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## प्रश्न-पुस्तिका / QUESTION BOOKLET

Roll No. ....

Question Booklet  
Sr. No.

06564

## Subject : PHARMACEUTICAL SCIENCE

Paper Code : 02

पुस्तिका में पृष्ठों की संख्या : 8

पुस्तिका में प्रश्नों की संख्या : 100

Number of Pages in Booklet : 8

Number of Questions in Booklet : 100

समय / Time : 2.00 घंटे / Hours

पूर्णांक / Maximum Marks : 100

## INSTRUCTIONS

1. Answer **all** questions.
2. **All** questions carry **equal** marks.
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as **A, B, C, D**. You have to darken only one rectangle indicating the correct answer on the OMR Answer Sheet using **BLUE/BLACK BALL POINT PEN**. OMR Answer Sheet has been kept inside the Question Booklet.
6. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. (A wrong answer means an incorrect answer **or** more than one answers for any question. Leaving all the relevant rectangles of any question blank will not be considered as wrong answer.)
7. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
8. If there is any sort of ambiguity/mistake either of printing or factual nature, then out of Hindi and English Version of the question, the English Version will be treated as standard.

**Warning :** If a candidate is found copying or if any unauthorised material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would be liable to be prosecuted under Section 3 of the R.P.E. (Prevention of Unfair Means) Act, 1992.

## निर्देश

1. **सभी** प्रश्नों के उत्तर दीजिए ।
2. **सभी** प्रश्नों के अंक **समान** हैं ।
3. प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए ।
4. एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा ।
5. प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः **A, B, C, D** अंकित किया गया है । अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक आयताकार खाने को OMR उत्तर-पत्रक पर नीले/काले बॉल प्वाइंट पेन से गहरा करना है । OMR उत्तर-पत्रक इस प्रश्न-पुस्तिका के अंदर रखा हुआ है ।
6. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा । (गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है । किसी भी प्रश्न से संबंधित सभी आयताकार खानों को खाली छोड़ना गलत उत्तर नहीं माना जायेगा ।)
7. मोबाईल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है । यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जाएगी ।
8. यदि किसी प्रश्न में किसी प्रकार की कोई मुद्रण या तथ्यात्मक प्रकार की त्रुटि हो तो प्रश्न के हिन्दी तथा अंग्रेजी रूपान्तरों में से अंग्रेजी रूपान्तर मान्य होगा ।

**चेतावनी :** अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराई जायेगी और आर.पी.ई. (अनुचित साधनों की रोकथाम) अधिनियम, 1992 की धारा 3 के तहत कार्यवाही की जायेगी ।



1. Strontium chloride is used as
  - (A) Dentrifrice
  - (B) Desensitizing agent
  - (C) Polishing agent
  - (D) Mouth wash
2. Mercuric chloride paper is used in the limit tests of
  - (A) Heavy metals
  - (B) Arsenic
  - (C) Iron
  - (D) Lead
3. Karl-Fisher reagent is a mixture of
  - (A) Sulphurdioxide + Pyridine + Anhydrous methanol + Bromine
  - (B) Sulphurdioxide + Pyridine + Ethanol + Bromine
  - (C) Sulphurdioxide + Pyridine + Anhydrous methanol + Iodine
  - (D) Sulphurdioxide + Pyridine + Ethanol + Iodine
4. Lamotrigine is used as
  - (A) Sedative
  - (B) Antipsychotic
  - (C) Antiamoebic
  - (D) Anticonvulsant
5. The most sensitive method for detection of elements by atomic spectral method is
  - (A) flame atomic emission
  - (B) inductively coupled plasma emission
  - (C) flame atomic fluorescence
  - (D) flame atomic absorption
6. A mixture of HCl and Acetic acid can be titrated satisfactorily by
  - (A) Amperometry
  - (B) Potentiometry
  - (C) Conductometry
  - (D) Spectrophotometry
7. \_\_\_\_\_ is used for topical treatment of burns.
  - (A) Silversulfadiazine
  - (B) Clotrimazole
  - (C) Sulphamethoxazole
  - (D) Pyrimethamine
8. The source of IR for scanning is called
  - (A) Nitrogen glower
  - (B) Nernst glower
  - (C) Xenon arc
  - (D) Helium glower
9. The most intense peak in mass spectroscopy is known as
  - (A) Base peak
  - (B) Molecular peak
  - (C) Fragment peak
  - (D) Metastable peak
10. Primary alkyl halide prefers to undergo \_\_\_\_\_ type reaction.
  - (A) SN1
  - (B) E1
  - (C) SN2
  - (D) None of the above
11. Alkenes prefers to undergo
  - (A) Elimination reaction
  - (B) Substitution reaction
  - (C) Electrophilic addition reaction
  - (D) Nucleophilic addition reaction
12. Enantiomers
  - (A) have different physical properties
  - (B) have different chemical properties
  - (C) reacts differently with optically active materials
  - (D) All
13. In proton NMR spectroscopy, aldehydic proton give signal around
  - (A) 0.9 ppm
  - (B) 2-3 ppm
  - (C) 9-10 ppm
  - (D) 6-7 ppm
14. Which of the following is a cholesterol absorption inhibitor?
  - (A) Atorvastatin
  - (B) Ezetimibe
  - (C) Fenofibrate
  - (D) Nicotinic acid
15. \_\_\_\_\_ is HIV protease inhibitor.
  - (A) Lopinavir
  - (B) Efavirenz
  - (C) Zidovudine
  - (D) Acyclovir



16. 100 proof spirit alcohol corresponds to \_\_\_\_\_ in India.  
 (A) 57.1 % w/v (B) 50.1 % v/v  
 (C) 50 % w/v  (D) 57 % v/v
17. \_\_\_\_\_ is used as plasticizer in coating.  
 (A) Polyethylene glycol  
 (B) Castor oil  
 (C) Propylene glycol  
 (D) All of the above
18. HLB range for o/w emulsifying agent is  
 (A) 9-16 (B) 21-40  
 (C) 0-3 (D) 5-10
19. Butylated hydroxy toluene (BHT) is used as \_\_\_\_\_  
 (A) an antibacterial  
 (B) a suspending agent  
 (C) an antioxidant  
 (D) a coloring agent
20. One of the following is not used as a preservative :  
 (A) Methyl hydroxy benzoate  
 (B) Propyl hydroxy benzoate  
 (C) Sorbitol  
 (D) Benzoic acid
21. \_\_\_\_\_ is used for enteric coating.  
 (A) Hypromellose  
 (B) Methyl cellulose  
 (C) Sodium carboxymethyl cellulose  
 (D) Hydroxypropylmethyl cellulose phthalate
22. Mixer suitable for semi-solid materials is  
 (A) Planetary mixer  
 (B) Double cone mixture  
 (C) Ribbon blender  
 (D) Octagonal blender
23. Aromatic nitrile compound absorb IR frequency at around  
 (A) 2850-2950  $\text{cm}^{-1}$   
 (B) 2210-2260  $\text{cm}^{-1}$   
 (C) 1640-1680  $\text{cm}^{-1}$   
 (D) 3200-3600  $\text{cm}^{-1}$
24. The number of ex officio members of PCI are  
 (A) 2  (B) 3  
 (C) 4 (D) 5
25. Hyper vitaminosis D causes  
 (A) Itching  
 (B) Hyperuricemia  
 (C) Nephrolithiasis  
 (D) Hyperbilirubinemia
26. LAL test is used  
 (A) to determine the presence of pyrogens  
 (B) to determine the amount of active ingredient  
 (C) to determine the presence of particulate matters  
 (D) all of the above
27. One glucose molecule on complete oxidation in anaerobic condition yields  
 (A) 2 ATP (B) 8 ATP  
 (C) 12 ATP (D) 38 ATP
28. Liquor ammonia fortis is the synonym of  
 (A) Dilute ammonia solution  
 (B) Strong ammonia solution  
 (C) Weak ammonia solution  
 (D) None of the above
29. Which of the following drug is not ester derivative ?  
 (A) Methyl salicylate  
 (B) Procaine  
 (C) Acetylcholine  
 (D) Lignocaine
30. Haloperidol belongs to the class of  
 (A) Propendiol  
 (B) Phenothiazine  
 (C) Butyrophenone  
 (D) Carbamate
31. Pyridoxine is  
 (A) Vitamin A (B) Vitamin B<sub>2</sub>  
 (C) Vitamin K  (D) Vitamin B<sub>6</sub>

32. \_\_\_\_\_ causes pernicious anemia.
- (A) Iron deficiency  
 (B) Absence of intrinsic factor  
 (C) Defect in the maturation of RBCs  
 (D) Abnormal hemoglobin
33. Which of the following is not a polyene antibiotic ?
- (A) Bacitracin  
 (B) Candicidin  
 (C) Nystatin  
 (D) Amphotericin B
34. Acetyl number is defined as
- (A) No. of mg of KOH required to neutralize fatty acids in 1 g of fat.  
 (B) No. of mg of KOH required to saponify 1 gm of fat.  
 (C) No. of iodine absorbed by 100 gms of fat.  
 (D) No. of mg of KOH required to neutralize acetic acid.
35. RP-HPLC involves
- (A) less polar mobile phase than stationary phase.  
 (B) less polar stationary phase than mobile phase.  
 (C) reverse osmosis.  
 (D) forward osmosis.
36. Nitrous oxide gas is known as
- (A) Noble gas  
 (B) Stimulating gas  
 (C) Tear gas  
 (D) Laughing gas
37. \_\_\_\_\_ is amino alkyl ether antihistaminic.
- (A) Mepyramine  
 (B) Pheniramine  
 (C) Promethazine  
 (D) Diphenhydramine
38. Aminohippuric acid is used to test
- (A) Liver function.  
 (B) Kidney function  
 (C) Blood volume  
 (D) Secretory function of the stomach

39. In gas chromatography one of the following gases is not used as a carrier gas :
- (A) Helium       (B) Oxygen  
 (C) Nitrogen    (D) Hydrogen
40. Thiotepe belongs to class .
- (A) Alkylating agents  
 (B) Antibiotics  
 (C) Plant products  
 (D) Antimetabolites
41. Collar of CO<sub>2</sub> gas cylinder is painted in
- (A) Yellow colour  
 (B) Blue colour  
 (C) Grey colour  
 (D) Black colour
42. \_\_\_\_\_ is synonym of precipitated chalk.
- (A) Calcium chloride  
 (B) Calcium carbonate  
 (C) Calcium acetate  
 (D) Calcium gluconate
43. Radioactive calcium used in the treatment of carcinoma of bone is
- (A) Ca<sup>44</sup>  
 (B) Ca<sup>45</sup>  
 (C) Both (A) and (B)  
 (D) None of the above
44. Cyanide poisoning is treated by
- (A) Dimercaprol  
 (B) Sodium nitrite  
 (C) Calcium Disodium Edetate  
 (D) Copper sulphate
45. Vitali-Morin's test is used for identification of
- (A) Indole alkaloids  
 (B) Quinoline alkaloids  
 (C) Tropane alkaloids  
 (D) Quinazoline alkaloids
46. In Coriander, the volatile oil is present in
- (A) Vittae  
 (B) Glandular trichomes  
 (C) Schizolysigenous glands  
 (D) Resin ducts

47. Cinchona bark is also known as  
 (A) Vachnag  
 (B) Cassia bark  
 (C) Arjuna bark  
 (D) Jesuits' bark
48. \_\_\_\_\_ contains brucine as an active constituent.  
 (A) Belladonna (B) Tulsi  
 (C) Guggal  (D) Nux vomica
49. Which of the following is not spread by mosquito?  
 (A) Filaria  (B) Q fever  
 (C) Dengue (D) Yellow fever
50. Insulin activates \_\_\_\_\_ enzyme.  
 (A) Adenylate cyclase  
 (B) Tyrosine kinase  
 (C) Guanylate cyclase  
 (D) Phospholipase
51. Sublingual route is a better for delivery of glyceryl trinitrate  
 (A) for targeted delivery.  
 (B) for rapid onset of action.  
 (C) to reduce metabolism.  
 (D) for extensive half life.
52. MESNA is used to treat side effect of  
 (A) Cyclophosphamide  
 (B) Doxorubicin  
 (C) Irinotectan  
 (D) Tamoxifen
53. In schizophrenia there is  
 (A) increase in noadrenaline and 5HT level  
 (B) decrease in dopamine level  
 (C) increase in dopamine level  
 (D) increase in GABA level
54. Nikethamide acts as a  
 (A) Anxiolytic  
 (B) CNS depressant  
 (C) CNS stimulant  
 (D) Antipsychotic agent
55. Zeolite is a class of  
 (A) Aluminium hydroxide  
 (B) Aluminium oxide  
 (C) Aluminium silicate  
 (D) Aluminium carbonate
56. \_\_\_\_\_ is used as a titrant in the assay of  $\text{NH}_4\text{Cl}$  by Volhard's method.  
 (A) Ferric ammonium sulphate  
 (B) Potassium chromate  
 (C) Ammonium thiocyanate  
 (D) None of the above
57. The elements having same atomic number but different atomic weight or mass are known as  
 (A) Isotopes  
 (B) Isomers  
 (C) Polymorphs  
 (D) None of the above
58. Thyroxine molecule contain \_\_\_\_\_ number of iodine atoms.  
 (A) 5 (B) 1  
 (C) 4 (D) 3
59. 700 bed hospital can be grouped into  
 (A) Large Hospital  
 (B) Medium Hospital  
 (C) Small Hospital  
 (D) Very small Hospital
60. Which of the following is not used as a co-solvent for parental products?  
 (A) Dimethylacetamide  
 (B) Ethyl alcohol  
 (C) Propylene glycol  
 (D) Methyl alcohol
61. \_\_\_\_\_ causes hyponatremia.  
 (A) Addison's disease  
 (B) Nerve damage  
 (C) Excessive Na salt retention  
 (D) Cushing's syndrome
62. D-penicillamine can be given as antidote for \_\_\_\_\_ poisoning.  
 (A) Pb (B) Mg  
 (C) Cu (D) All of above
63. Form number \_\_\_\_\_ is used for application of repackaging of drugs other than schedule C/C1 & X.  
 (A) 24 (B) 24-A  
 (C) 24-B (D) 24-D



64. \_\_\_\_\_ is hydroxyl group containing amino acid.  
 (A) Arginine (B) Isoleucine  
~~(C) Threonine~~ (D) Alanine
65. Which form of the Vitamin A is used in the visual cycle?  
 (A) Retinyl acetate  
~~(B) Retinaldehyde~~  
 (C) Retinaic acid  
 (D) Retinol
66. Pethidine is a derivative of  
~~(A) Piperidine~~ (B) Piperazine  
 (C) Pyridine (D) Pyrrolidine
67. \_\_\_\_\_ is having action on both central nervous system and cardio vascular system.  
 (A) Gokhru fruits  
 (B) Black catechu  
 (C) Nuxvomica seeds  
~~(D) Rauwolfia roots~~
68. Phenobarbitone is a  
 (A) Short acting barbiturate  
 (B) Intermediate acting barbiturate  
 (C) Ultra short acting barbiturate  
~~(D) Long acting barbiturate~~
69. Drug causes enzyme induction is  
~~(A) Phenytoin~~  
 (B) Cimetidine  
 (C) Metronidazole  
 (D) Chloramphenicol
70. When digoxin given in combination with cimetidine?  
 (A) Metabolism of digoxin is enhanced.  
 (B) No effect in digoxin metabolism.  
~~(C) Metabolism of digoxin is inhibited.~~  
 (D) Cimetidine metabolism enhanced.
71. List of drugs that should be sold by retail only against prescription of RMP is covered under  
~~(A) Sch. H~~ (B) Sch. X  
 (C) Sch. M (D) Sch. O
72. Morphine is a drug of choice for  
 (A) Urinary Tract Infection  
 (B) Bronchial asthma  
 (C) Cardiac arrest  
~~(D) Colic pain~~
73. Heterocyclic ring present in cyanocobalamine is  
~~(A) Pyrrole~~ (B) Imidazole  
 (C) Pyrazole (D) Oxazole
74. \_\_\_\_\_ is used as vulcanizing agent in rubber.  
 (A)  $\text{CaCO}_3$  ~~(B) S~~  
 (C) ZnO (D) Neon
75. Glass containers should comply with the  
 (A) Mechanical strength  
 (B) Hydrolytic resistance  
~~(C) Leakage test~~  
 (D) None
76. Moh's Scale indicates  
~~(A) Hardness~~  
 (B) Stickiness  
 (C) Flexibility  
 (D) Correctness
77. Dissolution rate of drug can be determined by  
 (A) Stock's Law equation  
 (B) Danckwert's equation  
~~(C) Noyes & Whitney equation~~  
 (D) Henderson - Hassel batch equation
78. 1 tablespoonful = \_\_\_\_\_ ml.  
 (A) 10 (B) 25  
 (C) 20 ~~(D) 15~~
79. \_\_\_\_\_ % w/v solution of sodium chloride is isotonic with blood.  
 (A) 1.2 ~~(B) 0.9~~  
 (C) 0.7 (D) 1.4
80. \_\_\_\_\_ is main side effect of ACE inhibitors.  
~~(A) Dry cough~~  
 (B) Swelling in ankle  
 (C) Renal failure  
 (D) Hypotension
81. Which of the following is Class-I antiarrhythmic agent?  
 (A) Propranolol (B) Verapamil  
~~(C) Quinidine~~ (D) Digitalis
82. A patient whose leg is amputated and still experiences pain in toes is called  
~~(A) Phantom pain~~  
 (B) Neuralgic pain  
 (C) False pain  
 (D) Referred pain




83. Interval between each cell division is known as  
 (A) G<sub>1</sub> phase (B) M phase  
 (C) G<sub>0</sub> phase (D) S phase
84. Drug contraindicated in asthma is  
 (A) Theophylline (B) Atropine  
 (C) Alprenolol (D) Salbutamol
85. Which of the followings antacid is causing constipation?  
 (A) Aluminium hydroxide  
 (B) Magnesium carbonate  
 (C) Magnesium hydroxide  
 (D) Sodium bicarbonate
86. Chemical test which involve dehydration of sugar is  
 (A) Benedict's test  
 (B) Seliwanoff test  
 (C) Iodine test  
 (D) Hey sulphur test
87. Which drug has two chiral carbon?  
 (A) Adrenaline  
 (B) Noradrenaline  
 (C) Isoprenaline  
 (D) Ephedrine
88. \_\_\_\_\_ diuretic is acidifying agent.  
 (A) Mannitol  
 (B) Ethacrinic acid  
 (C) Ammonium chloride  
 (D) Amiloride
89. \_\_\_\_\_ is anthranilic acid derivative.  
 (A) Mefenamic acid  
 (B) Diclofenac  
 (C) Diflunisal  
 (D) Ibuprofen
90. Cetrimide is \_\_\_\_\_ type of surface active agent.  
 (A) Neutral  
 (B) Anionic  
 (C) Cationic  
 (D) None of the above
91. Tween 20 is a  
 (A) Deflocculant  
 (B) Hydrophillic surfactant  
 (C) Lipophillic surfactant  
 (D) None of the above
92. Glycerine suppositories containing 92 % glycerine are solidified by the use of \_\_\_\_\_  
 (A) White wax  
 (B) Stearic acid  
 (C) Sodium stearate  
 (D) PEG 4000
93. The Pharmacy Council of India is reconstituted every \_\_\_\_\_ years.  
 (A) 10 years  (B) 5 years  
 (C) 2 years (D) 3 years
94. District opium officer appoints one cultivator as \_\_\_\_\_  
 (A) Drug inspector  
 (B) Executive commissioner  
 (C) Narcotic commissioner  
 (D) Lambardar
95. \_\_\_\_\_ is programmed cell death.  
 (A) Apoptosis (B) Mitosis  
 (C) Miosis (D) Necrosis
96. Which one of the following is a genetically determined adverse drug reaction?  
 (A) Addiction  
 (B) Idiosyncrasy  
 (C) Carcinogenicity  
 (D) Teratogenicity
97. Organophosphorous poisoning can be counteracted by  
 (A) Naloxone (B) Pethidine  
 (C) Pralidoxime (D) Charcoal
98. \_\_\_\_\_ is used to detect flavonoids.  
 (A) Van-urk's test  
 (B) Shinoda test  
 (C) Salkowski's test  
 (D) Baljet's test
99. The full form of LSD is  
 (A) Lysergic acid diethylamine  
 (B) Lysergic acid diethylketone  
 (C) Lysergic acid diethylamide  
 (D) None of the above
100. \_\_\_\_\_ is known as meadow saffron.  
 (A) Punarnava (B) Turmeric  
 (C) Hyoscyamus  (D) Colchicum



## INSTRUCTIONS FOR FILLING OMR ANSWER SHEET

### OMR उत्तर-पत्रक भरने के लिये निर्देश

1. For writing in the boxes and filling the rectangles, use **Blue/Black Ball Point Pen** only.  
बॉक्स में लिखने व आयताकार खानों को गहरा करने के लिये मात्र नीले/काले बॉल प्वाइंट पेन का प्रयोग करें ।
2. In columns relating to your roll number and question booklet serial number, first write in the boxes and then darken the rectangles below.  
अपना रोल नंबर, प्रश्न पुस्तिका क्रम संख्या पहले संबंधित कॉलम के बॉक्स में लिखें और तब उसके नीचे दिये गये आयताकार खानों को गहरा करें ।  
The Candidate will write his/her name at the place provided for on the Answer Sheet.  
उत्तर-पत्रक पर निर्दिष्ट स्थान पर अभ्यर्थी अपना नाम लिखें ।
3. To **answer**, fill the rectangles with **Blue or Black Ball-Point Pen**.  
उत्तर देने के लिये नीले या काले बॉल प्वाइंट पेन से आयताकार खानों को गहरा करें ।
4. Do not make any stray marks on this Answer Sheet.  
इस उत्तर-पत्रक पर कोई अवांछित चिह्न न लगायें ।
5. The Answer Sheet is a Carbonless Sheet. So, you have to put pressure on the pen while filling up the rectangles.  
उत्तर-पत्रक कार्बनलैस शीट है, अतः आपको आयताकार खानों को गहरा करते समय पेन पर दबाव देना है ।
6. Evaluation of this Answer Sheet will be done on the Computer. Handle Answer Sheet with care and do not fold.  
उत्तर-पत्रक का मूल्यांकन कम्प्यूटर द्वारा किया जायेगा । उत्तर-पत्रक को अच्छी तरह संभाले व मोड़े नहीं ।
7. If you have, by mistake, **filled any answer wrongly and want to change it, then you have no option to change it**. So it is advisable to fill the rectangles very carefully otherwise your answer will be treated as wrong.  
यदि आपने ग़लती से कोई प्रश्न ग़लत भर दिया है और इसे बदलना चाहते हैं, तो आपके पास इसे बदलने का कोई विकल्प नहीं है । अतः यह वांछनीय है कि आयताकार खाने ध्यानपूर्वक भरें अन्यथा आपका उत्तर ग़लत माना जायेगा ।
8. The method to fill the Answer Sheet :  
उत्तर-पत्रक भरने का तरीका :

Correct Method सही तरीका	 [ B ] [ C ] [ D ]
Wrong Method ग़लत तरीका	[ A ] [ X ] [ ● ] [ ■ ]

