

This Question Booklet contains
12 printed pages

PGPHA

A
Seal Sticker

Total Marks : 100
Time : 100 Minutes

Question
Booklet
Code :

A

Candidate's
Seat No. :

Candidate's Signature _____ Block Supervisor's Signature _____

DO NOT OPEN QUESTION BOOKLET UNTIL INSTRUCTED.

INSTRUCTIONS FOR CANDIDATE:

1. Check Number printed on your OMR SHEET and Question Paper with your SEAT No. before answering the questions. Consult block supervisors in case the above mentioned numbers do not match with your seat number.
2. There are total 100 questions. For answer of each question A, B, C, D, E options are given in OMR SHEET. In OMR SHEET, there is "E" option. "E" option is for "Not Attempted". If candidate do not wish to answer the question he/she should select "E" option (Not Attempted). All questions are compulsory.

For Example:

Which state of India has the longest sea shore ?

A ☐ B ☐ C ☒ D ☐ E ☐

(A) Maharashtra (B) Tamilnadu
(C) Gujarat (D) Andhra Pradesh

In this example, the right answer is (C). Therefore, the Circle of (C) has been darkened (encoded). Candidate should not give the answer "Gujarat" in writing.

The options once darkened/answered by candidate cannot be changed.

3. Candidates are not permitted to leave examination hall during examination.
4. Candidates must strictly enter SEAT NO. in the designated space provided in OMR SHEET as well as Question Paper neatly as soon as they receive the OMR SHEET & Question Paper.
5. Candidates must not write name or put any identification sign/symbol on OMR SHEET. In such case strict disciplinary action will be taken against candidate & will be considered disqualified/ineligible. Only Seat No. must be

entered at designated space provided in OMR SHEET.

6. Both, Candidate's & Supervisor's signature must be done on Certificate of OMR SHEET. Unsigned OMR SHEET would not be considered for evaluation.
7. Candidates are not permitted to use or carry with them any kind of literature, guide, hand written notes, or printed books, mobile phone, pagers, smart watches, camera or any electronic gadgets to examination hall.
8. Use of only Non-scientific / Non-programmable calculator shall allow during examination.
9. Candidates are not permitted to talk/discuss in the Examination Hall. Any candidate found violating supervisor's instructions will be disqualified.
10. Candidates must fully darken circle A, B, C, D and E accordingly with Blue / Black ball pen. If answers are marked with any other coloured ball pen, pencil, white ink (whitner), any corrections are done by candidate by means of blade or rubber or whitner will not be considered for evaluation.
11. Candidates may carry QP with them after Examination.
12. **For correct answer 1 (One) marks will be given.**

If candidate gives more than one option as answer for one question in answer sheet (OMR SHEET), or gives wrong answer then the candidate will be allotted Zero (0) marks.

If candidate does not want to answer a particular question and marks (E) or leave the option without encoding on OMR sheet, then no minus marks will be given.

Submit the OMR SHEET to the block supervisor after completion of examination without fail before leaving examination hall, failure to do so will result in disqualification of the candidature for the examination and disciplinary action will be taken against such candidate.

1. Which of the following is an example of an alkaloid.
 (A) Quinine (B) Rutin
 (C) Limonene (D) Stigmasterol
2. Glycosides are compounds where sugar moiety is bound to a non-sugar moiety called:
 (A) Aglycone (B) Glucoside
 (C) Terpene (D) Flavonoid
3. Which technique is commonly used for the isolation of Essential oils
 (A) Sublimation (B) Crystallization
 (C) Steam distillation (D) Chromatography
4. Which of the following drugs act on Central Nervous System?
 (A) Diazepam (B) Atorvastatin
 (C) Metformin (D) Lisinopril
5. The pharmacological action of atropine is:
 (A) Cholinergic (B) Anticholinergic
 (C) Sympathomimetic (D) Antiadrenergic
6. Beta blockers are primarily used in the treatment of
 (A) Asthma (B) Diabetes mellitus
 (C) Bacterial Infections (D) Hypertension
7. The structure of Acetaminophen (Paracetamol) includes:
 (A) Ester Group (B) Amide Group
 (C) Ketone Group (D) Alkene Group
8. The Synthesis of aspirin involves the esterification of
 (A) Benzoic acid (B) Oxalic acid
 (C) Salicylic acid (D) Ascorbic acid
9. NSAID'S (Non steroidal anti inflammatory drugs) primarily work by inhibiting
 (A) Lipase enzyme (B) Cyclooxygenase enzyme
 (C) Protease enzyme (D) Amylase enzyme
10. The Drugs and Cosmetics Act regulates
 (A) Food safety (B) Control of Drug Prices
 (C) Education standards of Pharmacists (D) Manufacture and sale of drugs
11. Pharmacy Act deals with
 (A) Regulations pertaining to Pharmacy store
 (B) Patent laws
 (C) Registration and regulation of Pharmacists
 (D) Environment laws
12. The primary focus of Pharmaceutical Ethics is:
 (A) Professional conduct (B) Financial management
 (C) Marketing strategies (D) Manufacturing processes

13. Flame photometry is commonly used to analyse:
(A) Polymers (B) Proteins
(C) Aromatic compounds (D) Metal ions
14. Conductometry measures
(A) Electrical conductivity of a solution (B) Optical Density
(C) Viscosity (D) Thermal conductivity
15. The principle of IR spectroscopy involves
(A) Reflection of visible light (B) Absorption of infrared light
(C) Scattering of X-Rays (D) Absorption of UV-light
16. The biochemical role of Insulin is to:
(A) Regulate blood pressure (B) Regulate Respiration
(C) Regulate Blood Sugar levels (D) Improve digestion of food
17. The primary role of vitamins in the body is to:
(A) Act as coenzymes in metabolic reaction (B) Provide structural support
(C) Serve as Energy source (D) Regulate osmotic balance
18. Vaccine work by:
(A) Stimulating the Immune system (B) Killing pathogens directly
(C) Neutralising toxins (D) Killing host cells
19. Microbial growth is commonly measured by
(A) Optical Density (B) Electrical conductivity
(C) Viscosity (D) pH
20. Which of following methods is used to ensure sterility in pharmaceutical products
(A) Freezing (B) Autoclaving
(C) Drying (D) Mixing
21. Patient Counseling aims to
(A) Improve the sales of pharmaceuticals (B) Enhance packaging design
(C) Reduce the manufacturing cost (D) Improve Medication adherence
22. Which chromatographic Technique is most suitable for separating high molecular weight plant polysaccharides?
(A) Thin layer chromatography (B) Gel. filtration chromatography
(C) Paper Chromatography (D) Gas Chromatography
23. The stereoisomerism of Quinine is a classic example of
(A) Diastereomerism (B) Geometrical isomerism
(C) Optical isomerism (D) Conformational isomerism
24. Guggul lipids are derived from which plants?
(A) Curcuma longa (B) Azadirachta indica
(C) Commiphora mukul (D) Ocimum sanctum

25. The term “pharmacodynamics” refers to
 - (A) The study of drug absorption, distribution and metabolism excretion
 - (B) The study of adverse drug reactions
 - (C) The study of the biochemical and physio of logical drugs effects
 - (D) The study of drug interactions
26. The pharmacological activity of Ginseng side is primarily due to
 - (A) Triterpenoid saponins
 - (B) Alkaloids
 - (C) Flavonoids
 - (D) Tannins
27. Which enzyme is commonly involved in the hydrolysis of glycosides during the extraction process?
 - (A) β -Amylase
 - (B) β -Glucosidase
 - (C) lipase
 - (D) pepsin
28. The use of cyclodextrins in phytochemical formulations is primarily for
 - (A) Reducing toxicity
 - (B) Improving taste
 - (C) Increasing viscosity
 - (D) Enhancing solubility and stability
29. The mg major site of drug metabolism in the body is
 - (A) Spleen
 - (B) Kidney
 - (C) Liver
 - (D) Lungs
30. Which of the following receptors is a G-protein coupled receptor (GPCR)?
 - (A) Muscarinic receptor
 - (B) Nicotinic receptor
 - (C) NMDA receptor
 - (D) AMPA receptor
31. Pharmacogenomics is the study of how:
 - (A) Genetic disorders occur
 - (B) Genetic variations affect drug response
 - (C) Drug interact with food
 - (D) Disease affect drug distribution
32. The Term “First-pass metabolism” refers to the
 - (A) Metabolism of drugs in kidney
 - (B) Distribution of drugs in blood
 - (C) Metabolism of drugs in liver before it reaches systemic circulation
 - (D) Effluxing of drug to intestinal lumen by p-glycoprotein
33. An example of a selective serotonin reuptake inhibitor (SSRI) is:
 - (A) Fluoxetine
 - (B) Diazepam
 - (C) Metoprolol
 - (D) Ibuprofen
34. The therapeutic window of a drug refers to the range between
 - (A) Peak concentration and trough concentration
 - (B) Loading dose and maintenance dose
 - (C) Absorption and excretion
 - (D) Minimum effective concentration and minimum toxic concentration
35. Inverse agonists differ from antagonists in that they
 - (A) Produce the opposite effect to the agonist
 - (B) Block the receptor without activating it
 - (C) Enhance the effect of the against
 - (D) Compete with the agonist for the receptor

36. Which of the following drugs is used as an anticoagulant?
(A) Atorvastatin (B) Metformin
(C) Warfarin (D) Lisinopril
37. The primary mechanism of action of local anesthetics is:
(A) Inhibiting acetyl cholinesterase (B) Activating potassium channels
(C) Binding to GABA receptors (D) Blocking sodium channels
38. Which of the following drugs is used to treat Alzheimer's disease?
(A) Propranolol (B) Metformin
(C) Furosemide (D) Donepezil
39. The prodrug concept is utilised to
(A) Enhance selectivity (B) Improve bioavailability
(C) Increase potency (D) Reduce toxicity
40. Therapeutic drug monitoring (TDM) is primarily used for:
(A) Studying the mechanism of action of drugs
(B) Ensuring correct drug dosage in individual patients
(C) Developing new pharmaceutical formulation
(D) Conducting population-based drug studies
41. Clinical pharmacists often use the "SOAP" format to document patient care. what does SOAP stand for?
(A) Symptoms, Observations, Actions, Plan
(B) Symptoms, Objective, Assessment, Prescription
(C) Subjective, Objective, Assessment, Plan
(D) subjective, Objective, Actions, Prescription
42. The term "pharmacovigilance" refers to:
(A) The study of drug interaction
(B) The process of drug discovery
(C) The monitoring of drug manufacturing
(D) The science and activities related to detecting assessing, understanding and preventing adverse effect or any drug related problem
43. The term "Bioisosterism" refers to The
(A) Replacement of one functional group with another that has similar physical or chemical properties
(B) Binding of a drug to a specific receptor
(C) Metabolism of drug in the liver
(D) Excretion of drug via the kidneys
44. Which of the following drugs is a proton pump inhibitor (PPI)?
(A) Ranitidine (B) Famotidine
(C) Omeprazole (D) Cimetidine
45. Which of the following is a selective estrogen receptor modulator (SERM)?
(A) Progesterone (B) Tamoxifen
(C) Testosterone (D) Estrogen

46. The primary - component of the cell wall in Gram-positive bacteria is
 (A) Lipopolysaccharide (B) Phospholipid
 (C) Peptidoglycan (D) Protein
47. Which of the following is an antifungal drug that inhibits ergosterol synthesis
 (A) 5-fluorocytosine (B) Cotrimoxazole
 (C) Griseofulvin (D) Isoniazid
48. The Term “chiral center” refers to
 (A) A hydrogen atom bonded to a carbon atom
 (B) A double bond between two carbon atoms
 (C) An aromatic ring structure
 (D) A carbon atom with four different substituents
49. Which of the following methods is used to sterilize heat sensitive pharmaceutical products?
 (A) Autoclaving (B) Dry heat
 (C) Filtration (D) Radiation
50. Which of the following techniques is used to measure the molecular weight of proteins?
 (A) TLC (B) SDS-PAGE
 (C) HPLC (D) NMR
51. The principle of High Performance Liquid Chromatography (HPLC) is based on:
 (A) Separation of compounds based on their interactions with a stationary and a mobile phase.
 (B) Separation of compounds based on their boiling points.
 (C) Separation of compounds based on their molecular weights.
 (D) Separation of compounds based on their optical activities
52. Which of the following is a macrolide antibiotic?
 (A) Penicillin (B) Erythromycin
 (C) Tetracycline (D) Ciprofloxacin
53. The function of a trans-dermal patch in drug delivery is to.
 (A) Inject medication subcutaneously
 (B) Provide a controlled release of medication through the skin
 (C) Administer medication orally
 (D) Injects medication intravenously
54. Which of the following is an example of cardiac glycoside
 (A) Sennosides (B) Xanthotoxin
 (C) Digoxin (D) Warfarin
55. Which of the following is a Class-III antiarrhythmic agent?
 (A) Amiodarone (B) Propranolol
 (C) Phenytoin (D) Lignocaine
56. The role of cytochrome P 450 enzymes in drug metabolism is to
 (A) Hydrolyze the drug to activate them
 (B) Reduce the drugs
 (C) Oxidize the drugs to increase their solubility in water
 (D) Methylate drugs to excrete them

57. The primary purpose of a phase III clinical trial is to
- (A) Evaluate drug safety in healthy volunteers
 - (B) Assess the drug's pharmacokinetics and pharmacodynamics
 - (C) Conduct initial safety & efficacy in a small group of patients
 - (D) Confirm the drug's efficacy and monitor ADR in large group of patients
58. Which of the following is a common side effects of opioid analgesics?
- (A) Diarrhoea
 - (B) Cough
 - (C) Constipation
 - (D) Hypertension
59. Which of the following drugs is a Calcium Channel Blocker)
- (A) Losartan
 - (B) Lisinopril
 - (C) Amlodipine
 - (D) Metoprolol
60. The concept of "Lipinski's rule of five" is used to
- (A) Predict the drug-likeness of a molecule
 - (B) Determine the drug's pharmacodynamics
 - (C) Evaluate drug's toxicity
 - (D) Assess the drug's stability
61. The Term "enantioselectivity" in pharmacology refers to:
- (A) The ability of drug to bind to multiple receptor
 - (B) The rate at which drug is metabolised
 - (C) The differential action of different enantiomers of a drug
 - (D) The process of drug absorption in the intestine
62. The Term "Volume of Distribution (VD)" in Pharmacokinetics refers to.
- (A) The Volume of drug administered to patient
 - (B) The concentration of drug in the plasma
 - (C) The bioavailability of the drug
 - (D) The theoretical volume in which the total amount of drug would need to be uniformly distributed to produce the observed blood concentration
63. The primary purpose of clinical Trial phase I is to
- (A) Determine safety and dosage in healthy subjects
 - (B) Determine Efficacy in patients
 - (C) Assess long term effect of drug.
 - (D) Develop marketing strategies
64. WHO guidelines for herbal products primarily focuses on
- (A) Packaging
 - (B) Standardisation
 - (C) Marketing
 - (D) Advertising
65. Quantitative microscopy can be used to evaluate
- (A) Particle size
 - (B) Moisture content
 - (C) Alkaloid content
 - (D) Glycoside content

66. Which agency is responsible for the approval of new drugs in India
(A) world Health Organisation
(B) Indian Council of Medical Research
(C) Pharmacy Council of India
(D) Central Drugs Standard Control Organisation (CDSCO)
67. Which of the following is an example of Schedule H drug in India,
(A) Antibiotics (B) Antacids
(C) Vitamins (D) Herbal supplements
68. Informed Consent is Crucial in:
(A) Drug manufacturing (B) Pharmaceutical sales
(C) Quality Control of products (D) Clinical Trials
69. Which technique is used to determine the melting point of a substance
(A) Differential Scanning Calorimetry (DSC)
(B) Thin layer Chromatography (TLC)
(C) Gas Chromatography (GC)
(D) IR Spectroscopy (IR)
70. The Technique used to amplify DNA is called
(A) Gel Electrophoresis (B) Restriction Digestion
(C) Polymerase Chain Reaction (PCR) (D) DNA sequencing.
71. The term Pathogenicity
(A) The ability of a microorganism to cause disease
(B) The presence of microorganism in the environment
(C) The resistance of microorganism to antibiotics
(D) The growth rate of mic micro organism
72. The function of bacterial capsule is primarily to
(A) Provide motility (B) Protect against phagocytosis
(C) Aid in reproduction (D) Enhance nutrition absorption
73. Which of the following organisms are known for producing antibiotics
(A) Clostridium (B) E. Coli
(C) Streptomyces (D) Bacillus
74. The antidote for acetaminophen over dose is
(A) Atropine (B) Naloxone
(C) Flumazenil (D) N-acetylcysteine
75. Warfarin therapy requires monitoring of
(A) Blood Glucose level (B) International normalised ratio (INR)
(C) Serum Potassium level (D) Renal function
76. The process of adjusting drug dosages based on patient response is known as
(A) Titration (B) Tapering
(C) TDM (D) Compliance

77. Which of the following is an antiplatelet agent
(A) Warfarin (B) Heparin
(C) Aspirin (D) Enoxaparin
78. The primary goal of anti microbial Stewardship is to:
(A) Reduce healthcare Cost (B) Improve Clinical Outcomes
(C) Prevent antimicrobial resistance (D) Increase antimicrobial prescription
79. Which solvent system is frequently used for the extraction of alkaloids from plant materials?
(A) Methanol-water (B) Chloroform-methanol
(C) Hexane-acetone (D) Ethyl acetate-water
80. Which of the following is methods is best suited for the analysis of volatile oil composition
(A) GC-MS (B) HPTLC
(C) FTIR (D) Capillary Electrophoresis
81. The pharmacokinetic parameter that describes the rate at which drug is removed from the body is.
(A) Volume of distribution (B) Bioavailability
(C) Clearance (D) Half-life
82. An orphan drug is used to treat
(A) Common Conditions (B) Rare diseases
(C) Infectious Diseases (D) Nutritional Diseases
83. A drugs half-life is defined as:
(A) Time it takes to absorb the drug.
(B) Time it takes to sale the drug.
(C) Time it takes for plasma concentration of drug to four value.
(D) Time it takes to manufacture the drug.
84. The study of the adverse effects of Chemicals on living organism is known as
(A) Pharmacology (B) Pharmacotherapy
(C) Toxicology (D) Pharmacokinetics
85. The common antidote for opioid over dose is
(A) Morphine (B) Naloxone
(C) Adrenaline (D) Atropine
86. The term LD50 refers to
(A) The dose of toxin that kills 50% of test population
(B) The 50% of therapeutic dose
(C) The average dose of a dry
(D) The close required to get 50% of therapeutic effect
87. Chronic toxicity refers to
(A) Immediate poisoning
(B) The adverse effect due to long term exposure of drug/toxin
(C) Short Term exposure
(D) Beneficial effects

88. Which of the following drugs is a proton pump inhibitor?
(A) Fluconazole (B) Astemizole
(C) Lansoprazole (D) Ranitidine
89. The primary mechanism of action of statin is
(A) Blocks Calcium Channel (B) Inhibits Angiotensin Converting Enzyme
(C) Block B-adrenoceptor (D) Inhibits HMG-CoA Reductase Enzyme
90. A common method of synthesis of peptides involves
(A) Liquid-Liquid extraction (B) Distillation
(C) Crystallization (D) Solid-phase peptide synthesis
91. Which of the following drugs is a monoclonal antibody used in cancer therapy
(A) Methotrexate (B) Trastuzumab
(C) Doxorubicin (D) Cisplatin
92. Which of the following is selective cox-2 Inhibitor
(A) Aspirin (B) Celecoxib
(C) Naproxen (D) Ibuprofen
93. The principle of Structure Activity Relationship in Medicinal Chemistry is used to
(A) Determine solubility of drug.
(B) Determine stability of Compound
(C) Relate chemical structure to biological activity
(D) Analyze purity of drug
94. A common method of enhancing bioavailable of poorly soluble drugs.
(A) using sustained release formulation
(B) Increasing the dosed dose of drug.
(C) Increase the particle size
(D) Formulate as nanoparticles
95. The process of lyophilization is used to
(A) Dry the product at very high temperature and high pressure
(B) Dry the product at very low temperature and low pressure
(C) Dry the product at high temperature and low pressure
(D) Reduce the particle size
96. The term - "critical micelle concentration" is associated with
(A) Polymers (B) Surfactants
(C) Proteins (D) Lipids
97. The primary purpose of enteric coating on tablet is to:
(A) Enhance Taste (B) Increase absorption in stomach
(C) Prevent dissolution in stomach (D) Prolong shelf-life

98. In clinical trials the “Placebo effect” refers to
- (A) The improve in symptoms due to patient’s belief in treatment
 - (B) The adverse effect because drug was not effective
 - (C) Lack of response to drug.
 - (D) The interaction between drugs.
99. The term “off label use of a drug refers to
- (A) using a drug at higher dose than recommended.
 - (B) use of drug in combination with other drugs
 - (C) using a drug for an indication not approved by regulatory authorities
 - (D) using a drug in different formulation
100. The area under the plasma concentration curve (AUC) is used to Determine
- (A) The rate of drug absorption
 - (B) The extent of drug absorption
 - (C) The therapeutic window
 - (D) The drug’s half-life

