012, HP DI - 2016]
 (a) After meals
 (b) Powdered compound
 (c) Before sleep
 (d) Daily
6. **'AC' in a prescription means** [AP DI - 2012] [HP DI - 2016]
 (a) Before rising (b) Add water
 (c) Shake well (d) Before meals
7. **What does 'BID' in a prescription means** [AP DI - 2012] [HP DI - 2016]
 (a) Twice daily (b) After meals
 (c) Five times daily (d) Four times daily
8. **In a prescription "STAT" means** [AP DI - 2012] [CG DI - 2015]
 (a) At once (b) Single tablet at a time
 (c) Straight (d) Stop after some time
9. **'Unguentum' means** [AP DI - 2012] [UP DI - 2018]
 (a) Cream (b) Lotion
 (c) Ointment (d) Plaster
10. **In a prescription 'vespere' mean** [AP DI - 2012]
 (a) Talk in whisper (b) Russel's viper
 (c) In the evening (d) At the morning
11. **In a prescription 'OID' means** [AP DI - 2012]
 (a) One fourth (b) One quart
 (c) Once in four days (d) Four times a day
12. **In a prescription what is 'bi ter in die' (b t id)** [AP DI - 2012]
 (a) Best taken in day time
 (b) Taken at bed time
 (c) Take tablet with breakfast
 (d) Two or three times a day
13. **In a prescription h.s. Hora somni means** [AP DI - 2012]
 (a) Evening time
 (b) After dinner
 (c) At bedtime
 (d) Before and after lunch
14. **In a prescription-D5W-means** [AP DI - 2012]
 (a) Distilled water 5 ml water
 (b) Daily-5-times
 (c) 5 drops of water
 (d) Dextrose 5% in water
15. **In a prescription 'gtt'-indicates** [AP DI - 2012]
 (a) Syrup (b) Tablet
 (c) Drops (d) Creams
16. **What is ter in die in prescription** [AP DI - 2012]
 (a) Once in three days
 (b) Three tablets at a times
 (c) Three time a day
 (d) Two or three times a days
17. **In a prescription sexies in die (sex.i.d.) means** [AP DI - 2012]
 (a) Six times a day
 (b) Given to males only
 (c) Given to females only
 (d) Can be given to males or females
18. **In a prescription order inscription denotes** [AP DI - 2012]
 (a) Guideline to the patient
 (b) Guideline to pharmacist
 (c) Address of patient
 (d) Address of prescriber
19. **'qs' in a prescription means** [AP DI - 2012]
 (a) Every hour (b) Sufficient quantity
 (c) Every time (d) Every day
20. **In a prescription what is the abbreviation for every day** [AP DI - 2012]
 (a) q.i.d. (b) q.o.d.
 (c) q.d. (d) q.s.
21. **What is the meaning of -ou- in a prescription** [AP DI - 2012]
 (a) One unit (b) Once a day
 (c) Orally (d) Both eyes
22. **What is 'sos' in a prescription order** [HP DI - 2011] [AP DI - 2012]
 (a) If needed (b) Subcutaneous
 (c) Without (d) At once
23. **What is tabella in prescription** [AP DI - 2012]
 (a) Table spoon (b) Tablet
 (c) Tabletsalt (d) Transdermal patch
24. **'R_x' in prescription means** [AP DI - 2012]
 (a) Recipe (b) Rectify
 (c) Take (d) Supply

247. What is the concentration in milligrams per milliliter of a solution containing 2 mEq of potassium chloride (KCl) per milliliter [GDC PRACTICE MCQ]
- (a) 108 mg/ml (b) 149 mg/ml
(c) 28 mg/ml (d) 12 mg/ml
248. Convert 98.6°F to corresponding degrees centigrade [GDC PRACTICE MCQ]
- (a) 14°C (b) 25°C
(c) 37°C (d) 37°C
249. Calculate the volume of 8.9 kg of lanolin, if the density is 0.9329 gm/ml [GDC PRACTICE MCQ]
- (a) 8540.14 ml (b) 5540.14 ml
(c) 9540.14 ml (d) 3540.14 ml
250. How many gallons of 20% v/v alcohol would be the equivalent of 20 proof gallons [GDC PRACTICE MCQ]
- (a) 50 gallons (b) 15 gallons
(c) 95 gallons (d) 10 gallons

HOSPITAL PHARMACY

Introduction to Hospital Pharmacy

- The concurrent use of many drugs during the course of treatment is known as following [UK DI - 2024]
 - Drug overdose
 - Contra indication
 - Polypharmacy
 - Superinfection
- Hospital pharmacy deals with [TN DI - 2009]
 - Supply of ancillary products
 - Storage of biological products
 - Purchase of inventory drugs
 - Both (a) and (b)
- Essential drugs are those which should be available in every [MAHARASHTRA DI - 2008]
 - Chemist shop
 - Primary health care
 - Private hospital
 - Nursing home
- How are prescription drugs different from OTC drugs [CG DI - 2015]
 - They contain higher amount of active ingredients
 - They are unsafe for use without medical supervision
 - Both (a) and (b)
 - None of the above
- PHC stands for [MP DI - 2017]
 - Pharmacy Health Centre
 - Public Health Centre
 - Pharmaceutical Health Centre
 - Primary Health Centre
- In Pharmacy, Expired drugs should be stored separately in a locked shelf. Bearing the following label [HP DI - 2016]
 - "Expired Goods-Not For Sale"
 - "Expired Drugs"
 - "OLD drugs-Not For Sale"
 - "OLD drugs"
- The preparing and dispensing of drug is known as [BIHAR DI - 1998]
 - Pharmacotherapeutics
 - Pharmacy
 - Pharmacology
 - Pharmacognosy
- Which one is the major criteria for selection of OTC drug [CG DI - 2015]
 - Which covers wide range of symptoms
 - Which covers primary symptoms
 - Both (a) and (b)
 - None of the above
- Which of the following personnel is NOT required for the operation of blood bank facility [MAHARASHTRA DI - 2008]
 - Medical officer
 - Registered nurse
 - Blood bank technician possessing DML
 - Medical social worker
- The minimum area requirement for store room of a 700 beds hospital is [ODISHA DI - 2012]
 - 1000 sq. feet
 - 1600 sq. feet
 - 2400 sq. feet
 - 3600 sq. feet

COSMETIC TECHNOLOGY



1. **These are the antioxidants used in lipsticks EXCEPT** [TNDI - 2024]
 - (a) Butylated hydroxy anisole
 - (b) Propyl para hydroxy benzoate
 - (c) Salt
 - (d) Citric acid
2. **Which of the following is a common building block in the skin care products** [GUJARAT DI - 2024]
 - (a) Antioxidants
 - (b) Antibiotics
 - (c) Antihyperlipidemics
 - (d) Antipyretics
3. **_____ Promote and encourage the formation of blackheads** [GUJARAT DI - 2024]
 - (a) Comedogenic substances
 - (b) Non-comedogenic substances
 - (c) Keratolytic agents
 - (d) None of the above
4. **What does TEWL stand for in the context of skin measurement** [GUJARAT DI - 2024]
 - (a) Trans-Epidermal Water Loss
 - (b) Total Epidermal Water Level
 - (c) Temperature and Water Level
 - (d) Tolerance for External Water Loss
5. **Aluminium chlorohydrate is commonly used as** [UK DI - 2024]
 - (a) Antacid
 - (b) Anaesthetic
 - (c) Antiperspirant
 - (d) Dentifrice
6. **Which device is used for measuring the moisture content of the skin** [GUJARAT DI - 2024]
 - (a) Sebumeter
 - (b) Corneometer
 - (c) TEWL Meter
 - (d) Colorimeter
7. **Which one of the following antimicrobials is used in the preparation of deodorant soaps** [UPSC DI - 2023]
 - (a) Bithionol
 - (b) Propylene glycol
 - (c) Trichlorocarbanilide
 - (d) Titanium dioxide
8. **Vanishing cream is an ointment that may be classified as** [GDC PRACTICE MCQ]
 - (a) Water soluble base
 - (b) Oleaginous base
 - (c) Absorption base
 - (d) Emulsion base
9. **Which of the following cosmetic is also having the role of a drug** [GDC PRACTICE MCQ]
 - (a) Deodorant
 - (b) Antiperspirant
 - (c) Face powder
 - (d) Lipstick
10. **A typical skin cream consisting of stearic acid, potassium hydroxide, glycerin, water, preservative and perfume, would be commonly known as** [GDC PRACTICE MCQ]
 - (a) Cold cream
 - (b) Vanishing cream
 - (c) Foundation cream
 - (d) All-purpose cream
11. **Titanium dioxide is commonly present in** [GDC PRACTICE MCQ]
 - (a) Vanishing cream
 - (b) Sunscreen cream
 - (c) Aqueous calamine cream
 - (d) Ophthalmic cream
12. **Barrier creams are used to protect the skin from** [GDC PRACTICE MCQ]
 - (a) Sunlight injury
 - (b) Microorganisms
 - (c) Viral infections
 - (d) Industrial chemicals and UV rays
13. **Which of the following toilet preparation is used to make the eyelashes appear longer** [GDC PRACTICE MCQ]
 - (a) Eyebrow pencil
 - (b) Liquid eye shadow
 - (c) Mascara
 - (d) Eye cream
14. **The healing agent used in hand creams is** [GDC PRACTICE MCQ]
 - (a) Soft paraffin
 - (b) Urea
 - (c) Bees wax
 - (d) Stearyl alcohol

47. Which of the following ingredient is commonly used in toothpaste to help control tartar buildup and reduce bacteria [GDC PRACTICE MCQ]
 (a) Sorbitol (b) Zinc citrate
 (c) Glycerin (d) Calcium carbonate
48. The pH of toothpaste should be in range from [GDC PRACTICE MCQ]
 (a) 6.8 to 7.4 (b) 4.7 to 8.2
 (c) 9.2 to 10.4 (d) 5.6 to 6.4
49. Which one of the followings is NOT used in preparation of baby powders [GDC PRACTICE MCQ]
 (a) Stearic acid (b) Boric acid
 (c) Kaolin (d) Calcium carbonate
50. Which of the following is a common preservative used in baby cosmetic products to prevent microbial growth [GDC PRACTICE MCQ]
 (a) Parabens (b) Formaldehyde
 (c) Triclosan (d) Phenoxyethanol

Cosmetic for Baby

PHARMACEUTICAL ENGINEERING

Flow of Fluids

1. Reynolds number depends on [GUJARAT DI - 2024]
 (a) Roughness of the pipe
 (b) The surface area of the pipe
 (c) The viscosity of the liquid
 (d) The volume of the liquid
2. What is the expression of the Reynolds Number [MP DI - 2022]
 ρ = density (kg/m^3 , 1bm/ft^3)
 u = velocity based on the actual cross section area of the duct or pipe (m/s , ft/s)
 μ = dynamic viscosity (Ns/m^2 , 1bm/s ft)
 L = characteristic length (m , ft)
 $\nu = \mu / \rho$ $p=1$ p = kinematic viscosity (m^2/s , ft^2/s)
 (a) $R_e = \rho u / \mu L$ (b) $R_e = \rho L / u \mu$
 (c) $R_e = \rho u L / 2 \mu$ (d) $R_e = \rho u L / \mu$
3. When fluid particles of one layer do not mix with the fluid particles of the other layer, the flow is called as [GUJARAT DI - 2021]
 (a) Laminar flow (b) Turbulent flow
 (c) Layer flow (d) None of these
4. Which one is the "area variable meter" for the measurement of flow of fluid [GUJARAT DI - 2021]
 (a) Orifice meter (b) Pitot tube
 (c) Rotameter (d) Venturi meter
5. Identify the type of flow, when the value of Reynold's number is less than 2000 [GUJARAT DI - 2021]
 (a) Turbulent (b) Transient
 (c) Laminar flow (d) None of these
6. In a pharma industry, pipes are used for transportation of [TN DI - 2018]
 (a) Solids (b) Semi solids
 (c) Liquids and steam (d) Electricity
7. Which of the following is NOT a reciprocating pump [GDC PRACTICE MCQ]
 (a) Plunger pump (b) Diaphragm pump
 (c) Gear pump (d) Piston pump
8. The Reynolds number widely used to classify flow behaviour of fluid is the ratio of which one of the following [GDC PRACTICE MCQ]
 (a) Inertial forces to gravitational forces
 (b) Inertial forces to viscous forces
 (c) Viscous forces to inertial forces
 (d) Viscous forces to gravitational forces
9. Which of the following pumps is used in handling of corrosive liquids [GDC PRACTICE MCQ]
 (a) Turbine pump (b) Volute pump
 (c) Air binding pump (d) Peristaltic pump

PHARMACEUTICAL TECHNOLOGY

Preformulation

- What is the primary purpose of Preformulation studies** [GUJARAT DI - 2024]
 - To develop final dosage forms
 - To understand the physicochemical properties of drug substances
 - To conduct clinical trials
 - To determine the therapeutic index
- Pre-formulation studies involve** [TN DI - 2019]
 - Development of suitable dosage form for a drug
 - Determination of pharmacological action of a drug
 - Determination of molecular structure of a drug
 - Determination of adverse drug reaction
- Which of the following DOES NOT decide the flow properties of powders** [MP DI - 2022]
 - Carr's Index
 - Angle of repose
 - Hausner Ratio
 - Solubility
- The most stable polymorphic form has** [UPSC DI - 2019]
 - Highest melting point and lowest dissolution rate
 - Highest solubility and lowest viscosity
 - Lowest melting point and lowest dissolution rate
 - Highest melting point and highest dissolution rate
- X-ray diffraction technique can be used to determine** [TN DI - 2018]
 - Crystalline property of a drug
 - Particle size of a drug
 - pH of a drug
 - Dissociation constant of a drug
- Differential Scanning Calorimetry is used to study** [JK DI - 2013]
 - Identity
 - Purity
 - Polymorphism
 - All of these
- The polymorphic form III of riboflavin is ___times more soluble than the form I** [MP DI - 2017]
 - 10 times
 - 20 times
 - 15 times
 - 18 times
- While developing a new formulation excipient should be selected from** [ODISHA DI - 2023]
 - Cambridge crystallographic database
 - Spectroscopy databases
 - Inactive ingredients database
 - Pharmacopoeia databases
- Material tested for microbial contamination include all EXCEPT** [AP DI - 2012]
 - Catgut
 - Human blood and blood product
 - Phenol
 - Eye drops
- Which property of the material changes upon polymorphic conversion** [GUJARAT DI - 2021]
 - Wettability
 - Compressibility
 - Crystal shape
 - All of these
- Choose the wrong statement from the following with regard to amorphous solids** [GDC PRACTICE MCQ]
 - Usually they are anisotropic
 - They tend to flow when subjected to sufficient pressure
 - Considered as super cooled fluids
 - They do not have definite melting point
- The pH of a pharmaceutical buffer system can be calculated by** [GDC PRACTICE MCQ]
 - pH partition theory
 - Noyes Whitney law
 - Henderson Hasselbalch equation
 - Michaelis Menten equation
- Hot stage microscopy is an important tool in preformulation studies for the study of** [GDC PRACTICE MCQ]
 - Pseudopolymorphism
 - Particle size measurement
 - Microbial contamination
 - Compaction behaviour

478. Which of the following instruments is used for color evaluation of tablet [GDC PRACTICE MCQ]

- (a) Reflectance spectrophotometry
- (b) Tristimulus colorimetric measurements
- (c) Micro-reflectance photometer
- (d) All of these

479. How many tablets require for content uniformity test [GDC PRACTICE MCQ]

- (a) 10
- (b) 20
- (c) 30
- (d) 40

480. The six-glass tube used to test disintegration, whose length is [GDC PRACTICE MCQ]

- (a) 3 inches
- (b) 6 inches
- (c) 5 inches
- (d) 4 inches

481. What type of liquid is used in the beaker for the disintegration test [GDC PRACTICE MCQ]

- (a) Water
- (b) 0.1 N HCl
- (c) Simulated gastric fluid
- (d) All of these

482. In the Noyes-Whitney equation,

$$\frac{dC}{dt} = \frac{DA}{hV} (C_s - C)$$

dC/dt denotes which of following [GDC PRACTICE MCQ]

- (a) Diffusion coefficient
- (b) Thickness of the diffusion layer
- (c) Surface area of drug exposed
- (d) Dissolution rate

483. Which is correct sequence for the sugar coating process [GDC PRACTICE MCQ]

- (a) Sub-coating → Seal Coating → Syrup Coating → Polishing
- (b) Seal Coating → Sub-coating → Syrup Coating → Polishing
- (c) Seal Coating → Syrup Coating → Sub coating → Polishing
- (d) Syrup Coating → Sub-coating → Polishing → Seal Coating

484. In tablet, Sodium carboxymethyl cellulose is used as [GDC PRACTICE MCQ]

- (a) Diluent
- (b) Film former
- (c) Disintegrant
- (d) Binder

485. Eudragit L is chemically [GDC PRACTICE MCQ]

- (a) Poly (methacrylic acid, methylmethacrylate) 1 : 1
- (b) Poly (methacrylic acid: ethylacrylate) (1 : 1)
- (c) Poly (methacrylic acid, methylmethacrylate) 1 : 2
- (d) Poly (ethyl acetate, methylmethacrylate) 2 : 1

486. Which of the following the coating equipment is categorised under the perforated pan EXCEPT [GDC PRACTICE MCQ]

- (a) Glatt coater
- (b) Driacoater
- (c) Accela coat
- (d) Pellegrini pan

487. Which of the following terms refers to a complete film coating concentrate used in tablet coating [GDC PRACTICE MCQ]

- (a) Opalux
- (b) Opaspray
- (c) Opadry
- (d) Opaquant

488. Too rapid evaporation of the solvent from tablet coat may result [GDC PRACTICE MCQ]

- (a) Bloom
- (b) Dull film
- (c) Blistering
- (d) Hazing

489. Removal of coating material from coated tablets is called [GDC PRACTICE MCQ]

- (a) Cracking
- (b) Flacking
- (c) Blistering
- (d) Hazing

490. The defect in tablet manufacturing where "Tablets become stuck together" is called as [GDC PRACTICE MCQ]

- (a) Mottling
- (b) Whiskering
- (c) Twinning
- (d) Orange peeling

491. It is the defect whereby pits occur in the surface of a tablet core without any visible disruption of the film coating [GDC PRACTICE MCQ]

- (a) Roughness
- (b) Pitting
- (c) Blooming
- (d) Splitting

492. Purpose of shellac and zein in sugar coating is [GDC PRACTICE MCQ]

- (a) Fill imperfections in coating
- (b) Provide natural colors to the coating
- (c) Prevents from moisture attack
- (d) Provide smoothing of the coating

493. Which of the following excipients is contraindicated in preparation containing iron [GDC PRACTICE MCQ]

- (a) Polyethylene glycol
- (b) Calcium stearate
- (c) Starch
- (d) Talc

494. Sub-coatings given to the tablets [GDC PRACTICE MCQ]

- (a) To increase bulk
- (b) To avoid deterioration due to microbial attack
- (c) To prevent the solubility in acidic media
- (d) To avoid stickiness

495. Weight variation problem during tablet manufacturing is due to the [GDC PRACTICE MCQ]

- (a) Poor flow of the granulation
- (b) Rat holing and bridging
- (c) Surges of excessive flow
- (d) All of the above

496. The content uniformity test NOT applicable for [GDC PRACTICE MCQ]

- (a) Multivitamins and trace elements
- (b) Antibiotics
- (c) Paracetamol
- (d) All of the above

497. Which of the following is a delayed release system [GDC PRACTICE MCQ]

- (a) Sugar coated tablet
- (b) Orally disintegrating tablet
- (c) Enteric coated tablet
- (d) All of the above

498. Which of the following tablets is designed to exert local effect in throat [GDC PRACTICE MCQ]

- (a) Buccal tablets
- (b) Sublingual tablets
- (c) Lozenges
- (d) Candies

499. The following material is used for sustained release coating [GDC PRACTICE MCQ]

- (a) Glycerine
- (b) Titanium dioxide
- (c) Acacia
- (d) Ethyl cellulose

500. Sta-Rx 1500 serves as [GDC PRACTICE MCQ]

- (a) Diluent
- (b) Binder
- (c) Disintegrant
- (d) All of these



501. The ratio of dry glycerine to dry gelatine in case of soft capsule is [UK DI - 2024]

- (a) 0.4/1
- (b) 0.6/1
- (c) 0.8/1
- (d) 1.2/1

502. The material (1.0 g/ml, density) ill capacity of hard gelatin capsule of tire no. I is [UK DI - 2024]

- (a) 300 mg
- (b) 400 mg
- (c) 500 mg
- (d) 600 mg

503. Green bone is a source of [GUJARAT DI - 2021]

- (a) Type A Gelatin
- (b) Type B Gelatin
- (c) Both (a) and (b)
- (d) None of these

504. Capsule shells are prepared by [JK DI - 2013]

- (a) Type-A gelatin
- (b) Type-B gelatin
- (c) Both of these
- (d) None of these

505. The capsule size which holds maximum volume comparatively is [JK DI - 2013]

- (a) 0
- (b) 1
- (c) 4
- (d) 5

506. Bloom strength is related to [JK DI - 2013]

- (a) Cohesive strength of cross-linking that occurs between gelatin molecules
- (b) The higher the bloom strength the more is the capsule stability
- (c) Cost of gelatin is directly proportional to bloom strength
- (d) All of these

507. Capacity of '000' size empty gelatin capsule is [UK DI - 2024]

- (a) 1.40 ml
- (b) 1.80 ml
- (c) 0.95 ml
- (d) 0.68 ml

508. Capsules are available in various sizes (1, 2, 3, 4, 5, 000, 00E, 00, 0 and 0E) for human administration. Which of the following statements regarding capsule size is/are Correct [UPSC DI - 2023]

P. "000" is the largest capsule size

Q. "5" is the smallest capsule size

R. "0" is the smallest capsule size

S. "5" is the largest capsule size

T. "000" is the smallest capsule size

Select the CORRECT answer using the code given below

- (a) S and T
- (b) P and Q
- (c) R and S
- (d) P and R

509. The elasticity of soft gelatin capsule shells can be controlled by adding [BIHAR DI - 2023]

- (a) Povidone
- (b) Lactose
- (c) Sorbitol
- (d) Sorbic acid

864. Nature of Soft Eye contact lens is [GDC PRACTICE MCQ]

- (a) Hydrophilic (b) Lipophilic
(c) Amphiphilic (d) None of these

865. Wetting solution used in ophthalmic preparation is [GDC PRACTICE MCQ]

- (a) PVP
(b) Mannitol
(c) Cellulose derivative
(d) Both (a) and (c)

866. The outer layer of the eye can be considered as segments of two spheres known as [GDC PRACTICE MCQ]

- (a) Retina and Macula
(b) Sclera and Cornea
(c) Iris and Choroid
(d) Retina and Optic nerve

867. The direction "To be used within 30 days after first opening." is given for [GDC PRACTICE MCQ]

- (a) Suppositories (b) Mixture
(c) Paste (d) Eye drops

868. Ophthalmic dosage forms administered adjacent to the eye are called [GDC PRACTICE MCQ]

- (a) Topical (b) Intraocular
(c) Periocular (d) All of these

869. Most of the ophthalmic drugs are [GDC PRACTICE MCQ]

- (a) Acid salts of weak bases stabilized at acidic pH
(b) Acid salts of weak bases stabilized at basic pH
(c) Acid salts of weak bases stabilized at neutral pH
(d) Acid salts of strong bases stabilized at acidic pH

870. Which of the following requirements is NOT essential for dispensing of eye drops [GDC PRACTICE MCQ]

- (a) Isotonicity
(b) Free from pyrogens
(c) Vehicle must be WFI
(d) All of these

871. Draize eye test is used to detect [GDC PRACTICE MCQ]

- (a) Irritancy (b) Therapeutic effect
(c) Toxicity (d) None of these

872. Eye lotions should be diluted with [GDC PRACTICE MCQ]

- (a) Lubricant (b) Warm water
(c) Water (d) No need of dilution

873. The concentration of salts in lacrimal fluids determines their [GDC PRACTICE MCQ]

- (a) pH (b) Osmolality
(c) Surface tension (d) Viscosity

874. Viscosity of ophthalmic products should be [GDC PRACTICE MCQ]

- (a) 15-25 cps (b) 25-40 cps
(c) 10-13 cps (d) 5-10 cps

875. Most commonly used surfactants in ophthalmic preparations [GDC PRACTICE MCQ]

- (a) Cationic surfactant
(b) Anionic surfactant
(c) Non-ionic surfactant
(d) Amphoteric surfactant



876. Containers of aerosols should withstand the following pressure as high as [JK DI - 2013, UK DI - 2024]

- (a) 140-180 psig at 130° F
(b) 100-140 psig at 130° F
(c) 50-100 psig at 130° F
(d) None of these

877. Inhalation aerosols should have particles which are [UPSC DI - 2023]

- (a) Porous with large physical diameter and small aerodynamic diameter
(b) Porous with small physical diameter and large aerodynamic diameter
(c) Non-porous with large physical diameter and small aerodynamic diameter
(d) Non-porous with small physical diameter and large aerodynamic diameter

878. Which of the following statement is CORRECT regarding Aerosols [TELANGANA DI - 2023]

- I. Aerosols may be defined as the pressurized dosage form of medicament in which the liquid or solid drug or drugs are dissolved or suspended in gas
II. Aerosols used in the treatment of respiratory conditions, are atomized in devices known as nebulizers

- (a) Only I (b) Only II
(c) Neither I nor II (d) Both I and II

879. Which one of the following devices is used to increase the efficiency of drug delivery via aerosols [ASSAM DI - 2022]

- (a) Tube spacers (b) Metered valve
(c) Actuator (d) Pressure valve

BIOPHARMACEUTICS

Absorption of Drugs

- Consider the following statements regarding active drug transport [UPSC DI - 2023]
 - Transport of drug depends on concentration gradient
 - Transport requires energy
 - The process is capacity limited
 - The rate is slower than passive transport
 Which of the statements given above are CORRECT
 - 1, 2 and 3
 - 2, 3 and 4
 - 2 and 3 only
 - 3 and 4 only
- The increasing order of absorption from the available dosage form are [UPSC DI - 2023]
 - Capsule, Suspension, Emulsion, Solution
 - Suspension, Capsule, Emulsion, Solution
 - Emulsion, Suspension, Capsule, Solution
 - Solution, Capsule, Emulsion, Suspension
- Which of the following absorption of drug from gastrointestinal tract is based on concentration gradients [GUJARAT DI - 2021]
 - Passive transport
 - Active transport
 - Facilitated transport
 - Pore transport
- Fick's law is used for study of [GUJARAT DI - 2021]
 - Dissolution rate
 - Disintegration rate
 - Dissociation rate
 - Diffusion rate
- Absorption of the Riboflavin takes [GUJARAT DI - 2021]
 - Passive diffusion
 - Active transport
 - Facilitated diffusion
 - Pore convection
- Noyes Whitney equation is used for study of [RAJASTHAN DI - 2012]
 - Dissolution rate
 - Disintegration rate
 - Dissociation rate
 - Diffusion rate
- Dissolution control absorption of drug through membrane is [RAJASTHAN DI - 2012]
 - Less than 0.1 mg
 - 0.1 mg
 - 1 mg
 - 2 mg
- Oral absorption is ideal when [MP DI - 2012]
 - Log P > 5
 - Log P < 5
 - There are more than 5 hydrogen bond donors
 - Molecular weight > 500 Dalton
- The equation that describes the process of 'Passive Transport' is [TN DI - 2009]
 - Noyes-Whitney equation
 - Stokes law
 - Fick's law
 - Hofmeister rule
- Pinocytosis is known as [TN DI - 2009]
 - Vesicular transport
 - Engulfment of small solutes
 - Engulfment of larger particles
 - Absorption phenomenon
- Drug absorption through biological membrane involves [JK DI - 2013]
 - Ultrafiltration
 - Osmosis
 - Diffusion
 - Diffusion and membrane transporters
- Identify the rate limiting step in the absorption of drugs from orally administered solution dosage forms [BIHAR DI - 2023]
 - Gastric emptying
 - Dissolution
 - Disintegration
 - All of these
- Which of the following compounds show pH-independent absorption from GIT [BIHAR DI - 2023]
 - Weakly acidic drugs with pK_a values greater than 7.5
 - Weakly basic drugs with pK_a values less than 5
 - Neutral compounds
 - All of these

Drug Concentration and Pharmacological Response

245. If digoxin has a half-life of 35 hrs how will it take a toxic plasma concentration of 8 mg/ml to decline to a therapeutic concentration of 2mg/ ml

[HP DI - 2020]

- (a) 140 hrs (b) 17.5 hrs
(c) 105 hrs (d) 70 hrs

Controlled Release Medication

246. Therapeutic index of a drug is an indicator of

[HP DI - 2020]

- (a) Efficacy (b) Safety
(c) Potency (d) Toxicity

247. According to Higuchi model, drug release from porous matrix is directly related to

[MP DI - 2017]

- (a) Time (b) Square root of time
(c) Square of time (d) Porosity

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

[TN DI - 2019]

- (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

249. Drug release from granular matrices involves

[JK DI - 2013]

- (a) Penetration of surrounding liquid
(b) Dissolution of drug
(c) Leaching of drug
(d) All of these

250. For the determination of dissolution profile of Microspheres, Which is the best dissolution model we can apply

[GDC PRACTICE MCQ]

- (a) Baker - Lonsdale
(b) Hixson-Crowell model
(c) Higuchi model
(d) Noyes Whitney equation

PHARMACEUTICAL JURISPRUDENCE

History of Drug Legislation in India, Pharmacy Act

1. The committee appointed by Government of India to look into the drug industry and various aspects of drugs like licensing price control, imports, role of foreign sector quality control was headed by

[ODISHA DI - 2012]

- (a) Mudaliar (b) Bhatia
(c) Hathi (d) Bhore

2. The first National Institute for Pharmacy Education and Research (NIPER) was started at

[ODISHA DI - 2012]

- (a) Banaras (b) Chennai
(c) Mohali (d) Chhattisgarh

3. Pharmacy Act came into force in the

[MP DI - 2012, CG DI - 2015, RAJASTHAN DI - 2018]

- (a) 1950 (b) 1948
(c) 1952 (d) 1949

4. In India, pharmacy profession is governed by the

[BIHAR DI - 2023]

- (a) Pharmacy Act, 1958 (b) Pharmacy Act, 1948
(c) Pharmacy Act, 1938 (d) Pharmacy Act, 1968

5. Which chapter of the Pharmacy Act, 1948 deals with the Registration of Pharmacists

[CG DI - 2015]

- (a) Chapter II (b) Chapter III
(c) Chapter IV (d) Chapter V

6. The main object of the Pharmacy Act, 1948 is to

[JK DI - 2013, RAJASTHAN DI - 1996]

- (a) Control the advertisement of drugs
(b) Regulate the profession of pharmacy
(c) Prevent the infliction of unnecessary pain or suffering on animals
(d) All of the above

169. Schedule 'X' of the Drugs and Cosmetics Act and Rules deals with [UPSC DI - 2015]

- (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

170. The requirements and guidelines for clinical trials, import and manufacture of new drug as per the drug and cosmetics rules is given under schedule

[MPDI-2012, MAHARASHTRA DI-2014, UPSCDI-2015, MPDI-2017, TNDI-2018, TNDI-2019, HPDI-2020, BIHARDI-2023, TNDI-2024]

- (a) N
- (b) Y
- (c) A
- (d) B

171. Schedule Y deals with [MAHARASHTRA DI - 2012]

- (P) Manufacture of new drugs
- (Q) Standards for cosmetics
- (R) Standards for ophthalmic preparations
- (S) Requirements and guidelines for clinical trials

- (a) Only (P)
- (b) (Q) and (R)
- (c) (P) and (S)
- (d) (P), (Q) and (S)

172. Under Schedule Y to the Drugs and Cosmetics Rules, 1945, responsibility of a sponsor includes [JK DI - 2013]

- (a) Review of trial protocol to ensure rights and safety of the trial subjects
- (b) Conduct of the trial according to the GCP guidelines
- (c) Provision of adequate medical care to the participant for any adverse events
- (d) Submission of status reports on the clinical trial to the licensing authority

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

[MAHARASHTRA DI - 2012]

- (a) Sch M
- (b) Sch Y-1
- (c) Sch C
- (d) Sch X

174. The drugs specified under which of the following schedules to the Drugs and Cosmetics Rules, 1945 will not be sold by retail except on and in accordance with the prescription of Registered Medical Practitioner [UPSC DI - 2023]

- 1. Schedule U
- 2. Schedule Y
- 3. Schedule H
- 4. Schedule H₁
- 5. Schedule X

Select the CORRECT answer using the code given below

- (a) 3 and 4 only
- (b) 3, 4 and 5
- (c) 1, 2 and 3
- (d) 2, 3, 4 and 5

175. Match the following schedules and their descriptions [UK DI - 2024]

- (A) Schedule 'H' I. Standard for disinfectant fluids.
- (B) Schedule 'O' II. Standard for cosmetics.
- (C) Schedule 'S' III. List of Prescription Drugs.
- (D) Schedule 'FF' IV. Standard for ophthalmic preparation

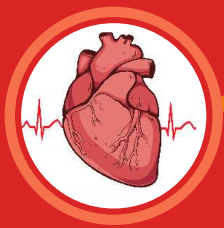
- | | | | | |
|-----|-------|-------|------|------|
| | (A) | (B) | (C) | (D) |
| (a) | (III) | (I) | (II) | (IV) |
| (b) | (III) | (I) | (IV) | (II) |
| (c) | (I) | (III) | (II) | (IV) |
| (d) | (I) | (III) | (IV) | (II) |

176. Match the following

- P. Schedule V I. Particulars to be shown in the various records of manufacture of drugs
- Q. Schedule T II. List of drugs which can be marketed under generic names only
- R. Schedule U III. Life period of Drugs
- S. Schedule W IV. Standards of patent of proprietary medicines
- T. Schedule P V. Requirements of factory premises and conditions for Ayurvedic and Unani drugs

Which is the CORRECT match [UPSC DI - 2011]

- (a) P-I, Q-III, R-IV, S-V, T-II
- (b) P-V, Q-IV, R-I, S-II, T-III
- (c) P-IV, Q-V, R-I, S-II, T-III
- (d) P-IV, Q-V, R-II, S-I, T-III



HUMAN ANATOMY AND PHYSIOLOGY

Scope of Anatomy and Physiology

- The plane which divides the body into upper and lower parts is called as** [MP DI - 2022]
(a) Transverse plane (b) Sagittal plane
(c) Coronal plane (d) All of these
- The study of organs or viscera are also known as** [GDC PRACTICE MCQ]
(a) Osteology (b) Splanchnology
(c) Cytology (d) Ophthalmology
- The _____ of the body includes the head, neck, and trunk** [GDC PRACTICE MCQ]
(a) Dorsal cavity
(b) Axial portion
(c) Appendicular portion
(d) Ventral cavity
- A _____ section divides the body into right and left portions** [GDC PRACTICE MCQ]
(a) Sagittal (b) Coronal
(c) Transverse (d) Oblique
- The front or direction toward the front of the body. The toes are anterior to the foot is** [GDC PRACTICE MCQ]
(a) Anterior (b) Posterior
(c) Superior (d) Lateral
- Study of bones is called** [GDC PRACTICE MCQ]
(a) Splanchnology (b) Osteology
(c) Myology (d) Arthrology
- Study of the nervous system is called** [GDC PRACTICE MCQ]
(a) Neurology (b) Cardiology
(c) Myology (d) Ophthalmology
- The _____ cavity is the portion enclosed by the pelvic bones** [GDC PRACTICE MCQ]

- (a) Abdominopelvic (b) Abdominal
(c) Thoracic (d) Pelvic

Cell : The Unit of Life

- Who identified lysosome** [BIHAR DI - 2023]
(a) Christian de Duve
(b) Novikoff
(c) Claude
(d) Palade
- Cell was discovered by** [BIHAR DI - 2023]
(a) Leeuwenhoek (b) Robert Hooke
(c) Robert Swanson (d) Robert Brown
- Choose the CORRECT statement** [ASSAM DI - 2022]
(a) Mitochondria are the centers of cellular respiration
(b) Prokaryotes contain a well-defined nucleus
(c) DNA does not contain the genetic information
(d) Humans have 49 chromosomes
- Which of the following process is also called "cell drinking"** [GUJARAT DI - 2021]
(a) Pinocytosis
(b) Phagocytosis
(c) Convective transport
(d) Active transport
- Which of the following is the CORRECT sequence of electron acceptors in ETS** [MP DI - 2022]
(a) Cyt a, a, b, c (b) Cyt c, b, a, a₃
(c) Cyt b, c, a₃, a (d) Cyt b, c, a, a₃
- A plant cell shrinks, when it is kept in** [GUJARAT DI - 2021]
(a) Hypotonic solution
(b) Isotonic solution
(c) Hypertonic solution
(d) Pure water

Respiratory System

158. The apparatus commonly used to measure the volume of air exchanged during breath and the respiratory rate is known as [GUJARAT DI - 2024]

- (a) Sphygmomanometer
- (b) Spirometer
- (c) Pulse Oximeter
- (d) Glucometer

159. Respiration is controlled by [UK DI - 2024]

- (a) Medulla oblongata
- (b) Hypothalamus
- (c) Cerebellum
- (d) Olfactory lobe

160. Amount of air that moves in or out of lungs with each respiratory cycle [ODISHA DI - 2023]

- (a) Minute volume
- (b) Tidal volume
- (c) Vital capacity
- (d) Force expiratory volume

161. The lung is lined by thin layer of tissue known as [ODISHA DI - 2023]

- (a) Pleura
- (b) Peritoneum
- (c) Alveoli
- (d) Bronchioles

162. Auscultation of the lungs reveals abnormal sounds, called rales, that have been described as [TELANGANA DI - 2023]

- (a) Dippers
- (b) Fatty apron
- (c) Crackling leaves
- (d) Howling cheers

163. Which of the following is TRUE for aerobic respiration in humans [BIHAR DI - 2023]

- (a) Glucose + Water = Carbon dioxide + Water
- (b) Glucose + Oxygen = Carbon dioxide + Water
- (c) Glucose = Carbon dioxide + Water
- (d) None of these

164. In humans, respiration results in [BIHAR DI - 2023]

- (a) Release of oxygen
- (b) Anabolism
- (c) Release of carbon dioxide
- (d) None of these

165. Breathing rate in humans is controlled by [BIHAR DI - 2023]

- (a) Medulla oblongata
- (b) Cerebellum
- (c) Hypothalamus
- (d) Thalamus

166. Where in a cell most of the aerobic respiration takes place [BIHAR DI - 2023]

- (a) Mitochondria
- (b) Nucleus
- (c) Ribosome
- (d) Cytoplasm

167. The site of respiration inside the lungs is [BIHAR DI - 2023]

- (a) Alveoli
- (b) Diaphragm
- (c) Bronchi
- (d) Bronchioles

168. _____ acts as air conditioners [BIHAR DI - 2023]

- (a) Nasal chamber
- (b) Larynx
- (c) Pharynx
- (d) Lung

169. After deep inspiration, maximum expiration of lungs is called [BIHAR DI - 2023]

- (a) Vital capacity
- (b) Total lung capacity
- (c) Inspiratory capacity
- (d) Functional residual capacity

170. Maximum amount of oxygen is exchanged from blood in [BIHAR DI - 2023]

- (a) Arteries of the body
- (b) Capillaries surrounding the alveoli
- (c) Left auricle of the heart
- (d) Right auricle of the heart

171. Oxygen is mainly transported as [BIHAR DI - 2023]

- (a) Oxyhaemoglobin
- (b) Carboxyhaemoglobin
- (c) Globin
- (d) None of these

172. Inspiratory capacity is the sum of Inspiratory Reserve Volume and [GUJARAT DI - 2021]

- (a) Expiratory Reserve Volume
- (b) Tidal Volume
- (c) Residual Volume
- (d) All of these

173. When a bacterial cell and mitochondria are treated with cyanide and carbon monoxide, what happens initially [CG DI - 2015]

- (a) Protein synthesis inhibits
- (b) Respiration inhibits
- (c) Photosynthesis inhibits
- (d) No effect occurs

Lymphatic System

343. The region from which the blood vessels, ureters and nerves passes in kidney is called as [UK DI - 2024]

- (a) Pyramid (b) Hilum
(c) Calyx (d) Cortex

344. _____ refers to aggregates of lymphocytes around the splenic artery [MP DI - 2022]

- (a) PALS (b) Secondary follicles
(c) MALT (d) Primary follicles

345. Which of the following is Graveyard of RBC [GDC PRACTICE MCQ]

- (a) Spleen (b) Liver
(c) Kidney (d) Thymus

346. Which sequence best describes the flow of lymph through the lymphatic system [GDC PRACTICE MCQ]

- (a) Trunks, capillaries, vessels, ducts
(b) Capillaries, vessels, trunks, ducts
(c) Ducts, trunks, capillaries, vessels
(d) Ducts, vessels, trunks, capillaries

347. Which lymphatic structure may also be a site of erythrocyte production in the fetus [GDC PRACTICE MCQ]

- (a) Liver (b) Thymus
(c) Spleen (d) Bone marrow

348. Lymphatic capillaries resemble blood capillaries because lymphatic capillaries [GDC PRACTICE MCQ]

- (a) Have the same permeability as blood capillaries
(b) Lead to the vena cava
(c) Have a lining of endothelium
(d) Are thick-walled tubes

349. All the following are important functions of the lymph nodes EXCEPT [GDC PRACTICE MCQ]

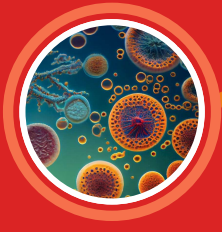
- (a) They serve as sites for production of antibodies
(b) They remove foreign material phagocytized by macrophages
(c) They are the sites where antigens stimulate the immune system
(d) They function in the production of neutrophils, eosinophils, and basophils

350. The fluid that passes through the lymphatic vessels [GDC PRACTICE MCQ]

- (a) Flows toward the lungs
(b) Passes from the lymphatic vessels into the arteries
(c) Enters the left ventricle of the heart through the right thoracic duct
(d) Moves in a single direction toward the heart

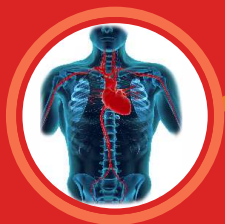
Human Anatomy and Physiology Answer Key

1-a	2-b	3-b	4-a	5-a	6-b	7-a	8-d	9-a	10-b
11-a	12-a	13-d	14-c	15-a	16-c	17-b	18-b	19-b	20-c
21-a	22-a	23-a	24-a	25-c	26-b	27-a	28-c	29-c	30-c
31-c	32-d	33-d	34-b	35-d	36-c	37-b	38-a	39-d	40-b
41-c	42-d	43-b	44-c	45-b	46-b	47-d	48-b	49-d	50-c
51-d	52-d	53-c	54-c	55-d	56-a	57-c	58-a	59-d	60-b
61-a	62-b	63-b	64-b	65-c	66-b	67-a	68-b	69-d	70-a
71-c	72-a	73-a	74-c	75-c	76-d	77-a	78-b	79-d	80-b
81-b	82-c	83-c	84-c	85-c	86-d	87-c	88-d	89-b	90-d
91-c	92-a	93-d	94-c	95-d	96-a	97-c	98-b	99-b	100-b
101-b	102-c	103-a	104-a	105-c	106-b	107-b	108-a	109-c	110-a
111-b	112-b	113-c	114-d	115-c	116-a	117-d	118-b	119-a	120-c
121-d	122-a	123-a	124-c	125-b	126-d	127-c	128-a	129-c	130-a
131-d	132-b	133-b	134-d	135-d	136-a	137-a	138-d	139-c	140-b
141-c	142-d	143-a	144-a	145-b	146-b	147-d	148-c	149-b	150-c



PATHOPHYSIOLOGY

- What is Chemotaxis** [HARYANA DI - 2019]
 - Toxicity of chemicals
 - Taxonomy of chemicals
 - Inhibition of inflammation
 - Movement of leukocytes in inflammation
- Which of the following statement(s) is/are NOT TRUE regarding Coagulative Necrosis** [GUJARAT DI - 2024]
 - It is also known as Colliquative necrosis.
 - Its hallmark is the conversion of normal cells into their 'tombstones'.
 - It commonly affects heart, spleen and kidney.
 - Cell digestion and liquefaction is observed.
 - (I), (II) and (III)
 - (I) and (IV)
 - (IV) only
 - (II), (III) and (IV)
- A cell undergoing apoptosis shows all these features EXCEPT** [GUJARAT DI - 2021]
 - Cell hyperplasia
 - Chromatin condensation
 - Cell surface blebbing
 - Cell shrinkage
- Which are NOT the types of adaptation** [GUJARAT DI - 2021]
 - Hypertrophy
 - Hyperplasia
 - Apoptosis
 - Atrophy
- The common cause of inflammation includes all the following; EXCEPT** [GUJARAT DI - 2021]
 - Infection
 - Hypersensitivity
 - Necrosis
 - Apoptosis
- A cell suicide by a built-in self-destruct mechanism consisting of a genetically programmed sequence of biochemical events is called as** [JK DI - 2013]
 - Angiogenesis
 - Apoptosis
 - Necrosis
 - None of the above
- Second order pain is** [MP DI - 2017]
 - Occur earlier
 - Dull, burning pain
 - Non protective behavior
 - None of these
- Hyponatremia is a condition caused in the body due to** [JK DI - 2013]
 - High plasma sodium concentration
 - Low plasma sodium concentration
 - Low plasma nitrogen concentration
 - Low plasma potassium concentration
- Which of the following is the major extracellular fluid cation** [BIHAR DI - 2023]
 - K⁺
 - Ca²⁺
 - Na⁺
 - Mg²⁺
- Select the situation that may lead to metabolic acidosis** [GUJARAT DI - 2021]
 - Severe diarrhoea
 - Ketosis
 - Both (a) and (b)
 - None of these
- Obesity is measured by BMI (Body Mass Index) and the following is the ideal range of it** [JK DI - 2013]
 - 25-0-29.9 kg/m²
 - 30.0-39.9 kg/m²
 - 18.5-24.9 kg/m²
 - 18.5-40.0 kg/m²
- The process of a tissue-damaging immune response directed specifically and in appropriately against one or more self-antigen (s) is/are called as** [JK DI - 2013]
 - Immunity
 - Autoimmunity
 - Tachyphylaxis
 - Prophylaxis
- Cell-mediated immunity is carried out by while humoral immunity is mainly carried out by** [MP DI - 2022]
 - Epitopes/antigens
 - Antibodies/antigens
 - T-cells/B-cells
 - D cells/N cells



PHARMACOLOGY

General Pharmacological Principles

INTRODUCTION, ROUTES OF DRUG ADMINISTRATION

- Who is known as father of modern chemotherapy** [UP DI - 2018]
 - Paul Ehrlich
 - Louis Pasteur
 - Alexander Fleming
 - Domagale
- Desmopressin and GnRH agonist are administered in body by** [UK DI - 2024]
 - Oral route
 - Rectal route
 - Buccal route
 - Intranasal route
- Putting a drug in liquid form into a body cavity is known as** [BIHAR DI - 2023]
 - Inhalation
 - Instillation
 - Insertion
 - Insufflation
- When a drug is administered through the layers of skin into areolar tissue, this is known as** [BIHAR DI - 2023]
 - Intradermal administration
 - Intra-arterial administration
 - Subcutaneous administration
 - Intramuscular administration
- Which of the following statements regarding drug administration is INCORRECT** [BIHAR DI - 2023]
 - When drug is administered by injection, there is very rapid response of drug
 - By parenteral route, the drug goes directly into the blood. So, no absorption is required
 - Parenteral route can be used in case of an unconscious patient
 - Parenteral route cannot be used in case of an unconscious patient
- In intra-articular route of drug administration, injection is given into** [BIHAR DI - 2023]
 - Arteries
 - Atria
 - Joints
 - Areolar tissue
- Retroperitoneal in anatomy means** [ODISHA DI - 2023]
 - Left side of Peritoneum
 - Right side of Peritoneum
 - Front of the Peritoneum
 - Behind the Peritoneum
- What is TRUE about intramuscular route of administration** [ODISHA DI - 2023]
 - Only aqueous solutions can be injected
 - Volumes in the range of 2-3 ml are generally administered
 - The formulations need not be completely sterilized
 - Hypertonic and not hypotonic solutions can be administered
- The enteral route of administration depicts one among the following route** [MAHARASHTRA DI - 2023]
 - Intrathecal
 - Buccal
 - Transdermal
 - Inhalation
- What is NOT a CORRECT combination of branch of pharmacology and its scope** [MP DI - 2022]
 - Pharmacodynamics: It refers to the study of response of an organism to the action of drugs in absence of disease
 - Pharmacognosy: It deals with the study of sources and identification (origin) of drugs
 - Pharmacometrics: It is defined as the mathematical description temporal changes in concentration of drugs and/ or their metabolites within the body
 - Pharmacology: It is an experimental science dealing with the properties of drugs and their effects on living systems

58. In which of the following model's peripheral compartments connected to a central compartment [BIHAR DI - 2023]
 (a) Compartment model (b) Catenary model
 (c) Physiologic model (d) Mammillary model
59. Phase II metabolism associated with a genetic polymorphism is [BIHAR DI - 2023]
 (a) Acetylation
 (b) Oxidation
 (c) Reduction
 (d) Glutathione conjugation
60. Following are the phase I reactions, EXCEPT [BIHAR DI - 2023]
 (a) Oxidation (b) Reduction
 (c) Hydrolytic reaction (d) Sulphide reaction
61. What plays a major role in extra- hepatic metabolism and contains CYP3A4 isoenzyme and P-glycoprotein [ODISHA DI - 2023]
 (a) Kidney (b) Intestine
 (c) Pancreas (d) Liver
62. The following properties of a drug encourage its accumulation in breast milk, EXCEPT [UPSC DI - 2011]
 (a) High lipid solubility
 (b) Unionized state
 (c) Low molecular weight
 (d) Weak acid
63. Which enzyme is important in phase II reaction [BIHAR DI - 2023]
 (a) Esterase (b) Amidase
 (c) Transferase (d) Aldo-Keto reductase
64. Which of the following promotes the excretion of acidic drugs [BIHAR DI - 2023]
 (a) Citrate (b) Ammonium chloride
 (c) Methionine (d) Ascorbic acid
65. Drugs having hydrazine residues are metabolized by getting conjugated through [MAHARASHTRA DI - 2023]
 (a) Acetylation (b) Methylation
 (c) Glucuronidation (d) Oxidation
66. A drug which undergoes significant first pass metabolism is [ODISHA DI - 2023]
 (a) Propranolol (b) Mercaptopurine
 (c) Nitroglycerin (d) All of these
67. Which of the following is CYP Isoforms biotransform most of the drugs [MP DI - 2022]
 (a) CYP2D6 (b) CYP3A4/5
 (c) CYP2C19 (d) CYP2C8
68. Which of the following are Phase 2 metabolic reactions [MP DI - 2022]
 (a) Oxidation (b) Hydrolysis
 (c) Acetylation (d) Reduction
69. Which one of the following statement is CORRECT [ODISHA DI - 2023]
 (a) Prodrugs are always NCE, cannot be considered for biowaivers
 (b) New prodrugs of an existing drug is never a new entity, always considered for biowaiver
 (c) A new prodrug can be considered for biowaivers based on certain conditions
 (d) None of these
70. Which of the following is often the site of first pass effect [MP DI - 2022]
 (a) Heart (b) Liver
 (c) Mouth (d) Intestine
71. Which of the molecule is the inhibitor of CYP3A [ASSAM DI - 2022]
 (a) Allopurinol (b) Quinidine
 (c) Ketoconazole (d) Amiodarone
72. Which drug has a high first pass effect [HP DI - 2021]
 (a) Verapamil (b) Phenytoin
 (c) Disopyramide (d) Amiodarone
73. An electrogenic Na⁺ transporter [GUJARAT DI - 2021]
 (a) Catalyses facilitated diffusion Na⁺ from a region of high Na⁺ concentration to a region of lower Na⁺ concentration
 (b) Must catalyse an electron transfer (oxidation-reduction) reaction simultaneously with Na⁺ transport
 (c) Transports Na⁺ without concurrent transport of any other charged species
 (d) Transport Na⁺ against its concentration gradient
74. Sultamicillin is a _____ prodrug [HP DI - 2021]
 (a) Macromolecular (b) Carrier linked
 (c) Mutual (d) Bioprecursor

148. A 70 kg woman was administered 1000 mg of the drug as i.v. bolus. After its uniform distribution in the body, the plasma concentration of the drug was found to be 50 mg/L. What is its volume of distribution

[GDC PRACTICE MCQ]

- (a) 2L (b) 500L
(c) 20L (d) 0.01L

149. Which of the following respective Phase-I and Phase-II reactions are the most common drug biotransformation reactions [GDC PRACTICE MCQ]

- (a) Oxidation and Glucuronidation
(b) Reduction and Acetylation
(c) Hydrolysis and Glucuronidation
(d) Oxidation and Glutathione conjugation

PHARMACODYNAMICS

150. Serpentine receptor is [UK DI - 2024]

- (a) G-protein coupled receptor
(b) Catalytic receptor
(c) Ion-channel coupled receptor
(d) Steroid receptor

151. Dimerization, is an important step in [UK DI - 2024]

- (a) G-protein coupled receptor
(b) Ion channel linked receptor
(c) Catalytic receptor
(d) Steroid receptor

152. IP_3 and cAMP are the second messengers in [UK DI - 2024]

- (a) Ligand gated ion channels
(b) G-protein couple receptors
(c) Kinase linked receptors
(d) Nuclear receptors

153. Which of the following is G-protein coupled receptor [UK DI - 2024]

- (a) Nicotinic cholinergic receptor
(b) Muscarinic cholinergic receptor
(c) Glucocorticoids receptor
(d) Insulin receptor

154. Acetylcholine and physostigmine are examples of _____ type of drug interaction [UK DI - 2024]

- (a) Synergism (b) Addition
(c) Potentiation (d) Antagonism

155. Which among the following drug combinations DOES NOT produce an additive effect

[ODISHA DI - 2023]

- (a) Aspirin + Paracetamol
(b) Nitrous oxide + Halothane
(c) Ephedrine + Theophylline
(d) Acetylcholine + Adrenaline

156. A drug with high affinity for receptor and high intrinsic activity is a/an [MAHARASHTRA DI - 2023]

- (a) Agonist (b) Antagonist
(c) Partial agonist (d) Inverse agonist

157. Receptor macromolecular perturbation theory fails in substantiating the concept of

[MAHARASHTRA DI - 2023]

- (a) Agonism (b) Antagonism
(c) Partial agonism (d) Inverse agonism

158. Which of the following are the major events in electron transport chain [GUJARAT DI - 2021]

- (a) Electron flow and release of energy
(b) Proton gradient formation
(c) PMF (proton motive force) driven ATP synthesis
(d) All of these

159. The formulations that contain the same therapeutically active ingredients and elicit identical pharmacological effects are said to be

[GUJARAT DI - 2021]

- (a) Chemically equivalent
(b) Biologically equivalent
(c) Therapeutically equivalent
(d) Pharmaceutically equivalent

160. When the action of one drug is facilitated or increased by the other drug, the phenomenon is called [TN DI - 2019]

- (a) Synergism (b) Antagonism
(c) Tolerance (d) Tachyphylaxis

161. Which of the following statements are TRUE [GUJARAT DI - 2024]

- (I) Drug potency is clearly a factor in choosing the dose of a drug
(II) Efficacy is a more decisive factor in the choice of a drug

- (a) (P), (Q), (R), (S) (b) (P), (R), (Q), (S)
 (c) (P), (Q), (S), (R) (d) (P), (S), (Q), (R)

216. Clinical trials are performed on [GUJARAT DI - 2010]

- (a) Animals (b) Human beings
 (c) Both (a) and (b) (d) None of the above

217. The following statement is not true of 'potency' of a drug [GDC PRACTICE MCQ]

- (a) Refers to the dose of the drug needed to produce a certain degree of response
 (b) Can be related to that of its congeners by the relative position of its dose-response curve on the dose axis
 (c) It is often not a major consideration in the choice of a drug
 (d) It reflects the capacity of the drug to produce a drastic response

218. The LD₅₀ refers to [GDC PRACTICE MCQ]

- (a) The lethal dose in 50 people taking the drug
 (b) The lethal dose in 50% of the population taking the drug
 (c) The labelled dosage recommended for the drug
 (d) The labelled dose for at least 50 people taking the drug

219. 'Drug efficacy' refers to [GDC PRACTICE MCQ]

- (a) The range of diseases in which the drug is beneficial
 (b) The maximal intensity of response that can be produced by the drug
 (c) The dose of the drug needed to produce half maximal effect
 (d) The dose of the drug needed to produce therapeutic effect

220. Which of the following is true of 'placebos'

[GDC PRACTICE MCQ]

- (a) Placebo is a dummy medication
 (b) Placebo is the inert material added to the drug for making tablets
 (c) Placebos do not produce any effect
 (d) All patients respond to placebos

221. Loss of therapeutic efficacy after prolonged / intensive use of drug [GDC PRACTICE MCQ]

- (a) Refractoriness (b) Resistance
 (c) Tachyphylaxis (d) Idiosyncrasy

ADVERSE DRUG EFFECTS AND PHARMACOVIGILANCE

222. Idiosyncrasy refers to [TN DI - 2024]

- (a) Genetically determined abnormal reactivity to a drug
 (b) Age determined abnormal reactivity to a drug
 (c) Sex determined abnormal reactivity to a drug
 (d) Food determined abnormal reactivity to a drug

223. _____ has been defined by the WHO (2002) as the 'Science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other drug related problems' [TN DI - 2024]

- (a) Iatrogenic (b) Pharmacovigilance
 (c) Placebo (d) Carcinogenicity

224. Which of the following is type B unpredictable reaction [UK DI - 2024]

- (a) Idiosyncrasy (b) Toxic effects
 (c) Side effects (d) Physical dependence

225. The fetus is most vulnerable to teratogenic effect between [UK DI - 2024]

- (a) 25-40 days of gestation
 (b) 10-20 days of gestation
 (c) 80-90 days of gestation
 (d) 100-120 days of gestation

226. Drug addiction is [UK DI - 2024]

- (a) Compulsive drugs use
 (b) Regular use of drugs
 (c) Irregular use of drugs
 (d) Taking high dose of drugs

227. The value of 5 to 8 on Naranjo Scale of Causality Assessment means [UK DI - 2024]

- (a) Definite adverse drug reaction
 (b) Probable adverse drug reaction
 (c) Possible adverse drug reaction
 (d) Doubtful adverse drug reaction

228. Which of the following drug causes phocomelia [UK DI - 2024]

- (a) Thalidomide (b) Paracetamol
 (c) Amoxicillin (d) Heparin A

Drugs Acting on Autonomic nervous System

AUTONOMIC NERVOUS SYSTEM: GENERAL CONSIDERATIONS

- All of the following drugs can be used for diagnosis of Myasthenia gravis EXCEPT** [UPSC DI - 2023]

(a) Neostigmine	(b) d-Tubocurarine
(c) Edrophonium	(d) Physostigmine
- Acetylcholine is NOT the neurotransmitter in the following fibers** [UP DI - 2018]

(a) Pre-ganglionic parasympathetics fibers
(b) Post-ganglionic sympathetic fibers
(c) Pre-ganglionic sympathetic fibers
(d) Pre-ganglionic sympathetic fibers of sweat glands
- Five Atom Rule is applicable for _____ receptor activity** [TN DI - 2012]

(a) Nicotinic	(b) Muscarinic
(c) α -receptor	(d) β -receptor
- The neurotransmitter at the sympathetic ganglia is** [GUJARAT DI - 2021]

(a) Adrenaline
(b) Noradrenalin
(c) Acetylcholine
(d) Adrenaline and Acetylcholine

CHOLINERGIC TRANSMISSION AND CHOLINERGIC DRUGS

- The only potential muscarinic agonist and totally devoid of Nicotinic activity containing Imidazole nucleus is** [TN DI - 2024]

(a) Pilocarpine	(b) Methacholine
(c) Carbachol	(d) Bethanechol
- Which of the following statement is NOT TRUE with respect to butyryl cholinesterase** [ODISHA DI - 2023]

(a) It is found in all cholinergic sites, RBC, and gray matter
(b) It is found in plasma, liver, intestine, and white matter

- | |
|---|
| (c) It slowly hydrolyses Acetylcholine |
| (d) It is responsible for the hydrolysis of ingested esters |

- Ingestion of organophosphates can cause salivation, lacrimation and diarrhoea due to inhibition of** [ODISHA DI - 2023]

(a) Butyrylcholinesterase
(b) Acetylcholinesterase
(c) Tyrosine hydroxylase
(d) Monoamine oxidase
- Acetyl choline is hydrolysed by enzyme** [HP DI - 2011]

(a) Acetylase	(b) Cholinase
(c) Acetylcholinesterase	(d) Transferase
- Which among the following drug is a reversible carbamate inhibitor used for the treatment of Alzheimer disease** [MAHARASHTRA DI - 2023]

(a) Tacrine	(b) Galantamine
(c) Rivastigmine	(d) Donepezil
- Which of the following is NOT a muscarinic effect** [MP DI - 2022]

(a) Decreased heart rate
(b) Intestinal cramps
(c) Inhibiting secretions
(d) Dryness of mouth
- Pilocarpine belongs to which class of the following** [ASSAM DI - 2022]

(a) Muscarinic agonist
(b) Anticholinesterase drug
(c) Antimuscarinic agent
(d) Nicotinic cholinergic receptor blocking agent
- Which of the following neurotransmitter's level directly affect Alzheimer disease and Parkinson's disease** [MP DI - 2022]

(a) Glutamate
(b) Acetylcholine
(c) Gamma-amino butyric acid
(d) Dopamine
- Which agent is a specific antidote for belladonna/ Datura Poisoning** [GUJARAT DI - 2021]

(a) Hyoscyamine	(b) Neostigmine
(c) Physostigmine	(d) Homatropine

Autacoids and Related Drugs

INTRODUCTION

1. What is the primary medical use of steroids

[BIHAR DI - 2023]

- (a) To treat inflammation and immune system disorders
- (b) To boost athletic performance
- (c) To enhance mental focus and concentration
- (d) To promote hair growth

2. Which of the following type of cells are distributed throughout connective tissue and release diverse array of mediators of allergic manifestation

[SIKKIM DI - 2020]

- (a) Eosinophils
- (b) Basophils
- (c) Mast cells
- (d) Dendritic cells

3. Mast cells are noted for their high content of Histamine and

[BIHAR DI - 1998]

- (a) Norepinephrine
- (b) Acetylcholine
- (c) Epinephrine
- (d) Heparin

HISTAMINE AND ANTIHISTAMINICS

4. Which drug used as a highly sedative antihistaminics in pre anaesthetic medication

[TN DI - 2024]

- (a) Promethazine
- (b) Chlorpheniramine
- (c) Diphenhydramine
- (d) Dimenhydrinate

5. Burimamide is a full antagonist of which one of the following receptors

[UPSC DI - 2023]

- (a) H₁-receptor
- (b) D₂-receptor
- (c) H₂-receptor
- (d) D-receptor

6. Which of the antihistaminic drug was withdrawn from the market owing to cardiac adverse effects

[ODISHA DI - 2023]

- (a) Cetirizine
- (b) Loratadine
- (c) Terfenadine
- (d) Clemastine

7. _____ are the chief source of histamine in the circulating cells

[MAHARASHTRA DI - 2023]

- (a) Erythrocytes
- (b) Lymphocytes
- (c) Basophils
- (d) Neutrophils

8. Which of the following is NOT a non- sedating

antihistaminic [GUJARAT DI - 2021]

- (a) Levocetirizine
- (b) Fexofenadine
- (c) Pheniramine
- (d) Loratadine

9. The effect of vasodilation is found in

[GUJARAT DI - 2021]

- (a) Serotonin
- (b) Histamine
- (c) Both (a) and (b)
- (d) None of these

10. Which one of the following antihistaminic agents causes serious cardiac dysrhythmias

[ODISHA DI - 2012, HARYANA DI - 2019]

- (a) Fexofenadine
- (b) Terfenadine
- (c) Cetirizine
- (d) Loratadine

11. Chlorpheniramine is used to treat

[GUJARAT DI - 2021]

- (a) Migraine
- (b) Hay Fever
- (c) Rashes
- (d) All of these

12. The H₁ receptor antagonist having a high antimuscarinic action is

[TN DI - 2018]

- (a) Diphenhydramine HCl
- (b) Loratadine
- (c) Fexofenadine
- (d) Hydroxyzine

13. Older adults are especially vulnerable to the side effects of which of these OTCs

[CG DI - 2015]

- (a) Laxatives
- (b) Pain relievers
- (c) Antihistamines
- (d) Decongestants

14. Antihistaminic used to increase appetite in underweight children is

[CG DI - 2015]

- (a) Cetrizine
- (b) Loratadine
- (c) Loxatidine
- (d) Cyproheptadine

15. Which one of the following antihistaminic does NOT prolong QTc interval

[UPSC DI - 2015]

- (a) Terfenadine
- (b) Mizolastine
- (c) Astemizole
- (d) Ebastine

16. The trip response observed upon intradermal injection is the characteristic nature of

[JK DI - 2013]

- (a) Histamine
- (b) Dopamine
- (c) Adrenaline
- (d) Ketamine

17. Which of the H₂ receptor blockers used as an anti-ulcer agent has anti-androgenic action

[JK DI - 2013]

- (a) Famotidine
- (b) Roxatidine
- (c) Ranitidine
- (d) Cimetidine

Hormones and Related Drugs

INTRODUCTION

- Which of the following compounds is the hormone [TN DI - 2018]
 - Noradrenaline
 - Riboflavin
 - Morphine
 - Penicillin
- Which does NOT regulate or modify the reproductive system [TN DI - 2018]
 - Diosgenin
 - Androgen
 - Estrogen
 - Progesterone
- What is the main site of action for steroid hormones [MAHARASHTRA DI - 2012]
 - Cytoplasm
 - Plasma membrane
 - Nucleus
 - Mitochondria
- HbA1c levels range for diabetes [ODISHA DI - 2023]
 - 4.5-5.4%
 - 5.5-6.4%
 - 6.5% and above
 - None of these

ANTERIOR PITUITARY HORMONES

- Gigantism refers to [TN DI - 2024]
 - Decreased production of growth hormone
 - Excess production of growth hormone
 - Decreased production of GHRH
 - Excess production of GHRH
- Match the column [GUJARAT DI - 2024]

(P) Human Growth Hormone
(Q) Melanocyte Stimulating Hormone
(R) Luteinizing Hormone
(S) Prolactin

 - Gonadotrophs
 - Somatotrophs
 - Lactotrophs
 - Corticotrophs
 - (P)-IV, (Q)-II, (R)-I, (S)-III
 - (P)-II, (Q)-IV, (R)-I, (S)-III
 - (P)-III, (Q)-I, (R)-IV, (S)-II
 - (P)-II, (Q)-III, (R)-I, (S)-IV
- Which hormone initiates spermatogenesis [UK DI - 2024]
 - Follicle stimulating hormone

- Estrogen
 - Luteinizing hormone
 - DHEA-S
- Pegvisomant is used for treatment of which one of the following clinical conditions [UPSC DI - 2023]
 - Infertility
 - Pituitary dwarfism
 - Acromegaly
 - Turner syndrome
 - Which is the first-choice drug for hyperprolactinemia [ODISHA DI - 2023]
 - Bromocriptine
 - Cabergoline
 - Quinagolide
 - Pergolide
 - Octreotide is a [ODISHA DI - 2023]
 - Somatostatin analogue
 - Dopamine receptor antagonist
 - Growth hormone antagonist
 - Gonadotropin releasing hormone agonist
 - Prolactin release is inhibited by Prolactin Release Inhibitory Hormone, which is [GUJARAT DI - 2021]
 - Oxytocin
 - Opioid peptide
 - Dopamine
 - None of the above
 - Which of the following substances when present in urine is most likely a positive sign of pregnancy [UPSC DI - 2011, UPSC DI - 2015, HARYANA DI - 2019]
 - Thyroid-stimulating hormone
 - Corticotropin
 - Human chorionic gonadotropin
 - Interstitial cell-stimulating hormone
 - Somatostatin inhibits all EXCEPT [UPSC DI - 2015]
 - Growth hormone
 - Epinephrine
 - Insulin
 - Thyroxine
 - The primary hormone responsible for controlling breast milk production and the drug that decreases serum prolactin level is [JK DI - 2013]
 - Metoclopramide
 - Sulpiride
 - Bromocriptine
 - Haloperidol
 - Which of the following hormones is produced by the hypothalamic gland [MP DI - 2012]
 - Estradiol
 - Growth hormone-releasing hormone (GHRH)
 - Glucagon
 - Aldosterone

- 178. Which statement is INCORRECT regarding Parathyroid hormone (PTH)** [GUJARAT DI - 2021]
- It is secreted by endocrine parathyroid gland
 - It increases the number and activity of Osteoblast cells
 - It increases the number and activity of Osteoclast cells
 - It promotes formation of Calcitriol
- 179. Pamidronate is used in** [RAJASTHAN DI - 2012]
- Paget's disease
 - Menear's disease
 - Hodkin's disease
 - Cushing's disease
- 180. Active form of Vit. D in man is** [GUJARAT DI - 2010]
- Cholecalciferol
 - Calcifediol
 - Calciferol
 - Calcitriol

Drugs Acting on Peripheral Nervous System

SKELETAL MUSCLE RELAXANTS

- _____ is the active principle in the arrow poison of South American Indians, known for neuromuscular blocking activity [GUJARAT DI - 2024]
 - Succinylcholine
 - Pancuronium
 - Tubocurarine
 - None of the above
- The following drug shows synergistic effect with tubocurarine [UK DI - 2024]
 - Propranolol
 - Antiparkinson drug
 - Aminoglycoside antibiotics
 - Antihistaminics
- A preferred skeletal muscle relaxant in patients with renal failure is [GUJARAT DI - 2021]
 - Doxacurium
 - Atracurium
 - Pancuronium
 - None of these
- All of the given four drugs are neuromuscular blocking agents. Choose the CORRECT statement about them [HARYANA DI - 2019]

[P] Gallamine
 [Q] Succinylcholine
 [R] Decamethonium
 [S] d-Tubocurarine

 - [P] & [Q] are competitive neuromuscular blocking agents
 - [Q] & [R] are competitive neuromuscular blocking agents
 - [R] & [S] are competitive neuromuscular blocking agents
 - [P] & [S] are competitive neuromuscular blocking agents
- Which one of the following non-depolarizing blockers can be used as alternative to Succinylcholine for tracheal intubation without the disadvantage of depolarizing block and cardiovascular changes [UPSC DI - 2019]
 - Doxacurium
 - Atracurium
 - Rocuronium
 - Pancuronium
- Centrally acting muscle relaxant [KERALA DI - 2017]
 - Dantrolene sodium
 - D- Tubocurarine
 - Decamethonium
 - Diazepam
- Which neuromuscular blocking agent is contraindicated in patients with glaucoma [HP DI - 2016]
 - Gallamine
 - Pancuronium
 - Succinylcholine
 - Tubocurarine
- Centrally acting muscle relaxant [AP DI - 2012]
 - Halothane
 - d-tubocurarine
 - Mephenesin
 - Succinylcholine
- The neuromuscular blocker that DOES NOT need reversal of action by neostigmine at the end of the operation is [GDC PRACTICE MCQ]
 - d-Tubocurarine
 - Doxacurium
 - Pipecuronium
 - Mivacurium
- Select the skeletal muscle relaxant that is commonly used for endotracheal intubation despite histamine release, K⁺ efflux from muscles and cardiovascular changes [GDC PRACTICE MCQ]
 - Pipecuronium
 - Succinylcholine
 - Pancuronium
 - Cisatracurium
- Neuromuscular blocking drugs DO NOT produce central actions because [GDC PRACTICE MCQ]
 - They do not cross the blood-brain barrier
 - Nicotinic receptors are not present in the brain
 - They are sequestered in the periphery by tight binding to the skeletal muscles
 - They do not ionize at the brain Ph

259. Antifungal agent [AP DI - 2012]

- (a) Griseofulvin (b) Silver sulfadiazine
(c) Ribavirin (d) Neosporin

260. Which of the following antifungal drug causes drug-drug interaction as it has a greater propensity to inhibit mammalian cytochrome P450 enzymes [GUJARAT DI - 2010]

- (a) Itraconazole (b) Fluconazole
(c) Ketoconazole (d) Miconazole

261. Mechanism of action of ketoconazole is [GUJARAT DI - 2010]

- (a) Inhibits ergosterol synthesis
(b) Inhibits DNA gyrase
(c) Inhibits dihydropteroate synthase
(d) Induces translation misreading

262. Absorption of which drug is significantly increased when orally administered with high fat meal [CG DI - 2009]

- (a) Riboflavin (b) Griseofulvin
(c) Ibuprofen (d) Clindamycin

263. The polyene antibiotics primarily act by [MAHARASHTRA DI - 2008]

- (a) Inhibiting fungal ergosterol synthesis
(b) Creating micropores in fungal cell membrane
(c) Inhibiting fungal DNA synthesis
(d) Disorienting microtubules in fungal cells

264. Nystatin belongs to which class of antifungal agents [GUJARAT DI - 2021]

- (a) Imidazole (b) Triazole
(c) Polyene (d) None of these

265. The Vasculitis, a fungal infection in CNS is caused by [GUJARAT DI - 2021]

- (a) Mucormycosis (b) Aspergillosis
(c) Both (a) and (b) (d) None of the above

266. Match the given antifungal drugs with their mechanism of action [MAHARASHTRA DI - 2012]

Column A (Drugs)

(P) Amphotericin B

(Q) Fluconazole

(R) Flucytosine

(S) Terbinafine

Column B (Mechanism)

(i) Inhibits ergosterol synthesis

(ii) Alters permeability of cell membrane

(iii) Inhibits DNA and RNA synthesis

(iv) Accumulation of sterol squalene

- | | (P) | (Q) | (R) | (S) |
|-----|------|-------|-------|-------|
| (a) | (i) | (iii) | (ii) | (iv) |
| (b) | (ii) | (i) | (iii) | (iv) |
| (c) | (ii) | (i) | (iv) | (iii) |
| (d) | (iv) | (ii) | (i) | (iii) |

267. Antifungal agent 5-fluorocytosine is converted to its active metabolite 5-fluorouracil by one of the following fungal enzymes [GDC PRACTICE MCQ]

- (a) Cytosine deacetylase
(b) Cytosine reductase
(c) Cytosine demethylase
(d) Cytosine deaminase

268. Which antifungal acts by non-competitive inhibition of squalene epoxidase there by inhibition of ergosterol synthesis [GDC PRACTICE MCQ]

- (a) Caspofungin (b) Amphotericin B
(c) Terbinafine (d) Ketoconazole

269. Fluconazole differs from Ketoconazole in that [GDC PRACTICE MCQ]

- (a) It is not active by the oral route
(b) It is a more potent inhibitor of drug metabolism
(c) It is not effective in cryptococcal meningitis
(d) It produces anti-androgenic side effects

ANTIVIRAL DRUGS (NON-RETROVIRUS)

270. Amantadine, antiviral drug is active against [TN DI - 2024]

- (a) Influenza type A virus
(b) Adenoviruses
(c) Pox virus
(d) Herpes viruses

271. Amantadine is clinically effective in preventing and treating viral infection caused by [GUJARAT DI - 2024]

- (a) Influenza A
(b) Asian influenza virus A2
(c) H1N1 virus
(d) All of the above

181-d	182-a	183-d	184-a	185-b	186-c	187-a	188-a	189-a	190-c
191-b	192-b	193-c	194-b	195-b	196-d	197-c	198-b	199-c	200-c
201-a	202-a	203-a	204-c	205-a	206-c	207-d	208-c	209-d	210-b
211-d	212-d	213-b	214-a	215-a	216-b	217-b	218-a	219-d	220-a
221-b	222-c	223-a	224-b	225-c	226-a	227-b	228-c	229-d	230-b
231-b	232-a	233-d	234-b	235-a	236-b	237-b	238-a	239-b	240-b
241-b	242-a	243-c	244-c	245-b	246-c	247-a	248-b	249-d	250-d
251-a	252-d	253-c	254-b	255-b	256-b	257-c	258-c	259-a	260-c
261-a	262-b	263-b	264-c	265-c	266-b	267-d	268-c	269-d	270-a
271-d	272-a	273-d	274-a	275-a	276-d	277-b	278-a	279-c	280-c
281-d	282-a	283-c	284-a	285-c	286-a	287-a	288-c	289-a	290-a
291-c	292-b	293-a	294-b	295-b	296-a	297-c	298-a	299-a	300-b
301-d	302-c	303-b	304-b	305-a	306-c	307-c	308-d	309-a	310-d
311-d	312-c	313-a	314-c	315-a	316-a	317-a	318-a	319-d	320-d
321-c	322-c	323-b	324-d	325-b	326-d	327-d	328-b	329-a	330-a
331-d	332-d	333-a	334-c	335-d	336-c	337-c	338-b	339-a	340-a
341-b	342-a	343-b	344-b	345-b	346-c	347-c	348-a	349-a	350-b

CHEMOTHERAPY OF NEOPLASTIC DISEASE

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

MISCELLANEOUS DRUGS

1-d	2-b	3-a	4-d	5-b	6-a	7-d	8-b	9-c	10-b
11-a	12-d	13-b	14-a	15-a	16-a	17-d	18-c	19-d	20-a
21-b	22-b	23-d	24-c	25-a	26-d	27-b	28-c	29-a	30-d
31-d	32-b	33-a	34-b	35-c	36-b	37-d	38-a	39-c	40-c
41-c	42-a	43-b	44-a	45-b	46-c	47-a	48-b	49-a	50-a
51-d	52-a	53-b	54-c	55-b	56-d	57-d	58-d	59-b	60-b

MATCH THE FOLLOWING TYPE QUESTIONS

1-b	2-c	3-d	4-d	5-a	6-c	7-d	8-d	9-c	10-b
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PHARMACOGNOSY

Introduction of Pharmacognosy

HISTORY, DEFINITION AND SCOPE OF PHARMACOGNOSY

- 1. Which one of the following is the Pharmacopoeial definition of crude drug** [GUJARAT DI - 2021]
 - (a) Dried part of the plant
 - (b) Plant part or its preparation described in the pharmacopoeia
 - (c) Plant part used in medicine
 - (d) None of these
- 2. Who is credited for isolation of Narcotine from opium** [MEGHALAYA DI - 2019]
 - (a) Derosne
 - (b) Sertuerner
 - (c) Pelletier
 - (d) Stass and Otto
- 3. Drug obtained from animal source** [AP DI - 2012]
 - (a) Dicoumarol
 - (b) Heparin
 - (c) Senna
 - (d) Cocaine
- 4. In _____ herbal medicinal preparations are more in demand than the pharmaceutical preparations** [TN DI - 2019]
 - (a) Japan
 - (b) China
 - (c) Korea
 - (d) Germany
- 5. Which of the following statements is NOT CORRECT** [GUJARAT DI - 2024]
 - (a) Traditional Indian Ayurvedic System of Medicine is not patentable
 - (b) New use of herbal medicine is not patentable
 - (c) New isolation process of a phytoconstituent is patentable
 - (d) Modification in traditional ayurvedic formulation is patentable
- 6. WHO guidelines on GMP for herbal medicine do NOT include which of the following explicitly** [TN DI - 2018]
 - (a) Sanitation and hygiene
 - (b) Training
 - (c) Quality control
 - (d) Ethics
- 7. Following are the statement regarding the history of Pharmacognosy** [GDC PRACTICE MCQ]
 - [P] Pen-t Sao - contain 365 drugs each day of the year
 - [Q] Charak Samhita and Sushruta Samhita are well known treaties in ayurveda
 - [R] Bentham and Hooker introduce binomial nomenclature
 - [S] Gentle fosse coined the term aromatherapy

Choose the correct combination of statements

 - (a) P is true, Q is true, R is false and S is true
 - (b) P is true, Q is false, R is true and S is false
 - (c) P is true, Q is true, R is true and S is false
 - (d) P is false, Q is true, R is false and S is true
- 8. Which among the following is incorrect pair** [GDC PRACTICE MCQ]
 - (a) Dioscorides – Father of Pharmacognosy
 - (b) Hippocrates – Father of experimental physiology
 - (c) Sushrut – Father of cosmetic surgery
 - (d) Aristotle – Father of natural history
- 9. Match the following scientist and their extracted drug** [GDC PRACTICE MCQ]

1. Nagai	[P] Pilocarpine
2. Neumann	[Q] Ephedrine
3. Pelletier	[R] Strychnine
4. Gerrard and Hardy	[S] Cocaine

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

191. Caffeine on oxidation with $KClO_3/HCl$ gives

[GDC PRACTICE MCQ]

- (a) Trimethyl alloxan and urea
- (b) Methyl alloxan and dimethyl urea
- (c) 1,3 Dimethyl alloxan and mono methyl urea
- (d) None of the above

192. Theophylline on oxidation gives [GDC PRACTICE MCQ]

- (a) Methyl alloxan + methyl urea
- (b) Alloxan + urea
- (c) Dimethylalloxan + methylurea
- (d) Dimethyl alloxan + urea

GLYCOALKALOID

193. The constituents of Stereo glycol Alkaloid type are present in [MP DI - 2012]

- (a) Aerial part of *Polygala Senega*
- (b) Inner bark of *Quillia saponaria*
- (c) Ripened fruits of *Tribulus terrestris*
- (d) Aerial part of *Solanum khasianum*

194. A glycoalkaloid [GDC PRACTICE MCQ]

[P] Contains sulphur in addition to nitrogen in its molecule

[Q] Is glycosidic in nature

[R] Can be hydrolysed to an alkaloid

[S] Always contains endocyclic nitrogen in its molecule

- (a) P & R
- (b) Q & S
- (c) Q & R
- (d) P & Q

195. Solasodine is used as precursor for

[GDC PRACTICE MCQ]

- (a) Corticosteroids
- (b) Sex hormones
- (c) Oral contraceptives
- (d) All of these

QUINAZOLINE ALKALOIDS

196. Bromhexine HCl is chemically [BIHAR DI - 2008]

- (a) Synthetic derivative of vasicine
- (b) Synthetic derivatives of Brahmi
- (c) Synthetic derivative of Punarnava
- (d) Natural Vasaka

197. *Adhatoda vasica* Leaf is used for treatment of

[ODISHA DI - 2023]

- (a) Cold and Cough
- (b) Tetanus
- (c) Cancer
- (d) Cholera

198. Vasicine is an alkaloid obtained from the plant

***Adhatoda vasica*, which belongs to the family**

[GDC PRACTICE MCQ]

- (a) Apocynaceae
- (b) Acanthaceae
- (c) Scrophulariaceae
- (d) Rutaceae

DITERPENES

199. Select the synonyms of aconite root

[GUJARAT DI - 2010]

- (a) Vachnag
- (b) Monkshood
- (c) All of the above
- (d) None of the above

200. Hydrolysis of Aconitine gives [GDC PRACTICE MCQ]

- (a) Aconine + Benzoic acid
- (b) Aconine + Benzoyl Aconine
- (c) Benzoyl Aconine + Acetic acid
- (d) Benzoyl Aconine + Benzoic acid

Glycosides

INTRODUCTION

1. A polymer of monosaccharide units joined by glycosidic bonds is called [TELANGANA DI - 2023]

- (a) Glycome
- (b) Glypican
- (c) Glycan
- (d) Glycogenin

2. Glycosides are condensation products of

[MP DI - 2017, GUJARAT DI - 2021]

- (a) Sugar + Aglycone
- (b) Sugar + Protein
- (c) Protein + Aglycone
- (d) Fats + Aglycone

3. Acid catalyzed or enzymic hydrolysis of glycosides yields [TN DI - 2018]

- (a) Sugar and ROH
- (b) Non-sugar and RCOOH
- (c) Sugar and RCOOH
- (d) Non-sugar and RCHO

4. Aloe contains which type of glycoside

[TN DI - 2009, BIHAR DI - 2023]

- (a) O-Glycoside
- (b) C-Glycoside
- (c) N-Glycoside
- (d) S-Glycoside

5. Barbaloïn and Sennoside-A can be categorized as ___ and respectively [TN DI - 2009]

- (a) C-Glycoside, O-Glycoside
- (b) O-Glycoside, C-Glycoside
- (c) C-Glycoside, N-Glycoside
- (d) O-Glycoside, N-Glycoside

- (c) Alloxazine ring
(d) Coumarin ring

COUMARIN GLYCOSIDE

191. Xanthotoxin is obtained from [BIHAR DI - 2008]

- (a) Ammi (b) Psoralea
(c) Visnaga (d) Tonka bean

192. Bavchi consists of dried ripe fruits of [HP DI - 2011]

- (a) *Prunus amygdalus* (b) *Ammi visnaga*
(c) *Psoralea corylifolia* (d) *Picrorhiza kurroa*

ALDEHYDE GLYCOSIDE

193. Which of one these isothiocyanate glycosides [BIHAR DI - 2008]

- (a) Sinigrin (b) Salicin
(c) Rutin (d) Quercetin

194. Which one is aldehyde glycoside [BIHAR DI - 2008]

- (a) Vanilla (b) Bearberry
(c) Silymarin (d) Gentian

BITTER GLYCOSIDE

195. Shweta and Pita are the varieties of [GUJARAT DI - 2021]

- (a) Punarnava (b) Aparajita
(c) Bhringraj (d) Shankhpushpi

196. Andrographolides are found in [MP DI - 2012]

- (a) Cinchona (b) Datura
(c) Kalmegh (d) Gentian

197. Which one is known as Indian gentian [BIHAR DI - 2008]

- (a) Quassia (b) Picrorrhiza
(c) Chirata (d) Kalmegh

198. Common substitute of chirata is [BIHAR DI - 2008]

- (a) *S. densifolia* (b) *S. ciliate*
(c) *S. paniculata* (d) All of these

199. Match the following [BIHAR DI - 2008]

- | DRUG | SYNONYM |
|----------------------------|----------------------------|
| (P) Silymarin | (i) St. John's wort |
| (Q) Picrorrhiza | (ii) Bitter wood |
| (R) Quassia | (iii) Indian gentian |
| (S) Hypericum | (iv) Milk thistle |
| (a) P-i, Q-iv, R-ii, S-iii | (b) P-iv, Q-iii, R-ii, S-i |
| (c) P-iv, Q-ii, R-iii, S-i | (d) P-iv, Q-iii, R-ii, S-i |

200. The biological name of a common plant "Mehandi" which is popularly used for hair colouring is [RAJASTHAN DI - 2012, UK DI - 2024]

- (a) *Eclipta alba* (b) *Opuntia dillenii*
(c) *Lawsonia inermis* (d) *Rubia cordifolia*

Volatile Oil

INTRODUCTION

1. Volatile oil belongs to the category of [TN DI - 2019]

(a) Steroids (b) Terpenes
(c) Alkaloids (d) Fixed oils
2. Volatile oil containing bark drug is [TN DI - 2024]

(a) Cinchona (b) Kurchi
(c) Cinnamon (d) Clove
3. Citral is chemically [TN DI - 2024]

(a) Sesquiterpene aldehyde
(b) Diterpene aldehyde
(c) Monoterpene aldehyde
(d) Monoterpene ketone
4. Salkowski test is applied for identification of [BIHAR DI - 2008]

(a) Protein (b) Steroid & Terpenoid
(c) Tannin (d) Glycosides
5. Fruit which are derived from the plants Umbelliferae are all the type [TN DI - 2019]

(a) Cremocarp (b) Epicarp
(c) Pericarp (d) Mesocarp
6. Zingiberene is chemically [TN DI - 2024]

(a) Sesquiterpene (b) Monoterpene
(c) Steroid (d) Diterpene
7. Terpenoids are regarded as derivatives of polymers of [UK DI - 2024]

(a) Hemiterpene (b) Monoterpene
(c) Sesquiterpene (d) Polyterpene
8. The basic unit of terpenoids is [UK DI - 2024]

(a) C_8H_{24} (b) C_5H_8
(c) C_7H_{14} (d) C_6H_{12}
9. The chemical formula of 'Sesquiterpene' is [GUJARAT DI - 2021]

(a) C_5H_8 (b) $C_{10}H_{16}$
(c) $C_{15}H_{24}$ (d) CH_3
10. All of the following hydrocarbons are 'Monocyclic monoterpenes' EXCEPT [GUJARAT DI - 2021]

(a) d-Limonene (b) α - Phellandrene
(c) Ocimene (d) Phellandral

8. Lanolin is a synonym for [BIHAR DI - 2008]
 (a) Wool fat (b) Hydrous wool fat
 (c) Lard (d) Wool alcohol
9. Cod liver oil is nutritive due to presence of [GDC PRACTICE MCQ]
 (a) Vitamin A (b) Vitamin A and D
 (c) Vitamin A and E (d) Vitamin E
10. Flax seed is [GDC PRACTICE MCQ]
 (a) Colchicum (b) Linseed
 (c) Nuxvomica (d) Castor
11. Fixed oils turn rancid on storage due to [GDC PRACTICE MCQ]
 (a) Free base (b) Free acidity
 (c) Glycerol (d) Impurity
12. Castor oil is soluble in alcohol due to [GDC PRACTICE MCQ]
 (a) Presence of fatty acids
 (b) Presence of sulphadryl group
 (c) Presence of hydroxyl group in ricinoleic acid
 (d) None of the above
13. Cathartic property of castor oil is due to [GDC PRACTICE MCQ]
 (a) Ricinolein acid (b) Linoleic acid
 (c) Stearic acid (d) Sebacic acid
14. The enzyme present in linseed is known as [GDC PRACTICE MCQ]
 (a) Urokinase (b) Linase
 (c) Peroxidase (d) Streptokinase
15. Shark liver oil (1 ml) is dissolved in chloroform (10 ml). Few drops of saturated solution of antimony trichloride. A blue colour is formed due to the presence of [GDC PRACTICE MCQ]
 (a) Vitamin D (b) Vitamin C
 (c) Vitamin E (d) Vitamin A
16. Saponification claud test is for [GDC PRACTICE MCQ]
 (a) Yellow beeswax (b) Halibut liver oil
 (c) Lard (d) Suet
17. Which drug is use in the treatment of xerophthalmia [GDC PRACTICE MCQ]
 (a) Shark liver oil (b) Cocoa butter
 (c) Lard (d) Bees wax
18. Lignin derivative present in sesame oil [GDC PRACTICE MCQ]

- (a) Sesamin and sesamolin
 (b) Sesamol
 (c) Linoleic and oleic acid
 (d) Gingelic acid

19. Olive oil chiefly contains [GDC PRACTICE MCQ]
 (a) Ocarin (b) Oparin
 (c) Olein (d) Otarin
20. The raw arachis oil contains a poisonous substance known as [GDC PRACTICE MCQ]
 (a) Ajmalicine (b) Agaropectin
 (c) Ajmaline (d) Aflatoxin

Tannins & Resins

TANNINS

1. All of the following about 'Tannins' is true; Except [GUJARAT DI - 2021]
 (a) Tannins are NOT precipitated by salts of tin and lead
 (b) It forms colloidal solutions with water and are non-crystalline substances
 (c) They are precipitated by chromic acid solution
 (d) They show colour reactions with iron salts
2. Pseudo tannin containing which of the following character [BIHAR DI - 2008]
 (a) Don't obey Goldbeater skin test
 (b) Low molecular weight
 (c) Both (a) and (b)
 (d) None of these
3. What is NOT true for tannins [HARYANA DI - 2019]
 (a) They are polyphenolic substances detected by Goldbeater's skin test
 (b) They produce colour reaction with ferric chloride solution
 (c) They are of Hydrolysable, condensed, pseudo and complex types
 (d) They have restricted distribution only in the genera Hamamelis and Quercus
4. Gold beater's skin test is used for the identification of [TNN DI - 2024]
 (a) Glycosides (b) Tannins
 (c) Alkaloids (d) Flavonoids



PHARMACEUTICAL CHEMISTRY

PHYSICAL CHEMISTRY

Solution and Colligative Properties

- The relationship in osmotic pressure can be expressed as** [TN DI - 2024]
(a) $PV = nRT$ (b) $P_1 = N_1P_1^\circ$
(c) $\Delta T_F = K_F m$ (d) $\Delta T_b = K_b m$
- What is the quantity of dextrose required to prepare a solution isotonic with blood plasma. The molecular weight of dextrose is 180 and it is non-ionizing** [MP DI - 2022]
(a) 8.5 grams (b) 10.2 grams
(c) 5.4 grams (d) 5 grams
- Isotonic solutions have same** [GUJARAT DI - 2021]
(a) Density (b) Molar concentration
(c) Normality (d) None of these
- The value of Henry's Law constant is** [GUJARAT DI - 2021]
(a) Greater for gases with higher solubility
(b) Greater for gases with lower solubility
(c) Constant for all gases
(d) Not related to solubility of gases
- Choose the CORRECT statement for monobasic acids and monoacidic bases** [JK DI - 2013]
(a) Molar and normal solutions are identical in concentration
(b) Molar and normal solutions are not identical in concentration
(c) Concentration of molar solution is double of normal solution
(d) Concentration of normal solution is double of molar solution
- Which law governs the relative lowering of vapour pressure in solution** [GUJARAT DI - 2021]
(a) Van't Hoff Law (b) Boyle's Law
(c) Amagat's Law (d) Raoult's Law
- Colligative properties depend on** [GUJARAT DI - 2021]
(a) Nature of solute particles
(b) Number of solute particles
(c) Physical properties of solute particles
(d) Nature of solvent particles
- The vapour pressure of a solution containing a non-volatile solute is directly proportional to** [GUJARAT DI - 2021]
(a) Solvent molality
(b) Solute osmotic pressure
(c) Solvent molarity
(d) Solvent mole fraction
- The number of moles of solute dissolved in a litre of solution is called** [GUJARAT DI - 2021]
(a) Molarity (b) Molality
(c) Normality (d) None of these
- The colligative properties of a solution are related to the following** [HP DI - 2020]
(a) Number of ions present in the solution
(b) Number of solute particles
(c) pH of the solution
(d) Density of the solution
- The mole fraction of C_2H_5OH in a solution containing 46 g of Ethanol and 64 g of Methanol is** [GUJARAT DI - 2021]
(a) $1/3$ (b) $1/2$
(c) $2/3$ (d) $1/4$

41. For a reaction to be spontaneous at all temperatures [GDC PRACTICE MCQ]
- $\Delta G - ve, \Delta H + ve$ and $\Delta S +ve$
 - $\Delta G + ve, \Delta H - ve$ and $\Delta S +ve$
 - $\Delta G - ve, \Delta H -ve$ and $\Delta S -ve$
 - $\Delta G - ve, \Delta H -ve$ and $\Delta S +ve$
42. A process in which volume remains constant, is called [GDC PRACTICE MCQ]
- Isochoric process
 - Isothermal process
 - Adiabatic process
 - Isobaric process
43. A gas contained in a cylinder filled with a piston constitutes [GDC PRACTICE MCQ]
- An open system
 - A heterogeneous system
 - A closed system
 - An isolated system
44. The heat content of the system is called [GDC PRACTICE MCQ]
- Internal energy
 - Enthalpy
 - Free energy
 - Entropy
45. The entropy of the universe is always increasing is [GDC PRACTICE MCQ]
- Zerth law of thermodynamics
 - First law of thermodynamics
 - Second law of thermodynamics
 - Third law of thermodynamic
46. In which of the following process work is independent of path [GDC PRACTICE MCQ]
- Isothermal
 - Isochoric
 - Adiabatic
 - Isobaric
47. Which of the following statements is true [GDC PRACTICE MCQ]
- ΔG may be lesser or greater or equal to ΔH
 - ΔG is always proportional to ΔH
 - ΔG is always greater than ΔH
 - ΔG is always less than ΔH
48. Thermodynamics, a process is called reversible when [GDC PRACTICE MCQ]
- The surroundings are always in equilibrium with the system
 - There is no boundary between system and surroundings
 - The surroundings and system change into each other

- The system changes into the surroundings spontaneously
49. Which of the following statement is TRUE for ΔG [GDC PRACTICE MCQ]
- It is always proportional to ΔH
 - It may be less than or greater than or equal to ΔH
 - It is always greater than ΔH
 - It is always less than ΔH
50. The first law of thermodynamics states that [GDC PRACTICE MCQ]
- Energy cannot be created or destroyed
 - The entropy of an isolated system always increases over time
 - Heat flows spontaneously from a hot object to a cold object
 - It is impossible to reach absolute zero in a finite number of steps

Electro Chemistry

51. By convention, standard electrode potential is taken as [ODISHA DI - 2023]
- Oxidation potential
 - Reduction potential
 - Redox potential
 - None of these
52. The cell constant of a conductivity cell [ODISHA DI - 2023]
- Changes with a change of concentration of electrolyte
 - Remains constant for a cell
 - Changes with a change of electrolyte
 - Changes with change in temperature
53. If both the electrode potential values are expressed as reduction potentials, then the potential of the cell (emf) is the [ASSAM DI - 2022]
- Sum of the two electrode potentials
 - Multiplication of the two electrode potentials
 - Potential of reduction electrode minus the potential of oxidation electrode
 - Potential of oxidation electrode divided by the potential of reduction electrode

INORGANIC CHEMISTRY

Limit Test

- In limit test for chloride the opalescence produced is due to formation of** [TN DI - 2024]
 - Silver nitrate
 - Silver chloride
 - Silver sulphate
 - Silver iodide
- As per the Indian Pharmacopoeia procedure, the total volume is fifty-one m/n in the limit test of** [UK DI - 2024]
 - Sulphate
 - Heavy metals
 - Chloride
 - Iron
- What is the principle of the limit test for sulphate using barium chloride** [GUJARAT DI - 2024]
 - Sulphate ions form a black precipitate
 - Sulphate ions form a white precipitate
 - Sulphate ions form a yellow precipitate
 - Sulphate ions form no precipitate
- Thioglycolic acid is added in the limit test for** [BIHAR DI - 2023, TN DI - 2024]
 - Sulphate
 - Chloride
 - Iron
 - Arsenic
- In the limit test for arsenic, yellow stain is produced by the reaction of arsine with** [TN DI - 2024]
 - Stannous chloride
 - Magnesium chloride
 - Strontium chloride
 - Mercuric chloride
- Which of the following inorganic impurities is common in pharmaceutical substances** [GUJARAT DI - 2024]
 - Heavy metals
 - Sulphates
 - Chlorides
 - All of these
- Modified Gutzeit test is the method of limit test for** [JK DI - 2013, KERALA DI - 2017, MAHARASHTRA DI - 2023, UPSC DI - 2023, UK DI - 2024]
 - Lead
 - Arsenic
 - Iron
 - Heavy metals
- Alcohol is added during limit of sulphate to** [TN DI - 2009, JK DI - 2013, GUJARAT DI - 2021, BIHAR DI - 2023]
 - Make the solution ionic
 - Prevent super saturation
 - Make the solution volatile
 - None of these
- In the limit test for iron, the following compound helps to prevent the precipitation iron as ferrous hydroxide** [HP DI - 2021, MAHARASHTRA DI - 2023]
 - Ammonia
 - Thioglycolic acid
 - Dilute Hydrochloric acid
 - Citric acid
- Lead acetate cotton is used in the limit test for** [BIHAR DI - 2023]
 - Chloride
 - Arsenic
 - Sulphate
 - Iron
- The colour of the stain in limit test for arsenic is** [BIHAR DI - 2023]
 - Red
 - Blue
 - Yellow
 - White
- Which of the following is used in the limit test for aluminium** [BIHAR DI - 2023]
 - Pyrazole
 - Tryptophan
 - Cystine
 - Hydroxyquinoline
- Hydrogen sulphide is used in the limit test of** [BIHAR DI - 2023]
 - Chloride
 - Aluminium
 - Heavy Metals
 - Arsenic
- Expanded form of dithizone, which is used in the limit test for lead is** [MAHARASHTRA DI - 2012, MAHARASHTRA DI - 2023]
 - Diphenyl carbazone
 - Diphenyl thionzone
 - Diphenyl thiocarbazone
 - Diphenylamine

141. Roentgen is the [GDC PRACTICE MCQ]
 (a) Unit of radioactivity
 (b) Unit of absorbed dose
 (c) Unit of measuring ionizing radiation
 (d) Unit of exposure
142. Which one is NOT a stable isotope [GDC PRACTICE MCQ]
 (a) Uranium (b) Carbon-12
 (c) Chlorine-35 (d) Hydrogen-2
143. Listed below are some of the common radio nuclides used in nuclear pharmacy. Which one is generator produced [GDC PRACTICE MCQ]
 (a) ^{201}Ti (b) ^{67}Ga
 (c) 133 (d) Tc-99m
144. Which salt of $^{99\text{m}}\text{Tc}$ is used to study liver, spleen and bone marrow [GDC PRACTICE MCQ]
 (a) Pertechnetate (b) Mertiatide
 (c) Disofenin (d) Sulfide
145. Which of the following ratio of natural abundance of isotopes of chlorine is CORRECT [GDC PRACTICE MCQ]
 (a) $^{35}\text{Cl}_{17}$ is 75% and $^{37}\text{Cl}_{17}$ is 25%
 (b) $^{35}\text{Cl}_{17}$ is 50% and $^{37}\text{Cl}_{17}$ is 50%
 (c) $^{35}\text{Cl}_{17}$ is 25% and $^{37}\text{Cl}_{17}$ is 75%
 (d) $^{35}\text{Cl}_{17}$ is 60% and $^{37}\text{Cl}_{17}$ is 40%
146. Which of the following is an Iron radioactive isotope used in field of medicine [GDC PRACTICE MCQ]
 (a) Iron 59 (b) Iron 10
 (c) Iron 100 (d) Iron 66
147. A substance that emits radiation and is used in diagnosis or therapy is called a [GDC PRACTICE MCQ]
 (a) Radioisotope
 (b) Radiopharmaceutical
 (c) Radioprotector
 (d) Tracer
148. Radioisotope P-32 used for the treatment of [GDC PRACTICE MCQ]
 (a) Hyperthyroidism
 (b) Carcinoma of bone
 (c) Thyroid cancer
 (d) Polycythemia vera
149. Agent used as a contrast medium in the X-ray examination of gallbladder [GDC PRACTICE MCQ]
 (a) Cinnamic acid (b) Iothalamic acid
 (c) Iopanoic acid (d) Mandelic acid
150. Which one of the following elements is radioactive [GDC PRACTICE MCQ]
 (a) C (b) Br
 (c) ^{32}P (d) H

ORGANIC CHEMISTRY

Classification and Nomenclature of Organic Compounds

1. Which of the following is the CORRECT IUPAC name of the following compound [GUJARAT DI - 2024]
- $$\text{H}_3\text{C}-\text{CH}_2-\text{CH}=\underset{\text{CH}_2\text{CH}_3}{\text{C}}-\text{CH}_3$$
- (a) 4-ethylpent-3-ene (b) 2-ethylpent-2-ene
 (c) 3-methylhex-3-ene (d) 4-methylhex-3-ene
2. The IUPAC name of the compound having the formula $(\text{CH}_3)_2\text{CHCH}_2\text{Cl}$ [GUJARAT DI - 2010]
 (a) 2-methyl-3-chloropropane
 (b) 1-chloro-2-methylpropane
 (c) 1-chloropentane
 (d) 2-methyl-4-chlorobutane
3. The IUPAC name of the compound $\text{CH}_3\text{COCH}_2\text{CH}_2\text{CH}_3$ is [CG DI - 2009]
 (a) Methyl propyl ketone (b) Methyl propanone
 (c) Methyl butanone (d) None of these
4. Which of the following has a bridged ring system [GUJARAT DI - 2021]
 (a) Heptane (b) Norbornane
 (c) Octane (d) Decane
5. Carbon has six electrons its outer shell but is [BIHAR DI - 1998]
 (a) Bivalent compound
 (b) Trivalent compound
 (c) Tetravalent compound
 (d) Compound with variable valency

6. The correct decreasing order of preference of functional groups during the IUPAC nomenclature of polyfunctional compounds is

[GDC PRACTICE MCQ]

- (a) $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{CONH}_2$, $-\text{CHO}$
 (b) $-\text{SO}_3\text{H}$, $-\text{COOH}$, $-\text{CONH}_2$, $-\text{CHO}$
 (c) $-\text{CHO}$, $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{CONH}_2$
 (d) $-\text{CONH}_2$, $-\text{CHO}$, $-\text{SO}_3\text{H}$, $-\text{COOH}$

General Organic Chemistry

HYBRIDIZATION, POLAR AND NONPOLAR BONDS, ELECTRONIC DISPLACEMENT IN COVALENT BONDS, CLEAVAGE OF COVALENT BONDS

7. Hybridization of Carbon in carbonyl group is

[GUJARAT DI - 2021]

- (a) sp (b) sp^2
 (c) sp^3 (d) None of these

8. Which of the following compounds have planer molecules

[MP DI - 2012]

- (a) 1,3- Butadiene (b) Dimethyl Ether
 (c) 1- Butene (d) Allene

9. Parameter that indicates polarity of a solvent is

[UPSC DI - 2023]

- (a) Dissociation constant
 (b) Dielectric constant
 (c) Boiling point
 (d) Freezing point

10. Which of the following is most basic in nature

[GUJARAT DI - 2021]

- (a) Amides (b) Amines
 (c) Morpholine (d) Methenamine

11. Which of the following is most acidic in nature

[GUJARAT DI - 2021]

- (a) Acetic Acid (b) Water
 (c) Methanol (d) Acetone

12. Which of the bonds in ethyl alcohol ($\text{CH}_3\text{CH}_2\text{OH}$) will most readily undergo heterolytic bond fission

[MP DI - 2012]

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

ATTACKING REAGENTS, REACTION INTERMEDIATE AND TYPE OF ORGANIC REACTION

13. Diazonium ions are

[MAHARASHTRA DI - 2014]

- (a) Weakly electrophilic (b) Strongly electrophilic
 (c) Weakly nucleophilic (d) Strongly nucleophilic

14. CORRECT order of nucleophilicity protic

[ODISHA DI - 2023]

- (a) $\text{Cl}^- < \text{Br}^- < \text{I}^-$ (b) $\text{Br}^- < \text{Cl}^- < \text{I}^-$
 (c) $\text{I}^- < \text{Br}^- < \text{Cl}^-$ (d) $\text{I}^- < \text{Cl}^- < \text{Br}^-$

15. Which of the following statements regarding the $\text{S}_{\text{N}}1$ Mechanism is WRONG

[GUJARAT DI - 2024]

- (a) $\text{S}_{\text{N}}1$ reactions are unimolecular
 (b) $\text{S}_{\text{N}}1$ reactions are first order
 (c) The $\text{S}_{\text{N}}1$ mechanism involves a single step
 (d) $\text{S}_{\text{N}}1$ reactions usually occur in two steps

16. Reactive intermediate in $\text{S}_{\text{N}}1$ reaction is

[UPSC DI - 2023]

- (a) Carbene (b) Carbanion
 (c) Free radical (d) Carbocation

17. Which of the following is NOT an example of a concerted reaction

[GUJARAT DI - 2021]

- (a) Diels-Alder (b) E_2
 (c) $\text{S}_{\text{N}}1$ (d) $\text{S}_{\text{N}}2$

18. The reaction between methyl bromide and hydroxide ion to yield methanol is a/an

[UPSC DI - 2023]

- (a) $\text{S}_{\text{N}}2$ reaction (b) $\text{S}_{\text{N}}1$ reaction
 (c) E_2 reaction (d) E_1 reaction

19. Which is the most reactive in electrophilic substitution

[GUJARAT DI - 2024]

- (a) Acetyl benzene (b) Ethyl benzene
 (c) Chloro benzene (d) Methoxy benzene

20. Benzyne formation takes place during

[UPSC DI - 2023]

- (a) Nucleophilic aromatic substitution
 (b) $\text{S}_{\text{N}}1$ reaction
 (c) $\text{S}_{\text{N}}2$ reaction
 (d) Electrophilic aromatic substitution

21. Ethanoic anhydride CANNOT undergo a substitution reaction with

[GUJARAT DI - 2024]

- (a) CH_3NH_2 (b) CH_3OH
 (c) NaCl in CH_3COOH (d) Aqueous NaOH

126. How many stereo isomers are possible for the compound [MAHARASHTRA DI - 2016]



- (a) 2 (b) 3
(c) 4 (d) 5

127. Diastereomers possess different physical properties because [HARYANA DI - 2019]

- (a) They are mirror images of each other
(b) They are conformationally dissimilar isomers
(c) They are configurationally similar isomers
(d) They are configurationally different isomers

128. Following are the elements of symmetry in organic molecules EXCEPT the one [HARYANA DI - 2019]

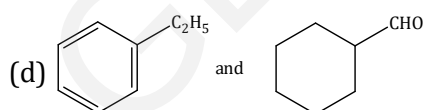
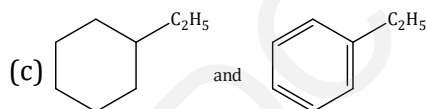
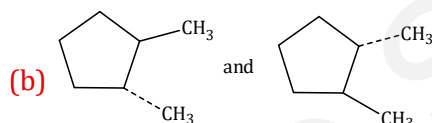
- (a) Plane of symmetry
(b) Alternating axis of symmetry
(c) Center of symmetry
(d) Alternating center of symmetry

129. The given rotation used in front of the name of an organic compound means that the compound is dextrorotatory [HARYANA DI - 2019]

- (a) D- (b) d-
(c) R- (d) Z-

130. Which of the following pair indicates isomers [MAHARASHTRA DI - 2008]

- (a) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$ and $\text{CH}_3\text{CH}_2\text{CH}_3$



131. What is NOT related to angle strain [MP DI - 2022]

- (a) Deviation in bond angles
(b) Increase in potential energy
(c) Decrease in potential energy
(d) Deviation in C-C angle

132. Propanone and 2-hydroxy propene are [GDC PRACTICE MCQ]

- (a) Position isomers (b) Rotamers
(c) Chain Isomers (d) Tautomers

133. Which of the following shows functional isomerism [GDC PRACTICE MCQ]

- (a) $\text{CH}_3\text{CH}_2\text{Cl}$ & $\text{CH}_3\text{CH}_2\text{Br}$
(b) CH_3CHBr_2 & $\text{CH}_2\text{Br.CH}_2\text{Br}$
(c) $\text{C}_2\text{H}_5\text{OC}_2\text{H}_5$ & $\text{CH}_3\text{OC}_3\text{H}_7$
(d) $\text{CH}_3\text{CH}_2\text{CHO}$ & CH_3COCH_3

134. Neopentane and 2-methyl butane are the pair of which of the following [GDC PRACTICE MCQ]

- (a) Positional isomers (b) Chain isomers
(c) Tautomers isomers (d) Diastereomers

135. Diethyl ether and methyl n-propyl ether are [GDC PRACTICE MCQ]

- (a) Position isomers (b) Functional isomers
(c) Metamers (d) Chain isomers

136. Identify pair of C_4 epimers [GDC PRACTICE MCQ]

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

137. Which of the following compounds exhibit geometrical isomerism [GDC PRACTICE MCQ]

- (a) 1-pentene (b) 2-methyl-2-pentene
(c) 2-pentene (d) 2-methyl-2-butene

138. Which of the following is an optically active compound [GDC PRACTICE MCQ]

- (a) 1-Butanol (b) 1-Propanol
(c) 2-Chloro butane (d) 4-Hydroxy heptane

139. The following isomeric structures is cis-trans isomers [GDC PRACTICE MCQ]

- (a) Enantiomers (b) Diastereomers
(c) Regioisomers (d) Atropisomer

140. Which type of isomerism present in R and S system [GDC PRACTICE MCQ]

- (a) Absolute configuration
(b) Relative configuration
(c) Conformational isomerism
(d) Optical isomerism

141. Separation of racemic mixture is known as [GDC PRACTICE MCQ]

- (a) Racemization (b) Resolution
(c) Hybridization (d) Racemic separation

192. Product formed in pinacol-pinacolone rearrangement [GDC PRACTICE MCQ]

- (a) Aldehyde (b) Ketones
(c) Phenols (d) Both (a) and (b)

193. Sigmatropic rearrangement is [GDC PRACTICE MCQ]

- (a) Diminish efficiency of Enantioselective synthesis
(b) Reduce efficiency of Enantioselective synthesis
(c) Decrease to some extent its efficiency
(d) Enhance the efficiency

194. Lindlar's catalyst is [GDC PRACTICE MCQ]

- (a) Platinum bromide + calcium oxide + lead acetate
(b) Palladium chloride + calcium carbonate + lead acetate
(c) Chromic acid + lead acetate + Sulfuric acid
(d) Nitric acid + sulfuric acid and + Palladium chloride

195. Which one of the following statements correct for oppenauer oxidation [GDC PRACTICE MCQ]

- (a) Oxidation of primary and secondary alcohols to aldehydes and ketones
(b) Conversion of ketones to secondary alcohols
(c) Primary alcohol to aldehyde and ketones
(d) Conversion of secondary alcohols to ketones

196. Epoxy ester is formed as a final product in, which reaction [GDC PRACTICE MCQ]

- (a) Darzen reaction (b) Birch reaction
(c) Mannich reaction (d) Cannizaro reaction

197. Wolff-kishner reduction involves [GDC PRACTICE MCQ]

- (a) Amalgamated zinc (b) Conc. HCl
(c) Hydrazine (d) All of these

198. Caprolactam is synthesized from [GDC PRACTICE MCQ]

- (a) Beckmann rearrangement
(b) Friedel craft Reaction
(c) Aldol Condensation Reaction
(d) Wittig Reaction

199. Fries rearrangement reaction of phenol ester leads to the formation which type of product [GDC PRACTICE MCQ]

- (a) Alkene (b) Aldehyde
(c) Alcohol (d) Ketone

200. Choose the correct option for Reimer-Tiemann reaction [GDC PRACTICE MCQ]

- (a) Salicylaldehyde is formed and NaOH is used as a catalyst
(b) Catechol is formed and NaOH is used as a catalyst
(c) Salicylaldehyde is formed and Pd-BaSO₄ is used as a catalyst
(d) Catechol is formed and Pd-BaSO₄ is used as a catalyst

MEDICINAL CHEMISTRY

Introduction of Medicinal Chemistry

1. The statistical parameter which is a measure of how well physicochemical parameter in the QSAR equation explain the observed variance in activity [TN DI - 2024]

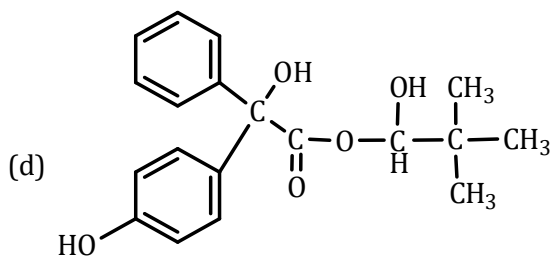
- (a) Correlation coefficient
(b) Slope of the line
(c) Standard deviation
(d) Root mean square value

2. Which of the following is one of the rules in Lipinski's rule of five [GUJARAT DI - 2024]

- (a) A molecular weight equal to 500
(b) No more than five hydrogen bond acceptor groups
(c) No more than 10 hydrogen bond donor groups
(d) A calculated log P value less than + 5

3. QSAR stands for [GUJARAT DI - 2011]

- (a) Qualitative structure activity relationship
(b) Quantitative structure action relationship
(c) Quantitative structure activity relationship
(d) Qualitative structure activity relativity



16. Atropine is the [TN DI - 2019]
 (a) Ester (b) Alcohol
 (c) Aldehyde (d) Ketone
17. Homatropine is a [GUJARAT DI - 2010] [UPSC DI - 2019]
 (a) Tropine ester of Mandelic acid
 (b) Tropine ester of amino acetic acid
 (c) Tropine ester of amino formic acid
 (d) Tropine methyl bromide ester of Mandelic acid
18. Which of the following is anticholinergic drug [TN DI - 2009]
 (a) Carbachol (b) Phenylephrine
 (c) Eucatropine (d) Procainamide
19. Homatropine is a semisynthetic obtained or synthesized by reacting [TN DI - 2009]
 (a) Tropine and Succinic acid
 (b) Tropine and Malic acid
 (c) Tropine and Fumaric acid
 (d) Tropine and Mandelic acid
20. The presence of a chiral center in the tropic acid moiety of Atropine means that it exists as [TN DI - 2012]
 (a) A single, achiral compound
 (b) A racemic mixture of two enantiomers
 (c) A single, optically active enantiomer
 (d) A mixture of diastereomers
21. Tropane system is fusion of [UPSC DI - 2011]
 (a) Pyrrolidine and piperidine
 (b) Pyrrolidine and Pyrimidine
 (c) Pyrrole and pyrazine
 (d) Thiophene and Piperidine
22. Starting material for synthesis of Salbutamol is [BIHAR DI - 2008]
 (a) 4-hydroxy-3-hydroxymethyl benzaldehyde
 (b) 3-hydroxy-4-hydroxymethyl benzaldehyde
 (c) 3-methoxy-4-hydroxymethyl benzaldehyde
 (d) 4-methoxy-3-hydroxymethyl benzaldehyde

23. The most active isomer of Ephedrine is [TN DI - 2012]
 (a) D(-)- Ephedrine (b) DL-(I) Ephedrine
 (c) L(+) Ephedrine (d) L(+) pseudoephedrine
24. Ephedrine possesses how many chiral centers [TN DI - 2009]
 (a) Zero (b) One
 (c) Two (d) Three
25. One of the following is a selective α_2 stimulant [BIHAR DI - 2008]
 (a) Caffeine (b) Salbutamol
 (c) Propranolol (d) Betahistine
26. This makes a compound to act as a central sympathomimetic agent [JK DI - 2013]
 (a) Introduction of beta hydroxyl group in phenylethylamine
 (b) Branching with lower alkyl group on alpha carbon of phenylethylamine
 (c) Halogenations of aromatic ring of phenylethylamine
 (d) Methoxy substitution of aromatic ring of phenylethylamine
27. Which following adrenergic agonist does NOT contain 3,4-dihydroxy nucleus [GUJARAT DI - 2010]
 (a) Ephedrine
 (b) Albuterol
 (c) Phenylpropanolamine
 (d) Terbutaline
28. ____ prepared by the interaction of (4 tert-butyl-2, 6-dimethyl phenyl) acetonitrile with ethylene diamine hydrochloride at an elevated temperature with loss of a mole of ammonia [TN DI - 2019]
 (a) Phenylpropanolamine (b) Xylometazoline
 (c) Naphazoline (d) Oxymetazoline
29.
 [TN DI - 2009]
 (a) Atenolol (b) Metoprolol
 (c) Acebutolol (d) Timolol

122. _____ prepared by the interaction of 2-methyl-2-phenyl succinic acid with excess of 40% methylamine [TN DI - 2018]

- (a) Primidone (b) Sultiame
(c) Carbamazepine (d) Ethosuximide

123. Carbamazepine has [TN DI - 2018]

- (a) Phenothiazine ring
(b) Piperazine ring
(c) Triketo Pyridine ring
(d) None of these

124. Choose the IUPAC name of Carbamazepine

[MP DI - 2012]

- (a) 5-[-3 (dim ethyl amino) ethyl] 10-11 dihydro-5 H dibenzo (b, f) azepine
(b) 5H dibenz (b, f) azepine -5- carboxamide
(c) 5 H dibenz (b, f) azepine - 5- acid chloride
(d) 5[3- dim ethyl amino propyl] 10-11 dihydro-5H dibenz (b, f) azepine

125. Benzylic acid ester on condensation with urea in presence of sodium ethoxide gives [TN DI - 2018]

- (a) Ethotoin (b) Phenytoin
(c) Mephenytoin (d) Primidone

126. Which one of the following belongs to imidazolidine 2,4- dione class [JK DI - 2013]

- (a) Phenytoin (b) Trimethadione
(c) Phensuximide (d) Paramethadione

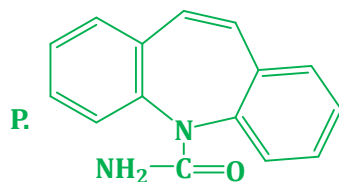
127. Tricyclic antidepressant used as antiepileptic is [JK DI - 2013]

- (a) Carbamazepine (b) Phenytoin
(c) Valproate (d) Ethosuximide

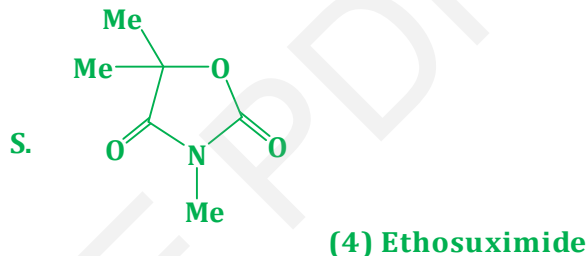
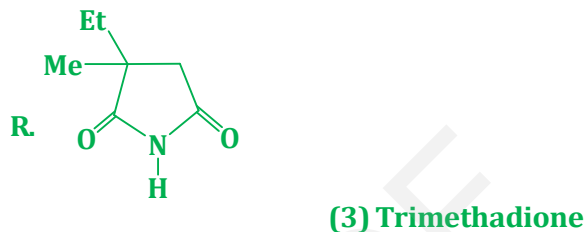
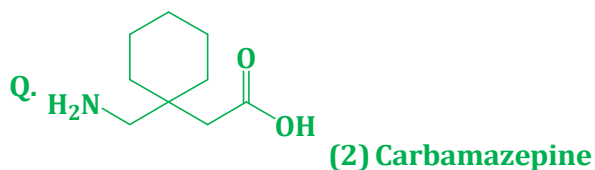
128. The common structure amongst the anticonvulsant drugs like barbiturates, succinimides and hydantoin is [HARYANA DI - 2019]

- (a) Sulphonamide (b) Ureide
(c) Thiazide (d) Tetrahydro pyrimidine

129. Match the following [TN DI - 2012]



(1) Gabapentin



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

130. 5,5 diphenyl (Imidazolidene 2, 4 dione) is used as Imidazolidine [HP DI - 2011]

- (a) Sedative Hypnotic (b) Local Anesthetic
(c) Antiepileptic (d) Vasodilator

131. Carbamazepine is a tricyclic anticonvulsant drug it is a [HP DI - 2011]

- (a) Benzodiazepine derivative
(b) Azepine derivative
(c) Xanthine derivative
(d) Dibenzazepine derivative

132. Chlorpromazine structure contains which of the following heterocycles [JK DI - 2013]

- (a) Piperazine (b) Xanthine
(c) Phenothiazine (d) Thiadiazine

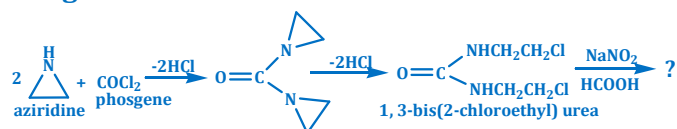
133. Chemically the Phenothiazines have [ASSAM DI - 2022]

- (a) One ring (b) Two rings
(c) Three rings (d) Five rings

134. The presence of electron withdrawing group on which position of phenothiazine is essential for its activity [HP DI - 2020]

- (a) Second (b) Third
(c) Fifth (d) Tenth

495. Which of the following drug will synthesize in given reaction [GDC PRACTICE MCQ]



- (a) Carmustine (b) Busulfan
(c) Lomustine (d) All of these

496. Chlorambucil is derivative of [GDC PRACTICE MCQ]

- (a) Amino phenyl butyric acid
(b) Amino phenyl caproic acid
(c) Amino phenyl glycine
(d) Diamino diphenyl

497. 7H-Purin-6-ol when treated phosphorus pentasulfide, gives [GDC PRACTICE MCQ]

- (a) Mercaptopurine (b) Thioguanine
(c) Azathioprine (d) Dactinomycin

498. Butane-1, 4-diyl dimethanesulfonate is the IUPAC nomenclature of which drug [GDC PRACTICE MCQ]

- (a) Thiotepa (b) Busulfan
(c) Ifosfamide (d) Mechlorethamine

499. What is the starting product for the synthesis of Melphalan [GDC PRACTICE MCQ]

- (a) 4-Nitro-L-phenylalanine
(b) Methanol
(c) Ethylene oxide
(d) Ammonia

500. 2-amino-1H-purine-6(7H)-thione' is the IUPAC nomenclature of which drug [GDC PRACTICE MCQ]

- (a) Dacarbazine (b) Etoposide
(c) Vinblastine (d) 6-Thioguanine

PHARMACEUTICAL ANALYSIS

Error, Accuracy and Precision

1. The number of significant figures in 0.00247 is [TN DI - 2024]

- (a) 6 (b) 5
(c) 3 (d) 2

2. Method validation parameter that denotes how close the measured values lie with each other after repeated measurements under completely identical set of conditions is [ODISHA DI - 2023]

- (a) Precision (b) Accuracy
(c) Reproducibility (d) Robustness

3. Precision of an analytical method for assay of drugs in formulation within laboratory conditions like different days, different analysts, etc. is expressed as [UPSC DI - 2023]

- (a) Repeatability
(b) Reproducibility
(c) Robustness
(d) Intermediate Precision

4. Accuracy of an analytical method is expressed in terms of [GUJARAT DI - 2021]

- (a) Relative Error
(b) Mean
(c) Relative Standard Deviation
(d) Median

5. Errors in an analytical method can be minimised by [GUJARAT DI - 2021]

- (a) Calibration of equipment
(b) Running a blank determination
(c) Running a control determination
(d) All of these

6. The error between mean of finite data set and mean of infinite data set is known as [GOA DI 2020]

- (a) True error of the mean
(b) Standard error of the mean
(c) Finite error
(d) Infinite error

7. Which among the following is a 'Random Error' [GOA DI 2020]

- (a) Instrumental Error (b) Erratic Error
(c) Methodic Error (d) Proportional error

Thermal Analysis

251. The parameter ___ is measured in differential thermal analysis [TN DI - 2024]

- (a) ΔT (b) dm/dt
(c) Mass (d) $dH.dt$

252. Thermal analysis is defined as [GDC PRACTICE MCQ]

- (a) Measurement of concentration of materials as a function of temperature
(b) Measurement of solubility of materials as a function of temperature
(c) Measurement of physical properties as a function of temperature
(d) Measurement of line positions of crystals as a function of temperature

Kjeldahl Method of Nitrogen Estimation

253. Which of the following methods used to determine the Nitrogen [TN DI - 2019]

- (a) Rast method
(b) Kjeldahl method
(c) Oxygen flask combustion method
(d) Cryoscopy method

254. In Kjeldahl method for determination of nitrogen in organic compound, the nitrogen in an organic compound is converted quantitatively to which of the following [ASSAM DI - 2022]

- (a) Ammonia (b) Amines
(c) Cyanides (d) None of these

255. In the Kjeldahl method, the organic compound is first digested with [GDC PRACTICE MCQ]

- (a) Hydrochloric acid (b) Nitric acid
(c) Sulfuric acid (d) Acetic acid

Oxygen Flask Combustion Method

256. Oxygen flask combustion method was developed by [JK DI - 2013]

- (a) K. Fajan (b) Kjeldahl

- (c) Schoriger (d) None of these

Pharmacopoeial Assay

257. Aspirin can be estimated by [TN DI - 2009]

- (a) Non-aqueous titration
(b) Complexometry
(c) Acid-base titration
(d) Dead-stop end point method

258. Assay of calcium gluconate is performed by [JK DI - 2013]

- (a) Direct titration
(b) Indirect titration
(c) Alkalimetric titration
(d) Replacement titration

259. Which is the constituent of basal media for microbiological assay of vitamin B₁₂ [BIHAR DI - 2023]

- (a) D-phenylalanine (b) L-ephedrine
(c) L-cystine (d) None of these

260. Pigeon is used in the bioassay of [BIHAR DI - 2023]

- (a) Aspirin (b) Digitalis
(c) Insulin (d) Ephedrine

261. For glucagon, for injection bioassay [BIHAR DI - 2023]

- (a) Rats are used (b) Sheep are used
(c) Monkeys are used (d) Cats are used

262. In bioassay of protamine sulphate [BIHAR DI - 2023]

- (a) Guinea pigs are used (b) Sheep are used
(c) Monkeys are used (d) Cats are used

263. The ability to stimulate the calcification of rachitic metaphysis in rats is used in bioassay [BIHAR DI - 2023]

- (a) Vitamin A (b) Vitamin B
(c) Vitamin C (d) Vitamin D

264. In bioassay of diphtheria toxoid [BIHAR DI - 2023]

- (a) Rats are used (b) Guinea pigs are used
(c) Monkeys are used (d) Cats are used

265. In microbiological assay of niacin, purification of test solution is not ordinarily important, because [BIHAR DI - 2023]

- (a) All purified reagents are used
(b) *L. plantarum* is unaffected by other substances
(c) Niacin does not react with other substances
(d) None of these

483. An analytical technique suitable for studying the different solid state polymorphic forms of a drug is [ODISHA DI - 2023]

- (a) HPLC (b) DSC
(c) NMR (d) LC-MS

484. The proton signal of OH of benzyl alcohol on the spectrum recorded in 60 MHz NMR equipment occurs at 144 Hz higher frequency than TMS. What is the chemical shift value (ppm) corresponding to this [ASSAM DI - 2022]

- (a) 4.2 (b) 2.4
(c) 1.44 (d) 6.0

485. Identify the chemical shift range of methoxy group [HP DI - 2021]

- (a) 1.5 - 2.2 (b) 3.3 - 3.8
(c) 6.5 - 5.2 (d) 2.0 - 2.6

486. Which of the following is the unit of chemical shift [TN DI - 2009] [RAJASTHAN DI - 2012] [GUJARAT DI - 2021]

- (a) Parts per million (b) Parts per billion
(c) Tesla (d) No unit

487. The relative peak area in doublet 'NMR' should be [SIKKIM DI - 2020]

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

488. How many ¹H-NMR (PMR) signals the octane molecule will give [TN DI - 2018]

- (a) 4 (b) 5
(c) 2 (d) 3

489. Recommended reference material used for ¹³C NMR is [JK DI - 2013] [TN DI - 2018] [TN DI - 2019]

- (a) Trimethyl silane (b) Tetramethyl silane
(c) Triethyl silane (d) Tetraethyl silane

490. In ¹H-NMR (PMR) spectra, the spin-spin splitting pattern for the compounds CHCl₃ -CHCl₃ is (the first number is each choice is signal appearing after TMS this is followed by second signal) [TN DI - 2019]

- (a) 2,3 (b) 3,5
(c) 3,4 (d) 4,3

491. Following are the scales of measurement of chemical shift in NMR spectroscopy [UPSC DI - 2019]

1. Frequency scale (ν)
2. Delta scale (δ)

3. Tau scale (τ)

Which of the above scales are independent of radio frequency used in NMR spectrometer

- (a) 1 only (b) 1 and 2
(c) 3 only (d) 2 and 3

492. Nuclear magnetic moment is NOT shown by [BIHAR DI - 2008]

- (a) ¹³C (b) ¹⁶O
(c) ¹H (d) ¹⁵N

493. Most commonly used solvent in NMR is [TN DI - 2018]

- (a) Ethanol 90%
(b) Acetone
(c) Deuterated chloroform
(d) Dichloromethane

494. Inter-system crossing is [BIHAR DI - 2023]

- (a) Crossover between two singlet states
(b) Crossover between two triplet states
(c) Crossover between singlet and triplet states
(d) None of these

495. An anisotropic effect causes deshielding in the following molecule EXCEPT [GDC PRACTICE MCQ]

- (a) Alkynes (b) Alkene
(c) Benzene (d) Aldehyde

496. Calculate the chemical shift in ppm for a proton that has resonance at 126 Hz downfield from TMS on spectrophotometer that operate at 60 MHz [GDC PRACTICE MCQ]

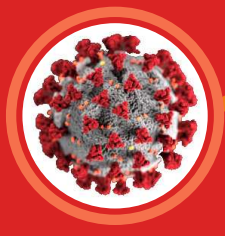
- (a) 3.1 (b) 2.1
(c) 4.1 (d) 5.1

497. Order of deshielding of proton attached with different halide group is [GDC PRACTICE MCQ]

- (a) HC-Br > HC-I > HC-Cl > HC-F
(b) HC-I > HC-Br > HC-Cl > HC-F
(c) HC-F > HC-Cl > HC-Br > HC-I
(d) HC-Cl > HC-Br > HC-I > HC-F

498. NMR signal is obtained when [GDC PRACTICE MCQ]

- (a) Applied frequency = Radio frequency
(b) Applied frequency = Precessional frequency
(c) Precessional frequency = Radio frequency
(d) Precessional frequency = Micro-wave frequency



OTHER SUBJECTS

BIOTECHNOLOGY

Plant and Tissue Culture

- In which year Gottlieb Haberlandt proposed that plant cells can be cultured on artificial media and developed the concept of in vitro cell culture** [GUJARAT DI - 2024]
(a) 1906 (b) 1904
(c) 1902 (d) 1901
- Haploid plants can be obtained from** [GUJARAT DI - 2024]
(a) Anther culture (b) Bud culture
(c) Leaf culture (d) Root culture
- Callus is a** [GUJARAT DI - 2021]
(a) Tissue that forms embryo
(b) Insoluble carbohydrates
(c) Tissue that grows to form embryoids
(d) Unorganized actively dividing mass of the cells maintained in culture
- Name the type of culture which is prepared by inoculating the cells directly from the tissue of an organism into culture media** [GUJARAT DI - 2021]
(a) Primary cell culture
(b) Secondary cell culture
(c) Cell lines
(d) Transformed cell culture
- Who is introduced the somatic embryogenesis in callus, cultured on a semisolid medium** [TN DI - 2019]
(a) Cocking (b) Michel
(c) Reinert (d) Steward
- Single cells can also be obtained from fresh plant organ** [TN DI - 2019]
(a) Root (b) Leaf
(c) Stem (d) Seed
- Indole Acetic Acid (IAA) is a——— that occurs naturally in plants** [TN DI - 2019]
(a) Cytokinin (b) Gibberellin
(c) Growth Inhibitor (d) Auxin
- In surface sterilization of explant, the tissue is washed with sterile water to remove** [TN DI - 2019]
(a) Calcium hypochlorite
(b) Sodium hypochlorite
(c) Hydrogen peroxide
(d) Silver nitrate
- The vitamin essential in tissue culture medium is** [RAJASTHAN DI - 2018]
(a) Pyridoxine (b) Thiamine
(c) Nicotinic acid (d) Inositol
- To raising of plants from a small tissue in culture is known as** [GDC PRACTICE MCQ]
(a) Macroproduction (b) Micropropagation
(c) Tissue culture (d) Mass production
- What is the primary function of a vector in molecular biology** [GDC PRACTICE MCQ]
(a) To replicate DNA independently
(b) To carry a foreign DNA fragment to be cloned
(c) To synthesize proteins
(d) To degrade unwanted DNA
- Which of the following vectors is used in crop improvement and crop management** [GDC PRACTICE MCQ]
(a) *Agrobacterium* (b) Plasmid
(c) Cosmid (d) Phasmid

BIOCHEMISTRY

Carbohydrates

1. What is the storage form of glucose in plants

[TN DI - 2018]

- (a) Glycogen (b) Dextran
(c) Sucrose (d) Starch

2. Which of the following is a triose

[GUJARAT DI - 2021]

- (a) Glucose (b) Ribulose
(c) Ribose (d) Glyceraldehyde

3. The important disaccharides are

[MAHARASHTRA DI - 2016]

- (P) Sucrose (Q) Maltose
(R) Lactose (S) Cellulose

Which of the above options are CORRECT

- (a) (P) and (Q) only (b) (P) and (R) only
(c) (P), (Q) and (R) only (d) (P), (Q) and (S) only

4. Which of the following is a disaccharide

[GUJARAT DI - 2021]

- (a) Dextrose (b) Lactose
(c) Glucose (d) Fructose

5. Starch is a

[BIHAR DI - 2008]

- (a) Monosaccharides
(b) Disaccharides
(c) Homopolysaccharides
(d) Mucopolysaccharides

6. Which of the following is a sugar alcohol

[UK DI - 2024]

- (a) Glucose (b) Stearic acid
(c) Xylitol (d) Sucrose

7. The invert sugar is

[BIHAR DI - 1998]

- (a) Glucose (b) Sucrose
(c) Starch (d) Glycogen

8. Most of the blood glucose burnt as 'fuel' is consumed by

[MP DI - 2022]

- (a) Liver (b) Brain
(c) Kidneys (d) Adipose tissue

9. In polysaccharides, monosaccharides are joined by

[GUJARAT DI - 2021]

- (a) Peptide bond (b) Glucose bond
(c) Glycosidic bond (d) Covalent bond

10. Consider the following statements about Inulin

[UPSC DI - 2019]

1. It is a carbohydrate made up of 25-30 D-fructofuranose units
2. It reduces Benedict's solution
3. It is insoluble in water

Which of the statements given above are CORRECT

- (a) 1 and 3 only (b) 1, 2 and 3
(c) Only 1 (d) Only 2

11. Among the following sugars which one is non-reducing sugar and does not exhibit mutarotation

[HARYANA DI - 2019]

- (a) Glucose (b) Lactose
(c) Maltose (d) Sucrose

12. Galactose is a main constituent of

[AP DI - 2018]

- (a) Milk sugar (b) Honey
(c) Cane sugar (d) Chitin

13. Glycogen is present in all body tissues, EXCEPT

[AP DI - 2018]

- (a) Liver (b) Brain
(c) Kidney (d) Stomach

14. Treatment of pentoses with a concentrated mineral acid yields a cyclic aldehyde known as

[AP DI - 2018]

- (a) Pentaldehyde (b) Cyclopental
(c) Hexaldehyde (d) Furfural

15. Milk sugar is known as

[AP DI - 2018]

- (a) Fructose (b) Glucose
(c) Sucrose (d) Lactose

16. Ruff degradation of (+)(-) Xylose yields

[UPSC DI - 2023]

- (a) (-) Glucose (b) (+) Fructose
(c) (-) Threose (d) (+) Glucose

17. Partial hydrolysis of starch with dilute acid will produce

[RAJASTHAN DI - 2012]

- (a) Chitin (b) Dextrin
(c) Suberin (d) Glucose

268. In the context of the central dogma, what does reverse transcription refer to [GDC PRACTICE MCQ]

- (a) Synthesis of RNA from a DNA template
- (b) Synthesis of DNA from an RNA template
- (c) Synthesis of proteins from RNA
- (d) Synthesis of RNA from proteins

269. In the transcription process, which DNA strand act as the template [GDC PRACTICE MCQ]

- (a) Sense strand
- (b) Antisense strand
- (c) Plus strand
- (d) Coding strand

270. Match the following types of RNA [GDC PRACTICE MCQ]

Type Of RNA

- (1) Messenger RNA
- (2) Transfer RNA
- (3) Heterogeneous nuclear RNA
- (4) Small nuclear RNA

Function

- (P) Transfer amino acid to mRNA for protein biosynthesis
- (Q) Serve as precursor for mRNA & other RNA
- (R) Transfer genetic information from genes to ribosomes to synthesize protein
- (S) Involve in mRNA processing

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

271. Which type of RNA carries amino acids to the ribosome for protein synthesis [GDC PRACTICE MCQ]

- (a) mRNA
- (b) rRNA
- (c) tRNA
- (d) snRNA

272. What is the process called where mRNA is decoded to produce a specific protein

[GDC PRACTICE MCQ]

- (a) Transcription
- (b) Translation
- (c) Replication
- (d) Splicing

273. In protein biosynthesis, each amino acid

[GDC PRACTICE MCQ]

- (a) Recognizes its own codon by a direct interaction with the m-RNA template
- (b) Is added in its proper place to a growing peptide chain through "adaptor" function of t-RNA
- (c) Is first attached to an anti-codon specific for the amino acid
- (d) Undergoes fidelity translation which is assured by the presence of traces of DNA on

274. What is the central dogma of molecular biology

[GDC PRACTICE MCQ]

- (a) DNA is translated into RNA, which is transcribed into proteins
- (b) RNA is transcribed into DNA, which is translated into proteins
- (c) DNA is transcribed into RNA, which is translated into proteins
- (d) Proteins are transcribed into RNA, which is translated into DNA

275. In the process of transcription, which of the following is synthesized [GDC PRACTICE MCQ]

- (a) mRNA
- (b) tRNA
- (c) rRNA
- (d) All of these

276. Which of the following is the end product of purine metabolism that accumulates in gout

[GDC PRACTICE MCQ]

- (a) Urea
- (b) Xanthine
- (c) Uric acid
- (d) Allantoin

277. What is the drug of choice for the treatment of gout [GDC PRACTICE MCQ]

- (a) Colchicine
- (b) Probenecid
- (c) Indomethacin
- (d) Allopurinol

278. Which enzyme's activity is primarily inhibited by allopurinol to reduce uric acid levels

[GDC PRACTICE MCQ]

- (a) Xanthine oxidase
- (b) Adenosine deaminase
- (c) Hypoxanthine - guanine phosphoribosyl-transferase (HGPRT)
- (d) Phosphoribosyl pyrophosphate synthetase

279. What is the primary crystal type involved in pseudogout [GDC PRACTICE MCQ]

- (a) Uric acid crystals
- (b) Calcium pyrophosphate crystals
- (c) Calcium oxalate crystals
- (d) Cholesterol crystals



280. Enzymes are biological catalysts. The characteristic feature of which is [BIHAR DI - 1998]

- (a) Protein in nature
- (b) Lipid in nature
- (c) Carbohydrate in nature
- (d) Vitamin in nature

446. A leukemoid reaction is best differentiated from chronic myeloid leukemia (CML) by the

[GDC PRACTICE MCQ]

- (a) Total WBC count
- (b) Presence of blasts in peripheral smear
- (c) Leukocyte alkaline phosphatase (LAP) score
- (d) Platelet count

447. The presence of Bence Jones proteins in urine is a diagnostic indicator of

[GDC PRACTICE MCQ]

- (a) Hodgkin's lymphoma
- (b) Multiple myeloma
- (c) Chronic kidney disease
- (d) Renal tuberculosis

448. Elevated bilirubin in blood without elevated liver enzymes suggests

[GDC PRACTICE MCQ]

- (a) Hepatitis A infection

- (b) Hemolytic anemia
- (c) Cirrhosis
- (d) Drug-induced hepatitis

449. Which test is most sensitive and specific for early detection of diabetic nephropathy

[GDC PRACTICE MCQ]

- (a) Serum creatinine
- (b) Blood urea nitrogen
- (c) Microalbuminuria
- (d) Urinalysis for protein

450. In a routine urine test, positive nitrites and leukocyte esterase indicate

[GDC PRACTICE MCQ]

- (a) Nephrotic syndrome
- (b) Glomerulonephritis
- (c) Urinary tract infection
- (d) Diabetes insipidus

MICROBIOLOGY

Introduction and History of Microbiology

1. Louis Pasteur is NOT related with [MP DI - 2022]

- (a) Vaccination of rabies
- (b) Pasteurization
- (c) Vaccination of small pox
- (d) Germ theory

2. Which of the following is NOT a Koch's postulate [MP DI - 2022]

- (a) The microorganism must not be re-isolated from the inoculated, diseased individual and matched to the original microorganism
- (b) The microorganism must be found in diseased but not healthy individuals
- (c) The microorganism must be cultured from the diseased individual
- (d) Inoculation of a healthy individual with the cultured microorganism must recapitulate the disease

3. Existence of antibiotic was first proposed by [UP DI - 2018]

- (a) Pasteur
- (b) Paul Ehrlich
- (c) Fleming
- (d) Dubos

4. The scientist who developed the concept of chemotherapy was [JK DI - 2013]

- (a) Paul Ehrlich
- (b) Elie Metchnikoff
- (c) Louis Pasteur
- (d) Robert Koch

5. Which of the following is NOT a contribution of Robert Koch in the field of microbiology

[JK DI - 2013]

- (a) Development of pure culture technique
- (b) Discovery of causative agent of anthrax
- (c) Discovery of causative agent of tuberculosis
- (d) Development of immunization technique

6. According to Pasteur statements which one of the following is true [GDC PRACTICE MCQ]

- (a) Living organisms discriminate between stereoisomers
- (b) Fermentation is an aerobic process
- (c) Living organisms doesn't discriminate between stereoisomers
- (d) Both (a) and (b)

71. Other than the sample (specimen) the remaining portion is stained then it is called

[GDC PRACTICE MCQ]

- (a) Simple staining (b) Negative staining
(c) Differential staining (d) None of these

72. The dye eosinate of methylene blue belongs to which group

[GDC PRACTICE MCQ]

- (a) Acidic dye (b) Basic dye
(c) Neutral dye (d) Oxazine dye

73. Upon Ziehl Neelsen staining the acid-fast bacteria appears in which colour

[GDC PRACTICE MCQ]

- (a) Blue colour (b) Green colour
(c) Violet colour (d) Red colour

74. India Ink method is used for

[GDC PRACTICE MCQ]

- (a) Flagella staining (b) Capsule staining
(c) Gram staining (d) Spore staining

75. Which of the staining technique helps in demonstrating spore structure in bacteria as well as free spores

[GDC PRACTICE MCQ]

- (a) Acid-fast stain (b) Endospore stain
(c) Capsule stain (d) Flagella stain

76. Endospores can be stained with

[GDC PRACTICE MCQ]

- (a) Safranin (b) Crystal violet
(c) Methylene blue (d) Malachite green

77. Which of the following is an example of an acidic stain used for background staining

[GDC PRACTICE MCQ]

- (a) Crystal violet (b) Eosin
(c) Methylene blue (d) Safranin

78. Giemsa stain is used for staining of

[GDC PRACTICE MCQ]

- (a) Neisseria (b) Malaria parasite
(c) Mycobacteria (d) Allin

79. Which staining technique is specifically used to detect bacterial spores

[GDC PRACTICE MCQ]

- (a) Gram staining
(b) Acid-fast staining
(c) Schaeffer-Fulton staining
(d) Ziehl-Neelsen staining

80. Production of acetyl methyl carbinol can be detected by which of the following test

[GDC PRACTICE MCQ]

- (a) Voges-Proskauer test
(b) Indole test

(c) Citrate utilization test

(d) Methyl red test

Culture Media

81. To test the indole production in peptone water culture, which reagent is used

[GUJARAT DI - 2024]

- (a) Salkowski's reagent (b) I₂-KI reagent
(c) Benedict's reagent (d) Kovac's reagent

82. To perform the sterility test for the presence of anaerobes, which of the following culture media is appropriate

[UPSC DI - 2015, GUJARAT DI - 2024]

- (a) Fluid thioglycolate medium
(b) Soyabean casein digest medium
(c) Tryptone soy broth
(d) All of the above

83. Name the culture media used for testing Anaerobes

[TNDI - 2024]

- (a) Peptone broth
(b) Glucose peptone broth
(c) Lactose peptone broth
(d) Liver broth

84. MacConkey's agar medium was introduced first and foremost in the year

[TELANGANA DI - 2023]

- (a) 1910 (b) 1907
(c) 1905 (d) 1902

85. Which of the following is a characteristic of selective media for microorganism identification

[TELANGANA DI - 2023]

- I. It specifically favours the growth of particular microorganisms
II. The MacConkey agar medium is an example for selective media
III. It distinguish between different groups of bacteria and even allow tentative identification of microbes based on their biological characteristics

- (a) I, II and III (b) I and II
(c) II and III (d) Only III

86. A medium which is composed of chemically defined compound is known as

[GUJARAT DI - 2021]

- (a) Natural media (b) Synthetic media
(c) Artificial media (d) None of these

297. Thread like fungal structures are [GDC PRACTICE MCQ]

- (a) Hyphae (b) Mycelium
(c) Rhizomorphs (d) Sclerotia

298. Which of the following fungi is most likely to be found within reticuloendothelial cells [GDC PRACTICE MCQ]

- (a) *Histoplasma capsulatum*
(b) *Sporothrix schenckii*
(c) *Cryptococcus neoformans*
(d) *Candida albicans*

299. Which fungal group includes mushrooms and reproduces sexually through basidiospores [GDC PRACTICE MCQ]

- (a) Ascomycetes (b) Zygomycetes
(c) Basidiomycetes (d) Deuteromycetes

300. Aspergillosis is recognized in tissue by the presence of [GDC PRACTICE MCQ]

- (a) Metachromatic granules
(b) Pseudohyphae
(c) Septate hyphae
(d) Budding cells

301. Which staining techniques are commonly used to identify fungal elements in tissue sections [GDC PRACTICE MCQ]

- (a) Gram stain and Ziehl-Neelsen stain
(b) Giemsa stain and Wright stain
(c) Periodic Acid Schiff (PAS) and methenamine silver stains
(d) India ink stain and Acid-fast stain

302. This fungus is also known as opportunistic pathogen, often isolated from warm-blooded animals [GDC PRACTICE MCQ]

- (a) *Aspergillus niger*
(b) *Penicillium notatum*
(c) *Penicillium chrysogenum*
(d) *Candida albicans*

303. Which fungal disease is associated with *Epidermophyton flocculosum* [GDC PRACTICE MCQ]

- (a) Athlete's foot (b) Aspergillosis
(c) Ring worm of scalp (d) Blastomycosis

304. Which of the following fungal structures is responsible for asexual reproduction and is commonly observed in dermatophytes [GDC PRACTICE MCQ]

- (a) Spores (b) Hyphae
(c) Mycelium (d) Sclerotia

- (a) Ascospores (b) Conidia
(c) Basidiospores (d) Zygosporangia

305. Which of the following fungal infections is associated with pigeon droppings and causes CNS infection [GDC PRACTICE MCQ]

- (a) Aspergillosis (b) Histoplasmosis
(c) Cryptococcosis (d) Candidiasis

Sterilization and Disinfectant

306. Syringes are commonly sterilized by employing [MAHARASHTRA DI - 2023]

- (a) Cosmic rays (b) Alpha rays
(c) Beta rays (d) Gamma rays

307. One among the following sterilization parameter is monitored in dry heat sterilization [MAHARASHTRA DI - 2023]

- (a) Gas concentration
(b) Temperature
(c) Exposure to radiation
(d) Radiation doses

308. Steam-sterilization temperature employed in moist heat sterilization of pharmaceutical and medical products [MAHARASHTRA DI - 2023]

- (a) 121°C (b) 160°C
(c) 450°C (d) 600°C

309. Which of the following statement is CORRECT regarding the sterilization of needles [TELANGANA DI - 2023]

- I. Needles can be sterilized by autoclaving or dry heat method
II. Suture needles may be sterilized in the air at 16°C for 60 minutes
(a) Neither I nor II (b) Only II
(c) Both I and II (d) Only I

310. In moist heat sterilization, spores are killed by exposure to heat at 121°C for _____ minutes [TELANGANA DI - 2023]

- (a) 120-150 (b) 180-240
(c) 200-300 (d) 10-30

311. Which filters are also called Millipore filters [TELANGANA DI - 2023]

- (a) Sintered metal filter (b) Ceramic filter
(c) Membrane filter (d) Seitz filter

693. Infection is defined as [RAJASTHAN DI - 1996]

- (a) Invasion and multiplication of parasite in the tissues of host
- (b) Invasion and multiplication of parasite in the tissues of guest
- (c) Presence of microorganisms producing disease
- (d) Presence of bacteria in the tissues in small number

694. Which bacterial infection is associated with *pseudomembranous colitis* [GDC PRACTICE MCQ]

- (a) *Clostridium perfringens*
- (b) *Clostridium difficile*
- (c) *Bacillus anthracis*
- (d) *Vibrio cholerae*

695. The causative organism of Q fever is [GDC PRACTICE MCQ]

- (a) *Coxiella burnetii*
- (b) *Chlamydia trachomatis*
- (c) *Rickettsia prowazekii*
- (d) *Brucella abortus*

696. Which of the following diseases is caused by a prion [GDC PRACTICE MCQ]

- (a) Creutzfeldt-Jakob disease
- (b) Influenza
- (c) Ebola
- (d) Rubella

697. Which of the following diseases is NOT transmitted by mosquitoes [GDC PRACTICE MCQ]

- (a) Dengue
- (b) Zika
- (c) Leptospirosis
- (d) Chikungunya

698. Which disease is characterized by a 'rice water stool' [GDC PRACTICE MCQ]

- (a) Typhoid
- (b) Cholera
- (c) Dysentery
- (d) Amoebiasis

699. Which of the following diseases is transmitted by tsetse flies [GDC PRACTICE MCQ]

- (a) Leishmaniasis
- (b) African sleeping sickness
- (c) Malaria
- (d) Dengue

700. Which of the following is the vector for *Leishmania donovani* [GDC PRACTICE MCQ]

- (a) Sandfly
- (b) Tsetse fly
- (c) Mosquito
- (d) Housefly

PHARMACEUTICAL MANAGEMENT

Inventory Management

1. Economic Order Quantity (EOQ) is [TN DI - 2024]

- (a) $Q = \sqrt{\frac{2DH}{S}}$
- (b) $Q = \sqrt{\frac{2HS}{D}}$
- (c) $Q = \sqrt{\frac{2DS}{H}}$
- (d) $Q = \sqrt{2DSH}$

2. Which one of the following improves the organization overall performance and achieves efficient distribution and delivery system goal [GUJARAT DI - 2021]

- (a) Master production system
- (b) Customer responsiveness
- (c) Lead-time offsetting
- (d) Just in time

3. Which of the following is NOT an inventory [GUJARAT DI - 2021]

- (a) Tablet compression machine
- (b) Paracetamol powder
- (c) Paracetamol tablets
- (d) Spare parts for the tablet compression machine

4. A leader in TQM focuses on [UPSC DI - 2018]

- 1. Quest for excellence
- 2. Creating the right attitudes
- 3. Controls to make prevention of defects possible
- 4. Optimize customer satisfaction

Which of the above statements is CORRECT

- (a) 1, 2 and 3 only
- (b) 1, 2 and 4 only
- (c) 3 and 4 only
- (d) 1, 2, 3 and 4

OBJECTIVE DRUG INSPECTOR EXAM AT YOUR FINGERTIPS: OTHER SUBJECTS

71-c	72-b	73-c	74-b	75-c	76-c	77-a	78-b	79-c	80-a
81-c	82-a	83-c	84-d	85-c	86-b	87-d	88-c	89-b	90-c
91-b	92-a	93-a	94-b	95-b	96-d	97-a	98-c	99-c	100-c
101-a	102-d	103-c	104-a	105-a	106-c	107-d	108-d	109-c	110-a
111-d	112-c	113-a	114-d	115-d	116-c	117-a	118-a	119-d	120-b
121-c	122-a	123-a	124-b	125-c	126-a	127-b	128-a	129-c	130-d
131-b	132-a	133-a	134-d	135-a	136-c	137-d	138-a	139-c	140-d
141-c	142-c	143-a	144-d	145-a	146-a	147-b	148-c	149-a	150-d
151-a	152-d	153-d	154-a	155-b	156-c	157-a	158-a	159-a	160-a
161-b	162-a	163-d	164-a	165-b	166-d	167-c	168-c	169-b	170-b
171-c	172-b	173-b	174-a	175-a	176-d	177-b	178-a	179-b	180-a
181-a	182-b	183-d	184-d	185-b	186-b	187-a	188-c	189-b	190-c
191-c	192-d	193-a	194-d	195-c	196-d	197-d	198-c	199-a	200-c
201-c	202-a	203-c	204-c	205-b	206-c	207-a	208-d	209-b	210-c
211-a	212-b	213-c	214-c	215-d	216-c	217-b	218-c	219-c	220-d
221-a	222-b	223-a	224-c	225-d	226-c	227-c	228-b	229-c	230-c
231-c	232-a	233-d	234-d	235-d	236-b	237-d	238-b	239-a	240-b
241-c	242-b	243-b	244-c	245-b	246-c	247-b	248-b	249-b	250-c

BIOCHEMISTRY

1-d	2-d	3-c	4-b	5-c	6-c	7-b	8-b	9-c	10-c
11-d	12-a	13-d	14-d	15-d	16-c	17-b	18-a	19-b	20-b
21-c	22-a	23-b	24-a	25-b	26-c	27-c	28-a	29-a	30-b
31-c	32-d	33-b	34-b	35-c	36-a	37-a	38-b	39-c	40-a
41-a	42-b	43-b	44-b	45-c	46-b	47-a	48-b	49-d	50-c
51-b	52-b	53-c	54-d	55-c	56-c	57-c	58-c	59-a	60-b
61-c	62-c	63-c	64-b	65-c	66-c	67-d	68-d	69-a	70-b
71-a	72-a	73-a	74-b	75-c	76-c	77-a	78-c	79-c	80-a
81-a	82-a	83-c	84-b	85-b	86-d	87-b	88-b	89-b	90-b
91-d	92-b	93-c	94-c	95-d	96-c	97-c	98-d	99-d	100-b
101-a	102-b	103-c	104-b	105-d	106-b	107-a	108-c	109-b	110-b
111-a	112-a	113-d	114-a	115-a	116-b	117-b	118-b	119-d	120-c
121-b	122-c	123-a	124-c	125-a	126-b	127-a	128-c	129-b	130-b
131-d	132-c	133-a	134-c	135-d	136-c	137-d	138-c	139-b	140-b
141-a	142-c	143-b	144-d	145-c	146-b	147-c	148-b	149-c	150-a
151-b	152-b	153-d	154-c	155-a	156-c	157-b	158-b	159-c	160-a
161-c	162-a	163-b	164-b	165-d	166-b	167-c	168-c	169-b	170-c
171-c	172-b	173-d	174-d	175-a	176-d	177-d	178-a	179-c	180-c
181-b	182-a	183-c	184-b	185-d	186-c	187-a	188-a	189-c	190-a
191-b	192-d	193-b	194-d	195-c	196-d	197-a	198-a	199-b	200-a
201-c	202-c	203-d	204-b	205-b	206-c	207-d	208-d	209-d	210-a
211-a	212-a	213-d	214-c	215-c	216-a	217-a	218-c	219-c	220-a
221-a	222-b	223-b	224-b	225-c	226-d	227-b	228-b	229-c	230-b
231-c	232-b	233-b	234-b	235-b	236-a	237-d	238-a	239-a	240-a
241-a	242-c	243-d	244-d	245-d	246-a	247-c	248-b	249-a	250-d
251-c	252-a	253-a	254-c	255-a	256-b	257-b	258-a	259-c	260-b
261-d	262-a	263-a	264-d	265-c	266-a	267-c	268-b	269-b	270-b
271-c	272-b	273-b	274-c	275-a	276-c	277-d	278-a	279-b	280-a
281-d	282-c	283-d	284-a	285-c	286-c	287-d	288-c	289-b	290-c
291-b	292-c	293-d	294-d	295-d	296-d	297-c	298-c	299-b	300-a
301-d	302-c	303-d	304-b	305-d	306-c	307-b	308-d	309-b	310-c



NON-PHARMA

GENERAL INTELLIGENCE AND REASONING

1. Which is the **WRONG** term in the following series [MP DI - 2022]

NKDW, ROHA, XUNE, BYRK, HEXQ

- (a) BYRK (b) HEXQ
(c) XUNE (d) ROHA
2. If the word "development" is spelled "Tnemdevelop." Following that, "Evaluation" will be written as [MP DI - 2022]

- (a) EVALUTIAON (b) EVALUATION
(c) NOITEVAUAL (d) NOITEVALUA

3. In the following figure, enter the omitted number in place of question mark (?). [MP DI - 2022]

20160	4
2880	4
?	8
96	24

- (a) 680 (b) 360
(c) 960 (d) 480
4. Read the following codes carefully, then respond to the questions. Using a specific code, [MP DI - 2022]

The code for "Try hard to beat the world" is "fop rnu kir nhy dlo qsp." "Tib fet nhy yug kir rnu zde", which is coded as "Hard to find world under one roof," The code for "Find ball under the tree" is "ble fop bhu yug tib." "nhy zde rub dlo ble tib" is the code for the phrase "under one ball try to score." Where can I find the "beat the ball score" code

- (a) qsp tib bhu rub (b) rnu fop ble rub
(c) kir fop ble bhu (d) qsp fop ble rub

5. 'TEACHER' is represented by the code VGCEJGT in some languages. How does that code translate to "CHILDREN" [MP DI - 2022]

- (a) EJKNFTGP (b) EJKNTFPG
(c) PEJKNTFJ (d) EJKNTFPG

6. In the following question, select the related number from the given alternatives [MP DI - 2022]

12: 62 :: 14:

- (a) 70 (b) 75
(c) 72 (d) 80

7. In the following figure, enter the omitted number in place of question mark (?). [MP DI - 2022]

?	25200	5
?		5
600		10
	120	30

- (a) 3600 (b) 1800
(c) 5000 (d) 5400
8. Find the missing letter in the series. [MP DI - 2022]

AAZ, BCT, DEN, _____ ?

- (a) GGT (b) GGH
(c) KIB (d) GGJ

9. How would STATION be described in that code if SENSATIONAL may be outlined as 1 2 3 1456734 [MP DI - 2022]

- (a) 1574683 (b) 1545667
(c) 1545673 (d) 1545657

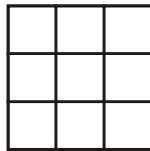
47. The following question is based on the sequence give below [MP DI - 2017]

W 1 R % 4 J E # 7 M T 2 1 9 B H 3 A \$ 9 F Q 5 D G 6 U S P

If the order of the last fifteen elements, in the above sequence is reversed, which of the following will be the fifth from the right and the eleventh from the left of the reversed elements

- (a) \$ (b) U (c) 3 (d) 6

48. How many squares are there in the following figure [MP DI - 2012]



- (a) 14 (b) 13 (c) 15 (d) 12

49. Pointing to a woman in a photograph a man says, "Her mother's mother is the mother of my father". How is the man related to the woman in the photograph [MP DI - 2012]

- (a) Uncle (b) Maternal cousin
(c) Nephew (d) Grand son

50. In a certain code language, if the number 1 is assigned to all the letters at odd places in the alphabet and the remaining letters are assigned the number 2 then what is the code for the word INDIAN [MP DI - 2012]

- (a) 2121212 (b) 211211
(c) 122122 (d) 122112

51. How many pairs of letters are there in the word 'WHITE', which have as many letter between them in the word as in the alphabet [MP DI - 2012]

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

52. Find the missing number: $1/4 : 1/8 :: 1/3 : ?$

[MP DI - 2012]

- (a) $2/6$ (b) $2/7$ (c) $1/6$ (d) $1/7$

53. In a certain code language CAT is codes as 24, what will be the code number for BAT in the same code language [MP DI - 2012]

- (a) 32 (b) 21 (c) 23 (d) 42

54. Select the given alternatives number, which is related to the given set [MP DI - 2012]
 $123 : 36 :: 221 : ?$

- (a) 52 (b) 69 (c) 25 (d) 72

55. In a certain code language, '479' means 'fruit is sweet', '248' means 'very sweet voice' and '637' means 'eat fruit daily'. Which digit stands for is in that code [MP DI - 2012]

- (a) 7 (b) 9
(c) 4 (d) Can't be determined

56. Find the missing number from the given series. 5,16,49,104, -?, 280 [MP DI - 2012]

- (a) 115 (b) 148 (c) 170 (d) 181

57. If CRICKETER is codes as DQJBLDUDS, PLAYER will be coded as [MP DI - 2012]

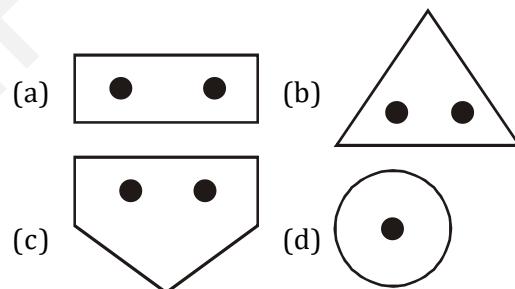
- (a) QMBZFA (b) QMZZDS
(c) QKBXFQ (d) QKBZDS

58. How many rectangles are in the following figure [MP DI - 2012]



- (a) 18 (b) 19 (c) 15 (d) 17

59. Find out the different one [MP DI - 2012]



60. In the given number series one term is wrong. Find out the WRONG term 2, 3, 5, 8, 15, 21, 34, 55 [MP DI - 2012]

- (a) 8 (b) 21
(c) 15 (d) 3

61. If the first and second letters in the word 'DEFINITION' were interchanged also the third and the forth letters, the fifth and sixth letter and so on, which letter would be the seventh letter counting from your left [MP DI - 2012]

- (a) N (b) I
(d) T (d) O

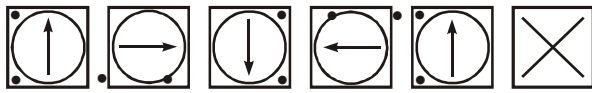
62. If $XY = 600$, $ABC = 6$, then $GO + DO$ will be equal to [MP DI - 2012]

- (a) 150 (b) 180
(c) 165 (d) 155

100. In a code language **PROBLEM** is written as **MPERLOB**. How **NUMBERS** will be written in that code language [MAHARASHTRA DI - 2012]

- (a) SNUREMB (b) SNRUBME
(c) SNRUEMB (d) SNRUMEB

101. Which of the figures in given alternatives belongs to the space marked 'X'? [MAHARASHTRA DI - 2012]

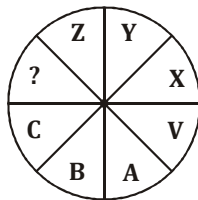


- (a) (b)
(c) (d)

102. What will be the next term in the given series **B B C B C D B C D E B C D E F B C D E F G B C D E F ?** [MAHARASHTRA DI - 2012]

- (a) B (b) G
(c) H (d) D

103. Which letter should go in the blank space [MAHARASHTRA DI - 2012]



- (a) D (b) E
(c) F (d) G

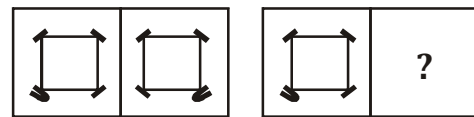
104. In a certain code **READ** is written as **#5%6** and **PAID** is written as **\$%46**. How will **RIPE** be written in that code? [MAHARASHTRA DI - 2012]

- (a) #4\$5 (b) #6\$5
(c) \$4#5 (d) \$4#6

105. Which of the following figures will represent the relationship between ball, football and sphere [MAHARASHTRA DI - 2012]

- (a) (b)
(c) (d)

106. There is a definite relationship between figures **A** and **B**. Establish the similar relationship between figures **C** and **D**, by choosing a suitable figure from given alternatives [MAHARASHTRA DI - 2012]



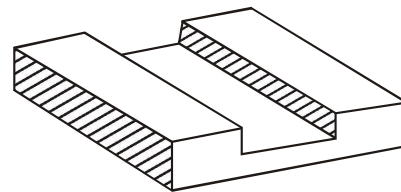
- (A) (B) (C) (D)

- (a) (b)
(c) (d)

107. Some boys are standing in a row, facing towards North. Ajay is 12th from left. If he moves four places to right, he appears at the place, 18th from right. What is the total number of boys in the row [MAHARASHTRA DI - 2012]

- (a) 32
(b) 33
(c) 34
(d) Information is not sufficient

108. A wooden block is shown in the figure. How many different surfaces does the block have [MAHARASHTRA DI - 2012]



- (a) 8 (b) 9
(c) 10 (d) 7

109. Find the missing terms in the given series, **5, 10, 17, 26, 37, __, __**. [MAHARASHTRA DI - 2012]

- (a) 50, 65 (b) 45, 65
(c) 50, 60 (d) 50, 75

110. The numbers in three figures follow some rule, which is NOT followed by the numbers in one figure. Find the figure, which is different from others [MAHARASHTRA DI - 2012]

- (a) (b)
(c) (d)

150. Fill the gap in the following with proper number [AP DI - 2012]

3, 14, 54, 159, -

- (a) 314 (b) 316
(c) 320 (d) 326

151. Fill the gaps in the following with proper numbers [AP DI - 2012]

5, 6, 12, 10, 28, 26, 62, 62, - - -

- (a) 132, 126 (b) 132, 185
(c) 123, 126 (d) 126, 132

152. Fill the gap in the following with proper numbers [AP DI - 2012]

2, 12, 36, 80, 150, —

- (a) 252 (b) 264
(c) 384 (d) 272

153. Fill the gap in the following with proper letter [AP DI - 2012]

Z, Y, U, L, —

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

154. Fill the gap in the following with proper letter [AP DI - 2012]

AB ABC BCA CA CA

- (a) ABCD (b) CABB
(c) ABBC (d) DCBA

155. In a particular code STAMP is written as HGZNK. In the same code TRACK is to be written as [AP DI - 2012]

- (a) GIZXP (b) GZIPX
(c) ZIGXP (d) ZXIGP

156. In a particular code MARBLE is written as FMDTDP. In the same code BOUGHT is to be written as [AP DI - 2012]

- (a) UIWIER (b) UIIWRE
(c) WIUREI (d) WUIIER

157. In a particular code MINUTE is written as VGFMRN. In the same code SECOND is to be written as [AP DI - 2012]

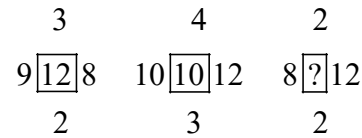
- (a) MWXVLH (b) WLMVXH
(c) WMIXVH (d) WIMHVX

158. In a particular code CRICKET is written as FTJCHCS. In the same code VICTORY is to be written as [AP DI - 2012]

- (a) YDKTPXL (b) YKDTLPX

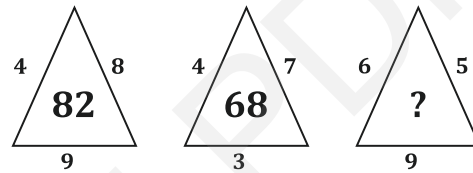
- (c) YKPXDTL (d) YXPKLTD

159. Number to be at question mark in the following [AP DI - 2012]



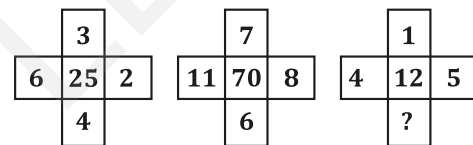
- (a) 22 (b) 24
(c) 26 (d) 32

160. Number to be at question mark in the following [AP DI - 2012]



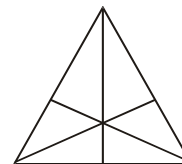
- (a) 60 (b) 70
(c) 80 (d) 90

161. Number to be at the question mark [AP DI - 2012]



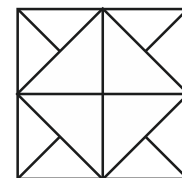
- (a) 10 (b) 6
(c) 2 (d) 1

162. Number of triangles in the following [AP DI - 2012]



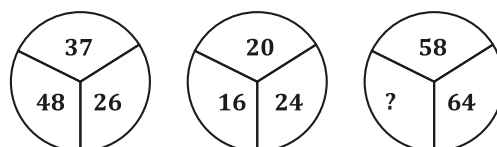
- (a) 12 (b) 13
(c) 14 (d) 16

163. Number of triangles in the following [AP DI - 2012]



- (a) 16 (b) 20
(c) 18 (d) 24

164. Number to be at the question mark [AP DI - 2012]



- (a) 52 (b) 53
(c) 54 (d) 55

165. Number to be at the question mark [AP DI - 2012]

19	3	25
17	11	39
9	5	?

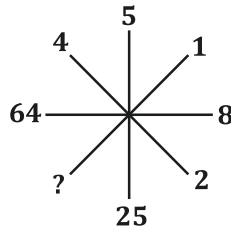
- (a) 19 (b) 20 (c) 21 (d) 22

166. Number to be at the question mark [AP DI - 2012]

	3	4	
5		25	
	26		100
1		?	8
	7	2	

- (a) 53 (b) 54 (c) 55 (d) 56

167. Number to be at the question mark [AP DI - 2012]



- (a) 1 (b) 3 (c) 6 (d) 9

168. Letter to be at the question mark [AP DI - 2012]

A	D	H
F	I	M
?	N	R

- (a) K (b) S (c) T (d) Q

169. Letter to be at the question mark [AP DI - 2012]

F	I	O
A	J	K
E	M	?

- (a) R (b) P (c) S (d) V

170. Find the odd one out [GUJARAT DI - 2024]

3, 7, 13, 20, 31, 43, 57

- (a) 7 (b) 20 (c) 31 (d) 43

171. Study the given information carefully and answer the question that follows. A group of 8 classmates, 4 boys H, I, J and K and 4 girls D, E, F and G decided to sit around a table to have coffee, during the lunch break. They are sitting in such a way that [GUJARAT DI - 2024]

- All of them are facing each other.
- No two girls or boys are sitting side by side.

- J is between D and G and is facing I.
- E, who is sitting between K and I, is facing D.
- H is the immediate right of F.

Who is sitting in front of K

- (a) D (b) H (c) I (d) F

172. How many meaningful English words can be formed with the first, the third, the fifth and the sixth letters of the word EMMULATE, using each letter once in each word [GUJARAT DI - 2024]

- (a) One (b) Three
(c) Four (d) Two

173. Three of the following four words are alike in a certain way and one is different. Select the odd one [GUJARAT DI - 2024]

- (a) Goggles (b) Spectacles
(c) Bifocal (d) Optical Reader

174. Select the option that is related to the third-term in the same way as the second-term is related to the first-term [GUJARAT DI - 2024]

IVORY: ZWSPJ:: CREAM:

- (a) NEDOB (b) SNFDB
(c) BODZL (d) DSFCN

175. $11(5x+2) < (8x-1)$ and $(7x-2) > 3(x+6)$, what will be solution set of x ($x \in \mathbb{N}$) [GUJARAT DI - 2024]

- (a) {2, 3, 4, 5} (b) N
(c) {5, 6, 7, 8} (d) {5, 6, 7, 8...}

176. "Democracy is based on a fundamental principle of political equality." Based on this statement, which of the following assertions is/are CORRECT [GUJARAT DI - 2024]

- Each adult citizen must have one vote and each vote must have one value.
- A democracy must be based on a free and fair election.
- In a democracy the final decision-making power must rest with those elected by the people.

- (a) Only I (b) Only II
(c) Both I & II (d) All are correct

177. 1. 2: 3.9 :: 2: a, then find the value of a [GUJARAT DI - 2024]

- (a) 6.5 (b) 6.9
(c) 6.3 (d) 6.1

MATHEMATICS

- The size of a burn can be quickly estimated by using the "rule of nines." According to the same rule, what percentage of body surface area is occupied by leg [TELANGANA DI - 2023]
 (a) 9% (b) 1% (c) 21% (d) 18%
- An object moves 16 metres in 4 seconds and then another 16 metres in 2 seconds. What is the object's average speed [MP DI - 2022]
 (a) 5.50 m/s (b) 5.33 m/s
 (c) 5 m/s (d) 5.55 m/s
- Rishabh walks a certain distance, say X m, from his Office towards the west. Then he turns left and walks 46 m. After that, he turns left and walks 72 m. Then he turns left again to walk 46 m. He finally turns left and walks 36 m to reach his Office. Find the value of X. [MP DI - 2022]
 (a) 40 m (b) 82 m (c) 44 m (d) 36 m
- A man can row a boat in still water at a speed of 8 km per hour, if the speed of the river is 2 km per hour, he takes 80 minutes to go to a place and return, then what is the distance of the place [MP DI - 2022]
 (a) 2.20 km (b) 2.81 km
 (c) 3.56 km (d) 4.34 km
- Three years ago, the value of my pen was Rs. 675. If the value of profit increases by 5% every year, now its value (in rupees) is [MP DI - 2022]
 (a) 715.31 (b) 781.39
 (c) 854.35 (d) 698.32
- The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of the son. After 6 years, what is the son's age [TN DI - 2019]
 (a) 12 years (b) 14 years
 (c) 18 years (d) 20 years
- If 75% of a number is added to 75, then the result is the number itself. Find the number [TN DI - 2019]
 (a) 50 (b) 60 (c) 300 (d) 400
- A three centimeter cube has been painted red on all its sides. It is cut into one centimeter cubes. How many cubes will be there with only one side painted red [MP DI - 2012]
 (a) 4 (b) 6 (c) 1 (d) 9
- A driver drives 20 km, towards east. He then takes a left turn and drives 7 km after which he goes 12 km, towards west. Next he takes a right turn and drives 5 km. finally he takes left and drives 8 km. how far is he from the starting point [MP DI - 2012]
 (a) 11 km. (b) 12 km.
 (c) 13 km. (d) 14km.
- Fresh grapes contain 90% water by weight - while dried grapes contains 20% water by weight. The weight of dry grapes available from 20kg of fresh grapes will be [MP DI - 2012]
 (a) 2kg (b) 2.2 kg
 (c) 2.4 kg (d) 2.5 kg
- How many values of the natural number n are possible so that the Expression is also a natural number [MP DI - 2012]
 (a) Infinite (b) 3
 (c) 4 (d) 7
- In a company there are 75% skilled worker and remaining are unskilled. 80% of skilled workers and 20% of unskilled workers are permanent. If the number of temporary workers is 119, then what is the number of total workers [MP DI - 2012]
 (a) 360 (b) 340 (c) 377 (d) 357
- Three persons A, B, C, were born on different days in the same year. If the date and month of birth of A, B and C are numerically equal, then what could be the minimum difference in the ages of youngest and oldest in days [MP DI - 2012]
 (a) 57 days (b) 59 days
 (c) 61 days (d) 63 days

63. The mean for normal distribution is [UPSC DI - 2018]

- (a) 3 (b) 2 (c) 1 (d) 0

64. What is the type of the following partial differential equation [UPSC DI - 2018]

$$X^2 \frac{\partial^2 u}{\partial Y^2} + 2xy \frac{\partial^2 u}{\partial x \partial Y^2} + y^2 \frac{\partial^2 u}{\partial x^2} = 0$$

- (a) Hyperbolic (b) Parabolic
(c) Elliptic (d) Circular

65. The ratio of areas of two squares A and B are 4:25. If the side of the square A is 6m. Then, what is the measure of the side of square B [MP DI - 2017]

- (a) 256m (b) 15m
(c) 12m (d) 32 m²

66. Choose the correct answer and fill up the blanks [MP DI - 2017]

$-1 \times -97321 = \dots\dots\dots$

- (a) 97321 (b) -97321
(c) -1 (d) 1

67. What is the range of the data given below [MP DI - 2017]

20, 35, 70, 65, 45, 95, 15, 80

- (a) 15 (b) 80 (c) 45 (d) 95

68. Gourav bought a scooter for 45000 rupees. If the shopkeeper has given him a discount of 10%, what was the marked price of the scooter [MP DI - 2017]

- (a) Rs. 50000 (b) Rs. 55000
(c) Rs. 65000 (d) Rs. 60000

69. The difference $20p^2 - 15q^2 - 21$, and $-12 + 11p^2 - 6q^2$ is..... [MP DI - 2017]

- (a) $9p^2 - 9q^2 - 9$ (b) $9p^2 + 9q^2 + 9$
(c) $9p^2 + 9q^2 - 12$ (d) $-9p^2 + 9q^2 - 12$

70. What is the measure of the base angle of an isosceles triangle, if its vertical angle is 70° [MP DI - 2017]

- (a) 110° (b) 55° (c) 90° (d) 70°

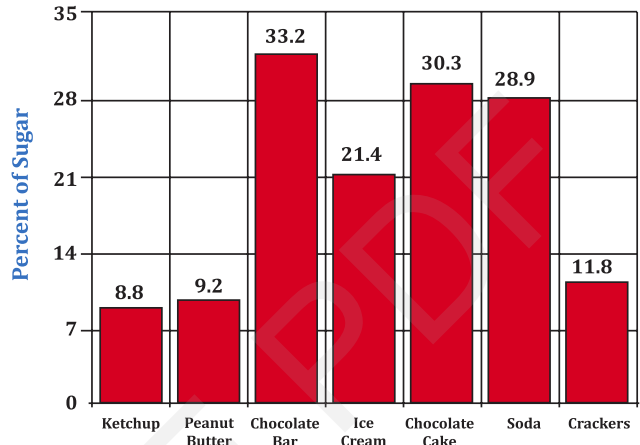
71. Madhuri took a loan of 70000 rupees at the rate of 5% from a bank and bought a scooter. After two years, she cleared the loan. How much money she would have paid in all [MP DI - 2017]

- (a) Rs. 75000 (b) Rs. 35000
(c) Rs. 77000 (d) Rs. 7000

72. Find the predecessor of $-(9^2 - 6^2) / -(9^2 - 6^2)$ [MP DI - 2017]

- (a) -44 (b) -46 (c) 44 (d) 46

73. Sugar contained in sweet items represented in this graph



From the adjoining graph, find out what is the percentage of sugar in the chocolate cake [MP DI - 2017]

- (a) 33.2% (b) 30.3%
(c) 11.8% (d) 28.9%

74. The sum of two numbers is 40. If one number is 1/7 of the larger number, the numbers are and [MP DI - 2017]

- (a) 33,7 (b) 28,7
(c) 40,0 (d) 35,5

75. Express the ratio 550 g to 5 kg [MP DI - 2017]

- (a) 11:1 (b) 55:50
(c) 11:5 (d) 11: 100

76. If the arithmetic mean of 18, 15, 16, 10 and x is 14, find the value of x [MP DI - 2017]

- (a) 10 (b) 13 (c) 12 (d) 11

77. An express train runs 900 km at an average speed of 90 km/hour, stopping for 3 minutes at stations after every 100 km. How long it would take to reach its destination [MP DI - 2017]

- (a) 10 hr 30 min (b) 10 hr 24 min
(c) 10 hr 27 min (d) 10 hr

78. Complete the table of values for the following equation: $X + 2 = Y$ [MP DI - 2017]

X	4	-1	0
Y

- (a) 2, 4, 5 (b) -3, -6, -5
(c) 6, 1, 2 (d) 1, 4, 5

128. What is the nearest perfect square number to 2359 [GUJARAT DI - 2024]

- (a) 2348 (b) 2402
(c) 2304 (d) 2401

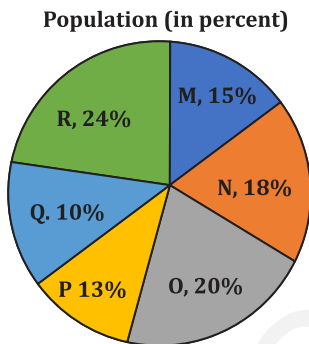
129. The difference between two-digit number and the number obtained by interchanging the digits is 63. What is the difference between the two digits of the number [GUJARAT DI - 2024]

- (a) 6 (b) 7 (c) 8 (d) 9

130. A Swimming Pool is 30 m. long, 10 m. wide and 5 m. deep. Find the cost of cementing its floor and its wall at the rate of Rs. 10 per square meter [GUJARAT DI - 2024]

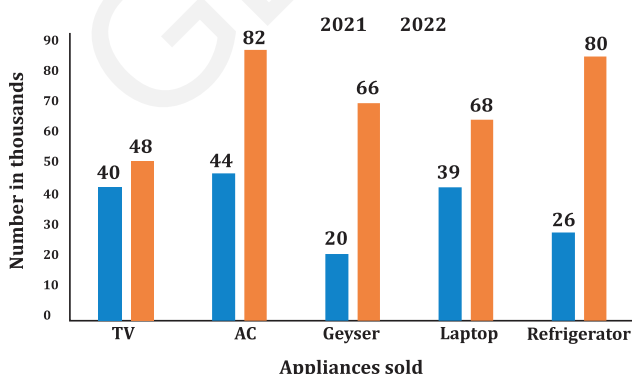
- (a) Rs. 700 (b) Rs. 7000
(c) Rs. 1500 (d) Rs. 15000

131. The following pie-chart shows the population of villages in Bihar. If the population of village N is 54,000, then what is the population of village O [TELANGANA DI - 2023]



- (a) 50,000 (b) 55,000
(c) 40,000 (d) 60,000

132. The Bar graph shows the number of different types of electronics sold (in thousands) by a shop in the years 2021 and 2022. The quantity of Laptops sold in 2021 is what percent of the quantity of TV and AC sold in 2022 together [TELANGANA DI - 2023]



- (a) 30% (b) 20% (c) 33% (d) 25%

133. In the following number series, how many 8's are there which are immediately followed by a number which does not divide it but is preceded by a number which divides it

48183858653482684715878286

[TELANGANA DI - 2023]

(Note- Each number is a one digit number)

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

134. Consider the following statements with reference to Traces [UPSC DI - 2018]

- When a plane is perpendicular to reference plane, its projections on that plane is a straight line
- When the plane is parallel to reference plane, its projections on that plane shows its true shape and size

Which of the above statements is/ are CORRECT

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

135. Which one of the following systems is recommended for the general rules of dimensioning [UPSC DI - 2018]

- (a) Unidirectional system
(b) Bidirectional system
(c) Aligned system
(d) Both unidirectional system and aligned system

136. A sectional plane is perpendicular to both the reference planes, the true shape of the section will be shown on the [UPSC DI - 2018]

- (a) Sectional top view (b) Sectional front view
(c) Sectional side view (d) Auxiliary side view

137. When the section plane is inclined to the axis and is parallel to one of the generators, the section is known as [UPSC DI - 2018]

- (a) Ellipse (b) Parabola
(c) Hyperbola (d) Epicycloid

138. A diagonal scale of $R_f = 1/250$ is constructed to read upto 1 km and to read meters on it. The length of the scale is [UPSC DI - 2018]

- (a) 8 cm (b) 40 cm
(c) 80 cm (d) 400 cm

139. The air quality for nitrogen dioxide (NO_2) in Delhi is $470 \mu\text{g}/\text{mm}^2$ at 25°C and 1 atm of pressure. The concentration of (NO_2) will be [UPSC DI - 2018]

- (a) 0.18 ppm (b) 0.20 ppm
(c) 0.22 ppm (d) 0.25 ppm

GENERAL AWARENESS

1. Which of the following rivers in India has the largest drainage basin [TELANGANA DI - 2023]
 - (a) Indus-Sutlej
 - (b) Ganga-Brahmaputra-Meghna
 - (c) Narmada-Tapi
 - (d) Ganga-Yamuna
2. Which of the following social security schemes in India is aimed at providing health insurance coverage to families living below the poverty line [TELANGANA DI - 2023]
 - (a) Pradhan Mantri Suraksha Bima Yojana (PMSBY)
 - (b) Pradhan Mantri Fasal Bima Yojana (PMFBY)
 - (c) Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)
 - (d) Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)
3. Which of the following statements is related to the Institutions and Policies under Local Governments in India are is CORRECT [TELANGANA DI - 2023]
 1. The Panchayati Raj system is a three-tiered system of local governance in India
 2. Municipal Corporations are responsible for the administration of urban areas in India
 3. The Ministry of Home Affairs is responsible for the implementation of local government policies in India
 4. The State Election Commission is responsible for conducting elections to local government bodies in India
 - (a) 1, 2 and 4 only
 - (b) 1 and 4 only
 - (c) 1 only
 - (d) 2 and 4 only
4. Match the district of Telangana state and the river, which flows through the district as per the details given below [TELANGANA DI - 2023]

River	District
A. Paleru River	1. Nizamabad
B. Musi River	2. Nalgonda
C. Manjira River	3. Khammam
(a) A-3, B-2, C-1	(b) A-3, B-1, C-2
(c) A-1, B-2, C-3	(d) A-1, B-3, C-2
5. Which of the following schemes of Telangana state aims to provide safe drinking water for every household under the Telangana Drinking Water Supply Project [TELANGANA DI - 2023]
 - (a) Mission Amrutum
 - (b) Mission Bhagiratha
 - (c) Mission Yeshasvini
 - (d) Mission Narmada
6. Pick the CORRECT Fiscal Policy measures with their descriptions [TELANGANA DI - 2023]
 1. Goods and Services Tax - A tax paid by individuals and businesses indirectly to the government based on their income or profits
 2. Direct Tax - A tax on goods and services that is collected by an intermediary such as a seller or retailer
 3. Indirect Tax - A comprehensive tax reform that replaced multiple indirect taxes with a single tax system
 4. Fiscal Deficit - The negative difference between a government's total revenue and its total expenditure
 - (a) Only 1 and 3
 - (b) Only 2 and 4
 - (c) Only 4
 - (d) Only 1
7. Which international organization is responsible for issuing guidelines on health and safety at the workplace [TELANGANA DI - 2023]
 - (a) United Nations Educational, Scientific and Cultural Organization
 - (b) United Nations Environment Programme
 - (c) World Health Organization
 - (d) World Trade Organization

- D. Local government body for villages and small towns**
 (a) 1-D, 2-A, 3-C, 4-B (b) 1-A, 2-C, 3-D, 4-B
 (c) 1-B, 2-C, 3-A, 4-D (d) 1-D, 2-C, 3-A, 4-B
- 41. Which of the following statements is/are INCORRECT [TELANGANA DI - 2023]**
- A. Telangana is separated from Chhattisgarh by the Godavari River**
B. Bhima is one of the prominent tributaries of Krishna River in Telangana
C. Telangana has prominent perennial rivers such as Godavari in the north and the Krishna in the south
 (a) Only A (b) Both A and C
 (c) Both B and C (d) Both A and B
- 42. Match the following events related to social exclusion and rights issues in India in chronological order [TELANGANA DI - 2023]**
- A. Abolition of untouchability**
B. The passing of Prevention of Atrocities Act
C. The passing of the Protection of Civil Rights Act
D. The establishment of the National Commission for Women
 (a) A, C, B, D (b) B, C, A, D
 (c) C, D, A, B (d) A, B, C, D
- 43. Which international organization is responsible for maintaining world peace and security and has 5 permanent members with veto power [TELANGANA DI - 2023]**
- (a) United Nations Security Council
 (b) International Court of Justice
 (c) International Criminal Court
 (d) International Atomic Energy Agency
- 44. Kamlesh D Patel received Padma Bhushan 2023 in the category of [TELANGANA DI - 2023]**
- (a) Public Service
 (b) Public Affairs
 (c) Literature and Education
 (d) Others-Spiritualism
- 45. Which of the following statements about Telangana Super Thermal Power Project is CORRECT [TELANGANA DI - 2023]**
- A. Telangana Super Thermal Power Project (TSTPP) is located in village Ramagundam, Karimnagar district Telangana**
B. Prime Minister Narendra Modi laid the foundation for this project in 2019
C. The project is being developed in two phases, with the under-construction first phase comprising 1.6GW (2x800MW) coal-based power plant with super critical technology
 (a) Both A and C (b) Both A and B
 (c) Only A (d) Only B
- 46. As of April 2023, who is the Minister for Agriculture of Telangana [TELANGANA DI - 2023]**
- (a) Singireddy Niranjan Reddy
 (b) Thanneeru Harish Rao
 (c) Vemula Prashanth Reddy
 (d) Chamakura Malla Reddy
- 47. Which of the following statements is are INCORRECT [TELANGANA DI - 2023]**
- A. The state bird of Telangana is Palapitta**
B. The State Animal of Telangana is Blackbuck
C. The emblem of Telangana is a circular seat consisting of the Kakatiya Kala Thoranam and Charminar
D. Tangedu Flower was declared as the state follower of Telangana state
 (a) Only A (b) Both C and D
 (c) Only B (d) Both A and B
- 48. Arrange the following district of Telangana as per their area from largest to smallest [TELANGANA DI - 2023]**
- A. Hanamkonda B. Adilabad**
C. Nirmal D. Jagtial
 (a) D, B, A, C (b) B, C, D, A
 (c) A, D, B, C (d) A, B, C, D
- 49. Which of the following is an example of a physical vulnerability in a community [TELANGANA DI - 2023]**
- (a) Limited access to healthcare services
 (b) Lack of awareness about disaster preparedness
 (c) Poor infrastructure and inadequate housing
 (d) Social and economic inequality

- 173. What is the time duration of the song National Anthem** [TN DI - 2019]
 (a) 50 seconds (b) 51 seconds
 (c) 52 seconds (d) 53 seconds
- 174. How many Member countries are in ASEAN** [TN DI - 2019]
 (a) 8 (b) 10
 (c) 12 (d) 14
- 175. The largest atomic Research centre of India** [TN DI - 2019]
 (a) Variable energy cyclotron centre
 (b) Centre for Advanced technology
 (c) Indira Gandhi centre for Atomic Research
 (d) Bhabha atomic research centre
- 176. India's first full-fledged sport university will be set up in the state** [TN DI - 2019]
 (a) Haryana (b) Manipal
 (c) Kerala (d) Punjab
- 177. Who is the first women vice chancellor for sports University in Tamil Nadu** [TN DI - 2019]
 (a) Sheela Nair (b) Sheela Stephen
 (c) Vijayalakshmi (d) None of these
- 178. India's largest public Wi-Fi service has been launched recently in which Indian State** [TN DI - 2019]
 (a) Karnataka (b) Haryana
 (c) New Delhi (d) Maharashtra
- 179. Whose birthday anniversary is celebrated as the International Day of Non-Violence** [TN DI - 2019]
 (a) Nelson Mandela (b) Abraham Lincoln
 (c) Mahatma Gandhi (d) Martin Luther King
- 180. Which city in India has launched a mobile application' for women's safety while travelling in train** [TN DI - 2019]
 (a) Mumbai (b) Chennai
 (c) Kolkata (d) Bangalore
- 181. The neutrino has** [TN DI - 2019]
 (a) Negative charge and half spin
 (b) Zero charge and half spin
 (c) Positive charge and integer spin
 (d) Zero charge and integer spin
- 182. In Utilization of finance, the Fixed Capital in invested on which of the following** [MEGHALAYA DI - 2019]
 (a) Purchase of raw Material
 (b) Wages and Rent
 (c) Plant and Machinery
 (d) Taxes and Internet
- 183. The Harappans were the earliest people to produce** [MEGHALAYA DI - 2019]
 (a) Seals (b) Bronze implements
 (c) Cotton (d) Barley
- 184. The Veda which deals with the rituals is known as** [MEGHALAYA DI - 2019]
 (a) Rigveda (b) Yajurveda
 (c) Samaveda (d) Atharvaveda
- 185. The first Buddhist Council held at** [MEGHALAYA DI - 2019]
 (a) Vaishali (b) Kashmir
 (c) Rajagriha (d) Pataliputra
- 186. Prince Khurram was the name of which Mughal Emperor** [MEGHALAYA DI - 2019]
 (a) Shahjahan (b) Jahangir
 (c) Babur (d) Akbar
- 187. Who built the Khajuraho temples** [MEGHALAYA DI - 2019]
 (a) Holkars (b) Scindias
 (c) Bundela Rajputs (d) Chandela Rajputs
- 188. In which of the following years 26th January was celebrated as an Independence Day** [MEGHALAYA DI - 2019]
 (a) 1929 (b) 1930
 (c) 1934 (d) 1937
- 189. The first General Secretary of the Indian National Congress was** [MEGHALAYA DI - 2019]
 (a) Dadabhai Naoroji (b) A.O. Hume
 (c) Ferozshah Mehta (d) Badruddin Tyabji
- 190. The Quit India Movement was launched in 1942 in the month of** [MEGHALAYA DI - 2019]
 (a) January (b) April
 (c) June (d) August
- 191. Who proposed the preamble before the Drafting Committee of the Constitution** [MEGHALAYA DI - 2019]
 (a) Jawaharlal Nehru (b) B.R. Ambedkar
 (c) B.M Rao (d) Mahatma Gandhi
- 192. Which State enjoys the distinction of being the first linguistic state of India?** [MEGHALAYA DI - 2019]
 (a) Andhra Pradesh (b) Goa
 (c) Karnataka (d) Kerala

GENERAL SCIENCE

- The energy emitted by the sun is due to** [MEGHALAYA DI - 2019]
 - Chemical reaction
 - Nuclear fission
 - Nuclear fusion
 - All of these
- The device which is used to store the electric charge is called** [MEGHALAYA DI - 2019]
 - Inductor
 - Capacitor
 - Generator
 - Transistor
- Which acid is known as "King of Chemicals"** [MEGHALAYA DI - 2019]
 - HCl
 - H_2SO_4
 - HNO_3
 - H_3PO_4
- The substance most commonly used in a transistor** [AP DI - 2012]
 - Silicon
 - Copper
 - Silver
 - Gold
- Chemical name for Dry Ice** [AP DI - 2012]
 - Solid carbon dioxide
 - Sodium chloride
 - Zinc Sulphate
 - Sodium Nitrate
- Chemical name for Alcohol** [AP DI - 2012]
 - Ethyl Alcohol
 - Hydrated Alcohol
 - Lead oxide
 - Calcium oxide
- German silver is an alloy of** [AP DI - 2012]
 - Copper, Zinc and Nickel
 - Copper, Aluminium and Nickel
 - Zinc, Magnesium and Copper
 - Nickel, Tin and Lead
- Who formulated the first theory of evolution** [AP DI - 2012]
 - J.B.D. Lamarck
 - B.G. Cuvier
 - Charles Darwin
 - Packard Spencer
- In 1665 who discovered the cell** [AP DI - 2012]
 - Robert Hook
 - A.G. Loewy
 - P. Siekevitz
 - Huxley
- Cinnabar is an ore/mineral of** [MEGHALAYA DI - 2019]
 - Lead
 - Manganese
 - Molybdenum
 - Mercury
- What is used to prevent freezing of fuel in spacecraft's** [MEGHALAYA DI - 2019]
 - Benzene
 - Glycol
 - Acetylene
 - Ester
- Where is Ozone layer found** [MEGHALAYA DI - 2019]
 - Troposphere
 - Ionosphere
 - Stratosphere
 - Exosphere
- Entomology is the science that studies** [MEGHALAYA DI - 2019]
 - Behaviour of human beings
 - Insects
 - The formation of rocks
 - None of these
- Charcoal is used in water treatment as a/an** [MEGHALAYA DI - 2019]
 - Solvent
 - Absorbent
 - Coagulant
 - Adsorbent
- Which will replace question mark in the following** [MEGHALAYA DI - 2019]
Palaeontology : Fossil :: Phrenology : ?
 - Pancreas
 - Thyroid
 - Lungs
 - Skull
- Oxygen molecule is 16 times as heavy as a hydrogen molecule. The temperature of oxygen when its average speed is equal to that of hydrogen at 30 K is** [TN DI - 2019]
 - 300 K
 - 480 K
 - 120 K
 - 100 K
- The molecular formula of Chromite ore is** [TN DI - 2019]
 - $FeCr_4O_8$
 - $FeCr_4SO_4$
 - $FeCrO_4$
 - $FeCr_2O_8$
- Which organelle is absent in human sperm** [TN DI - 2019]
 - Nucleus
 - Centriole
 - Endoplasmic reticulum
 - Mitochondria

- 115. The instrument used to measure atmospheric pressure is called a** [GDC PRACTICE MCQ]
 (a) Thermometer (b) Barometer
 (c) Hydrometer (d) Lactometer
- 116. What is the genetic material found in most living organisms** [GDC PRACTICE MCQ]
 (a) Protein (b) Carbohydrate
 (c) DNA (d) RNA
- 117. Which of the following is a vector quantity** [GDC PRACTICE MCQ]
 (a) Speed (b) Distance
 (c) Velocity (d) Mass
- 118. The process of conversion of water vapor into water is called** [GDC PRACTICE MCQ]
 (a) Evaporation (b) Condensation
 (c) Sublimation (d) Precipitation
- 119. What is the main component of biogas** [GDC PRACTICE MCQ]
 (a) Carbon dioxide (b) Methane
 (c) Hydrogen (d) Nitrogen
- 120. Which of the following is a communicable disease** [GDC PRACTICE MCQ]
 (a) Diabetes (b) Hypertension
 (c) Common Cold (d) Cancer

GENERAL ENGLISH

- 1. ____ you lend me your scooter, please** [GUJARAT DI - 2024]
 (a) Would (b) Shall (c) Will (d) Can
- 2. They made him king. (Change the voice)** [GUJARAT DI - 2024]
 (a) King made by them
 (b) He was made king
 (c) He has been made king
 (d) King has been made by them
- 3. Had you not informed me, I ____ missed the flight** [GUJARAT DI - 2024]
 (a) Will have (b) Would have
 (c) Shall have (d) Could have
- 4. I saw the lion ____ the prey** [GUJARAT DI - 2024]
 (a) catching (b) catches
 (c) caught (d) had caught
- 5. There is only ____ sugar in the jar** [GUJARAT DI - 2024]
 (a) little (b) a few (c) a little (d) few
- 6. ____ Ganga is ____ sacred river** [GUJARAT DI - 2024]
 (a) No article/the (b) The/the
 (c) The/a (d) No article/No article
- 7. Either the manager or his assistant failed in ____ duty** [GUJARAT DI - 2024]
 (a) his (b) their (c) her (d) the
- 8. In course ____ time he realised his mistake** [GUJARAT DI - 2024]
 (a) of (b) to (c) off (d) on
- 9. This is the house ____ Jack built** [GUJARAT DI - 2024]
 (a) which (b) whom (c) what (d) that
- 10. I shall wait till you ____ your lunch** [GUJARAT DI - 2024]
 (a) Finished (b) Finish
 (c) Have finished (d) Will finish
- 11. Fill in the blank with the most appropriate option.** [TELANGANA DI - 2023]
We all are not pawns in the hands of time, we ____?
 (a) Aren't (b) Can't (c) Have (d) Are
- 12. Which of these statements has a grammatical error** [TELANGANA DI - 2023]
Statement A: Although she had been dubious about the efficacy of the proposed strategy, the subsequent success it garnered left her in a state of pleasant astonishment
Statement B: Notwithstanding the challenges they faced, the team persevered and ultimately accomplished their objective, which was no small feat given the circumstances
 (a) Neither A nor B (b) Both A and B
 (c) Only B (d) Only A

25. निम्नलिखित विवरणों पर विचार करते हुए उचित विकल्प का चयन करें। [GUJARAT DI - 2024]
- संधि : भिशज् + रज = भिशग्रज्।
 - कर्मधारय समास – खड्मोसल।
 - जीव-जंतुओं का अलंकरण – मनुष्य में धन की चाहत प्रवाहित होती रहती है।
 - मुहावरे का अर्थ : मोटे पाताले सुकना = ऊंचा बैठना।
- (a) केवल 1 और 2 सही हैं
(b) केवल 1, 2 और 3 सही हैं
(c) केवल 2 और 4 सही हैं
(d) केवल 4 सही है
26. 'तुम' कौन सा सर्वनाम है [GDC PRACTICE MCQ]
- (a) पुरुषवाचक सर्वनाम (b) निश्चयवाचक सर्वनाम
(c) अनिश्चयवाचक सर्वनाम (d) प्रश्नवाचक सर्वनाम
27. 'सुंदर' शब्द का भाववाचक संज्ञा रूप क्या होगा [GDC PRACTICE MCQ]
- (a) सुंदरता
(b) सौंदर्य
(c) सुन्दरता और सौंदर्य दोनों
(d) सुन्दर
28. 'पढ़ना' कैसी क्रिया है [GDC PRACTICE MCQ]
- (a) अकर्मक क्रिया (b) सकर्मक क्रिया
(c) सहायक क्रिया (d) प्रेरणार्थक क्रिया
29. 'अत्यंत' शब्द में कौन सा उपसर्ग है [GDC PRACTICE MCQ]
- (a) अ (b) अति
(c) अधि (d) अपि
30. 'लेखक' शब्द में कौन सा प्रत्यय लगा है [GDC PRACTICE MCQ]
- (a) अक (b) इक
(c) क (d) अख

COMPUTER

1. Which of the following is the full form of "computer" [MP DI - 2022]
- (a) Commonly Operated Manually, Particularly Used for Trade/Technology, Education, and Research
(b) Common Output Machines in Trade, Technology, Education, and Research
(c) Commonly Used Machine Particularly Used for Trade, Technology, Education, and Research
(d) Commonly Operated Machine Particularly Used for Trade, Technology, Education, and Research
2. Which one of the following applies to "parity bits" [MP DI - 2022]
- (a) Encryption of data (b) To transmit faster
(c) To detect errors (d) To identify the user
3. DOS is related to computers, what is its full form [MP DI - 2022]
- (a) Disk Operation System
(b) Disk Operator System
(c) Disk Management System
(d) Disk Operating System
4. Who is the Inventor of WWW (World wide web) [MP DI - 2022]
- (a) Lee. N. Feyong (b) Jim Kim
(c) Tim Berners Lee (d) James Gosling
5. With respect to Internet, what is the full form of ISP [MP DI - 2022]
- (a) Intramail Service Provider
(b) Intranet Service Publisher
(c) Internet Service Provider
(d) International Service Provider
6. There are 8 tabs in in MS Word 2013 [MP DI - 2022]
- (a) Ribbon (b) Title Bar
(c) Home (d) Status Bar
7. What is the meaning of Bandwidth in Network [MP DI - 2022]
- (a) Compiler
(b) Transmission capacity of a communication channels
(c) Class of IP used in Network
(d) Connected Computers in the Network
8. Which of the following is the first network [MP DI - 2022]
- (a) APRANET (b) CSNET
(c) NSFNET (d) None of these



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