

# **Sikkim Public Service Commission**

## **Main Written Examination for the post of Drug Inspector under Sikkim State Subordinate Paramedical Service**

### **PAPER - II**

Time allowed: 3 Hrs

Maximum Marks: 300

#### **INSTRUCTIONS TO CANDIDATES**

***Read the instructions carefully before answering the questions: -***

- 1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.**
- 2. Use only Black Ball Point Pen to fill the OMR Sheet.**
- 3. Do not write anything else on the OMR Answer Sheet except the required information.**
- 4. It is the candidate's duty to fill in the particulars in the appropriate places in the Answer Sheet and OMR sheet as per given instructions. Any discrepancy/omission will render the Answer Sheet/OMR Sheet liable for rejection.**
- 5. Part - I of this booklet contains questions in MCQ mode to be marked in OMR Sheet. Part - II and Part - III contains Writing Section which has to be written on separate answer sheet provided to you.**
- 6. After you have completed filling in all your responses on the Answer Sheet and OMR Sheet and the examination has concluded, you should hand over the Answer Sheet and OMR sheet to the Invigilator only. You are permitted to take with you the Test Booklet.**
- 7. Marking Scheme**

#### **THERE WILL BE NEGATIVE MARKING FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTIONS**

- i. There are four alternatives/answers to every question. For each question for which a wrong answer has been given by the candidate, one-third of the marks assigned to the question will be deducted as penalty.
- ii. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happen to be correct and there will be same penalty as above to the question.
- iii. If a question is left blank. i.e., no answer is given by the candidate; there will be no penalty for that question.

**DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO**

**PART - I**

Choose the **CORRECT ANSWER** for the following questions: (3x50=150)

**1. Normal blood pressure in young adult is**

- A. 100/60
- B. 80/80
- C. 140/90
- D. 120/80

**2. The glomerulus is**

- A. a network of capillaries
- B. a lymph node
- C. a large artery entering the kidney
- D. none of the above

**3. The uppermost portion of intestine is the**

- A. Cecum
- B. Jejunum
- C. Ileum
- D. Duodenum

**4. The bundles of HIS are found in the**

- A. Lung
- B. Heart
- C. Liver
- D. Intestine

**5. When light rays come to a focus behind the retina, the eye is said to be**

- A. Hypermetropic
- B. Presbyopic
- C. Astigmatic
- D. Myopic

**6. Progressive fibrosis and scarring of the liver are known as**

- A. Diverticulitis
- B. Diverticulosis
- C. Hepatitis
- D. Cirrhosis

**7. Which is not an essential amino acid?**

- A. Glutamine
- B. Tryptophane
- C. Valine
- D. Threonine

**8. Which substance gives largest number of calories per gram?**

- A. Carbohydrates
- B. Proteins
- C. Minerals
- D. Fats

**9. Deficiency of Folic Acid will cause**

- A. Anemia
- B. Rickets
- C. Night blindness
- D. Beriberi

**10. The mineral zinc is most important for**

- A. Blood cell formation
- B. Bone formation
- C. Oxidative process
- D. Normal growth

**11. The WHO guidelines for the herbal drugs contaminants include**

- A. Purines and Pyrimidine bases
- B. Amino acids
- C. Pentoses
- D. Pesticidal residue, arsenic, heavy metals, microbial load

**12. Borntrager's test is performed for identification of**

- A. Digitoxin
- B. Reserpine
- C. Anthraquinone glycosides
- D. Ephedrine

**13. Kurchi bark is used to treat**

- A. Malaria
- B. Hypertension
- C. Constipation
- D. Amoebic dysentery

**14. Reserpine is active constituent of**

- A. Rauwolfia
- B. Cinnamon
- C. Cinchona
- D. Senna

**15. The biological source of cinnamon bark is**

- A. dried inner bark of the shoots of coppiced trees of *Cinnamomum Zeylanicum* fam Lauraceae
- B. dried inner bark of the shoots of coppiced trees of *Cinnamomum Indicum* fam Lauracea
- C. dried wood of *Cinnamomum Camphora* fam Lauracea
- D. dried inner bark of of the shoots of coppiced trees of *Cinnamomum Loureirii* fam Lauracea



**16. Active constituent of which drugs which cause dilation of pupil**

- A. Ephedra
- B. Belladonna
- C. Nux Vomica
- D. Bael

**17. Which of the following is known as Jesuit's bark?**

- A. Kurchi
- B. Cinnamon
- C. Cinchona
- D. Rauwolfia

**18. The Excise Officer in-charge of Bonded Laboratory may permit to take a sample from each batch of finished product free of duty up to a maximum amount of**

- A. 250 ml
- B. 150 ml
- C. 100 ml
- D. 50 ml

**19. The term of Patent for ordinary invention from the date of patent is**

- A. 7 years
- B. 14 years
- C. 5 years
- D. 10 years

**20. Ganja as per the Narcotic Drugs and Psychotropic Substances Act 1985 is**

- A. Flowering and fruiting tops of cannabis sativa
- B. Flowering and fruiting top, leaves and seeds of cannabis sativa
- C. Roots of cannabis sativa
- D. All parts of cannabis sativa

**21. Licenses for retail sale of drugs are issued by**

- A. Drugs controller General of India
- B. Drugs Inspector
- C. Director of Health Services of the state
- D. Drug Licensing Authority

**22. Biological and microbiological tests on drugs are conducted at**

- A. Delhi
- B. Calcutta
- C. Chennai
- D. Kasauli

**23. Establishment having a qualified person and engaged in compounding of drugs is called**

- A. Drug store
- B. Chemists and druggists
- C. Pharmacy
- D. Medical store

24. List of ailments and diseases that a drug should not claim to cure is given in schedule

- A. M
- B. L
- C. J
- D. H

25. Which of the following drugs is a scheduled bulk-drug?

- A. Alprazolam
- B. Codeine
- C. Salbutamol
- D. Amikacin

26. Drug samples from magistrate are sent for analysis to

- A. State Drug Testing Lab
- B. Regional Research Lab
- C. Pharmacy Council of India
- D. Central Drug Laboratory

27. Enzymatic activity of the enzyme dihydrofolate reductase is stopped by the action of drug-

- A. Cephalixin
- B. Trimethoprim
- C. Azithromycin
- D. Levofloxacin

28. What kind of substances cannot permeate membranes by passive diffusion?

- A. Lipid soluble substances
- B. Non- ionized substances
- C. Hydrophobic substances
- D. Hydrophilic substances

29. The mean of the 10 values is 20, if we add 10 in each observation the mean for the new value will be: -

- A. 20
- B. 0
- C. 30
- D. 10

30. The volume of distribution ( $V_d$ ) relates to: -

- A. Single to a daily dose of an administered drug
- B. Administered dose to body weight
- C. Unchanged drug reaching systematic circulation
- D. Amount of a drug in the body to the concentration of drug in plasma

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

- A. Eosinophils
- B. Basophils
- C. Mast cells
- D. Dendritic cells

32. When increased amount of drug/ substance is needed to produce the desired effect the phenomenon is known as-

- A. Withdrawal
- B. Tolerance
- C. Psychological dependence
- D. Physiological dependence

33. The relative peak area in doublet "NMR" should be

- A. 1:1
- B. 1:2
- C. 1:3
- D. 1:4

34. Test microorganism used for microbiological assay of Vitamin B12 is:

- A. Lactobacillus leichamanii,
- B. Lactobacillus casei,
- C. Lactobacillus viridiscens
- D. Lactobacillus plantarum

35. A Karl Fischer titration is used to determine:

- A. the concentration of  $\text{Cl}_2$  in a water sample,
- B. the alcohol content of blood,
- C. the water content of a sample,
- D. the pH of a water sample

36. What is the name of an instrument used to measure the absorbance of a coloured compound in solution?

- A. Coulometer,
- B. Colorimeter,
- C. Calorimeter
- D. Colourmeter

37. Which of the following is a component of the coenzyme A?

- A. Retinol
- B. Pantothenic acid
- C. Pyridoxine
- D. Retinoic acid

38. As per IP, uncoated tablets must disintegrate within ..... minutes to pass the disintegration test.

- A. 60
- B. 30
- C. 15
- D. 5



**39. Vitamin-E is formulated and supplied as:**

- A. tablet
- B. soft gelatin capsule
- C. hard gelatin capsule
- D. all above

**40. Vanishing cream is ..... emulsion.**

- A. o/w type
- B. w/o type
- C. multiple
- D. not an

**41. In preparation of ointment by fusion method, melting/ addition of the ingredients is done**

- A. simultaneously
- B. randomly
- C. in increasing order of their melting point
- D. in decreasing order of their melting point

**42. Which of the following blood products is not reconstituted before administration?**

- A. conc. RBCs
- B. dried human plasma
- C. human fibrin foam
- D. human fibrinogen

**43. Drugs which bind selectively to plasma protein, have apparent volume of distribution ..... their true volume of distribution**

- A. smaller than
- B. larger than
- C. equal to
- D. none of the above

**44. Tonicity of parenteral products must be equal to ..... % w/v of sodium chloride.**

- A. 0.009
- B. 0.09
- C. 0.9
- D. 9.0

**45. DMSO (Dimethyl sulphoxide) is most commonly used as:**

- A. Preservative
- B. Skin penetration enhancer
- C. Solubiliser
- D. Antioxidant

**46. Select Proton Pump Inhibitor drug.**

- A. Famotidine
- B. Lansoprazole
- C. Acetazolamide
- D. Losartan

**47. Example of a Calcium channel blocker is:**

- A. Captopril
- B. Lisinopril
- C. Benzapril
- D. Verapamil

**48. Which among the following is a long acting Vasodilator?**

- A. Isosorbide
- B. Nitroglycerine
- C. Minoxidil
- D. Nicordanil

**49. Which among the following is a Biguanide category of antidiabetic drug?**

- A. Tolbutamide
- B. Metformin
- C. Repaglinide
- D. Nateglinide

**50. Barbituric acid is prepared by the condensation of:**

- A. Malonic acid and Urea
- B. Diethylmalonate and Urea
- C. Malonic acid and methyl Urea
- D. Diethylmalonate and Methyl Urea



## **PART – II**

**Write detailed notes on ANY FIVE of the following:**

**(20X5=100)**

- 1) Applications of Turbidimetry and Nephelometry
2. Drug Receptors
3. Requirements of parenteral preparations.
4. NSAIDS
5. Sikkim Anti-Drugs Act, 2006
6. Nutritional deficiency diseases.
7. Incompatibility
8. Process of taking sample by the Drug Inspector.

## **PART - III**

**Attempt ANY TWO of the following-**

**(25x2=50)**

1. Discuss about Drug Biotransformation.
  2. Explain various IPQC tests for tablets as per IP.
  3. Define and classify Narcotic Analgesics with structural examples. Give SAR of morphine and its analogues.
  4. Discuss conditions and procedure for grant of Retail and Wholesale Drugs License.
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