

To be filled by the candidate)

Booklet S. No. _____

Roll No. (In figures) _____

Roll No. (In words) _____

Name of the Candidate : _____

Father's Name : _____

Center of Examination : _____

Total No. of Questions : 50

Paper Code- 2616

**Name of Examination- Senior Resident/Specialist Tutor Entrance 2026
Specialty-Pharmacology**

Time Allowed : 90 Minutes

Maximum Marks : 200

IMPORTANT NOTE:

- (i) OMR Answer Sheet will be supplied by the Examination Centre Superintendent for answering the questions.
- (ii) Use **Blue/Black Ink/ Ball Pen only**, to darken the appropriate circle in the OMR Answer Sheet.
- (iii) Darken one circle deeply for each question in the OMR Answer Sheet, as faintly darkened circle might be rejected by the Optical Scanner.
- (iv) Darkening of more than one circle shall be rejected by the scanner. **Over-writing, cutting, erasing or use of White Fluid is not allowed.**
- (v) Before dealing with the question paper, fill-up the required information with Blue/Black Ball Pen correctly both in the Question Booklet and in the OMR Answer Sheet.
- (vi) Do not fold the OMR Answer Sheet nor put any mark here and there to avoid rejection by the Optical Scanner.
- (vii) Write Roll. No. carefully on the OMR Answer Sheet and darken the appropriate circle properly.
- (viii) **Each question carries Four Marks while 1 mark shall be deducted for each incorrect response.**
- (ix) **Use of Calculator is not allowed.**
- (x) **No over-writing, cutting, erasing or use of white fluid is allowed.**
- (xi) Rough work be done on the sheet(s) at the end.
- (xii) **MOBILE TELEPHONES (EVEN ON SWITCH-OFF MODE) AND SUCH OTHER ELECTRONIC DEVICES ARE NOT ALLOWED INSIDE THE EXAMINATION HALL.**
- (xiii) The question paper-booklet will be retained by the candidate after the entrance test is over.

Q1. A drug following zero-order kinetics is:

- A. Warfarin
- B. Phenytoin
- C. Digoxin
- D. Theophylline

Correct answer: B

Q2. Bioavailability is defined as:

- A. Fraction of drug absorbed
- B. Fraction of drug reaching systemic circulation unchanged
- C. Rate of drug absorption
- D. Volume of distribution

Correct answer: B

Q3. A drug that is a partial agonist will:

- A. Produce full maximal response
- B. Have zero intrinsic activity
- C. Reduce response of full agonist
- D. Act only as antagonist

Correct answer: C

Q4. Therapeutic index is the ratio of:

- A. ED50/TD50
- B. TD50/ED50
- C. LD50/ED50
- D. ED50/LD50

Correct answer: C

Q5. First-pass metabolism occurs mainly in the:

- A. Kidney
- B. Lung
- C. Liver
- D. Brain

Correct answer: C

Q6. A drug highly bound to plasma proteins will have:

- A. Larger volume of distribution
- B. Faster elimination
- C. Lower free fraction
- D. Higher renal clearance

Correct answer: C

Q7. Which receptor is a ligand-gated ion channel?

- A. G-protein coupled receptor
- B. Nuclear receptor
- C. Nicotinic acetylcholine receptor
- D. Insulin receptor

Correct answer: C

Q8. Enzyme induction leads to:

- A. Decreased drug metabolism
- B. Increased drug half-life
- C. Reduced efficacy of substrate drugs
- D. Increased toxicity always

Correct answer: C

Q9. The volume of distribution is calculated as:

- A. Dose / plasma concentration
- B. Plasma concentration / dose
- C. Clearance \times half-life
- D. Bioavailability \times dose

Correct answer: A

Q10. Tachyphylaxis is best described as:

- A. Allergic reaction
- B. Cumulative toxicity
- C. Rapid loss of drug response
- D. Delayed hypersensitivity

Correct answer: C

Q11. Prodrugs are administered to:

- A. Reduce metabolism
- B. Increase toxicity
- C. Improve bioavailability
- D. Decrease duration of action

Correct answer: C

Q12. Which factor most affects renal drug clearance?

- A. Protein binding
- B. Hepatic blood flow
- C. Glomerular filtration rate
- D. Lipid solubility

Correct answer: C

Q13. Competitive antagonism shifts the dose-response curve:

- A. Downward
- B. To the left
- C. To the right
- D. Eliminates maximum response

Correct answer: C

Q14. Drug of choice for acute anaphylaxis is:

- A. Hydrocortisone
- B. Chlorpheniramine
- C. Adrenaline
- D. Salbutamol

Correct answer: C

Q15. A β -blocker safest in bronchial asthma is:

- A. Propranolol
- B. Atenolol

- C. Nebivolol
- D. Nadolol

Correct answer: C

Q16. ACE inhibitors reduce blood pressure mainly by:

- A. Reducing heart rate
- B. Decreasing aldosterone
- C. Vasodilation via reduced angiotensin II
- D. Increasing sodium excretion only

Correct answer: C

Q17. Drug of choice in acute pulmonary edema is:

- A. Digoxin
- B. Furosemide
- C. Mannitol
- D. Spironolactone

Correct answer: B

Q18. The anti-anginal drug causing coronary steal phenomenon is:

- A. Nitroglycerin
- B. Propranolol
- C. Dipyridamole
- D. Verapamil

Correct answer: C

Q19. Cardioselective β -blocker is:

- A. Propranolol
- B. Metoprolol
- C. Labetalol
- D. Carvedilol

Correct answer: B

Q20. The diuretic causing hyperuricemia is:

- A. Mannitol
- B. Furosemide
- C. Acetazolamide
- D. Amiloride

Correct answer: B

Q21. Drug of choice for acute severe asthma attack is:

- A. Oral theophylline
- B. Inhaled salbutamol
- C. Oral montelukast
- D. Cromolyn sodium

Correct answer: B

Q22. The mechanism of digoxin is inhibition of:

- A. Na^+/K^+ ATPase
- B. Ca^{2+} ATPase
- C. $\text{Na}^+/\text{Ca}^{2+}$ exchanger
- D. H^+/K^+ ATPase

Correct answer: A

Q23. Nitrates cause headache due to:

- A. Increased intracranial pressure
- B. Cerebral vasodilation
- C. Bradycardia
- D. Reduced cerebral blood flow

Correct answer: B

Q24. Preferred antihypertensive in pregnancy is:

- A. ACE inhibitors
- B. Losartan
- C. Methyldopa
- D. Aliskiren

Correct answer: C

Q25. Loop diuretics act on:

- A. Proximal tubule
- B. Distal tubule
- C. Thick ascending limb
- D. Collecting duct

Correct answer: C

Q26. Bronchodilator acting by PDE inhibition is:

- A. Salbutamol
- B. Ipratropium
- C. Theophylline
- D. Montelukast

Correct answer: C

Q27. Drug of choice for uncomplicated falciparum malaria is:

- A. Chloroquine
- B. Artesunate-based combination therapy
- C. Quinine alone
- D. Primaquine alone

Correct answer: B

Q28. Mechanism of action of metformin includes all EXCEPT:

- A. Reduced hepatic gluconeogenesis
- B. Increased insulin secretion
- C. Increased insulin sensitivity
- D. Activation of AMPK

Correct answer: B

Q29. Aminoglycosides cause ototoxicity by damaging:

- A. Cochlear hair cells
- B. Auditory nerve nucleus

- C. Tympanic membrane
- D. Vestibular nuclei only

Correct answer: A

Q30. Drug of choice for organophosphate poisoning is:

- A. Atropine
- B. Pralidoxime
- C. Atropine + Pralidoxime
- D. Diazepam

Correct answer: C

Q31. The antiepileptic causing gingival hyperplasia is:

- A. Valproate
- B. Carbamazepine
- C. Phenytoin
- D. Lamotrigine

Correct answer: C

Q32. Linezolid commonly causes:

- A. Nephrotoxicity
- B. Thrombocytopenia
- C. QT prolongation
- D. Hepatotoxicity

Correct answer: B

Q33. Drug of choice for opioid overdose is:

- A. Naltrexone
- B. Naloxone
- C. Methadone
- D. Buprenorphine

Correct answer: B

Q34. The mechanism of action of benzodiazepines is:

- A. Direct opening of GABA channels
- B. Increasing frequency of GABA-A channel opening
- C. Blocking NMDA receptors
- D. Increasing GABA synthesis

Correct answer: B

Q35. The drug causing gray baby syndrome is:

- A. Ciprofloxacin
- B. Chloramphenicol
- C. Sulfonamide
- D. Tetracycline

Correct answer: B

Q36. Drug used for medical termination of pregnancy is:

- A. Oxytocin
- B. Methylergometrine
- C. Mifepristone
- D. Terbutaline

Correct answer: C

Q37. The anticancer drug causing cardiomyopathy is:

- A. Cyclophosphamide
- B. Doxorubicin
- C. Cisplatin
- D. Methotrexate

Correct answer: B

Q38. Drug of choice for acute mania is:

- A. Diazepam
- B. Lithium
- C. Fluoxetine
- D. Carbamazepine

Correct answer: B

Q39. Monoclonal antibody used in rheumatoid arthritis is:

- A. Rituximab
- B. Infliximab
- C. Bevacizumab
- D. Trastuzumab

Correct answer: B

Q40. DOAC acting as direct factor Xa inhibitor is:

- A. Dabigatran
- B. Warfarin
- C. Rivaroxaban
- D. Heparin

Correct answer: C

Q41. Pharmacovigilance primarily deals with:

- A. Drug manufacturing
- B. Detection of adverse drug reactions
- C. Drug pricing
- D. Prescription writing

Correct answer: B

Q42. The Indian pharmacovigilance program is coordinated by:

- A. CDSCO
- B. AIIMS New Delhi
- C. IPC Ghaziabad
- D. ICMR

Correct answer: C

Q43. Biosimilars differ from generics because they are:

- A. Chemically identical

- B. Biologically similar but not identical
- C. Less potent
- D. Always oral

Correct answer: B

Q44. Drug acting as immune checkpoint inhibitor is:

- A. Etanercept
- B. Infliximab
- C. Nivolumab
- D. Interferon- α

Correct answer: C

Q45. Pharmacogenomics is most useful in:

- A. Dose individualization
- B. Increasing compliance
- C. Drug storage
- D. OTC drug use

Correct answer: A

Q46. ADR reporting in India follows:

- A. Voluntary reporting system
- B. Mandatory reporting for all drugs
- C. Industry-only reporting
- D. Court-based reporting

Correct answer: A

Q47. The drug used for COVID-19 cytokine storm is:

- A. Remdesivir
- B. Tocilizumab
- C. Hydroxychloroquine
- D. Azithromycin

Correct answer: B

Q48. A black box warning indicates:

- A. Absolute contraindication
- B. Life-threatening adverse effect
- C. Drug withdrawal
- D. Over-the-counter status

Correct answer: B

Q49. The primary purpose of Phase IV trials is:

- A. Dose finding
- B. Efficacy testing
- C. Post-marketing surveillance
- D. Bioequivalence

Correct answer: C

Q50. Orphan drugs are developed for:

- A. Common diseases
- B. Pediatric use only
- C. Rare diseases
- D. Emergency use

Correct answer: C

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