



ER-20-12T

8002

BOARD DIPLOMA EXAMINATION (Inst.), (ER-20)

AUGUST—2022

DPH – FIRST YEAR EXAMINATION

PHARMACEUTICAL CHEMISTRY

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

5×6=30

- Instructions :**
- (1) Answer *any* **six** questions.
  - (2) Each question carries **five** marks.
  - (3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 1. What are NSAIDs? Classify them with examples. Give the structure, chemical name, brand names and uses of Aspirin.
- 2. What are Anti-tubercular drugs? Classify them with examples. Give the structure, chemical name and formulations of Isoniazid.
- 3. Define Diuretics and write classification of Diuretics with examples. Write the structure, chemical name, brand names and uses of Frusemide.
- 4. Define antihypertensive drugs and write the classification of antihypertensive drugs with examples. Write the structure, chemical name and uses of Propranolol.
- 5. Write the chemical structure, chemical name, brand names and uses of (a) acetylcholine and (b) naphazolin.

6. Define antipsychotics and classify antipsychotics with examples. Write the structure, chemical name, uses and storage conditions of Chlorpromazine hydrochloride.
7. Define the word titration. Classify them. Explain briefly about Redox titrations.

### PART—B

3×10=30

**Instructions :** (1) Answer *any ten* questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

8. Write the principle involved in limit test for chlorides.
9. Write the molecular formula, pharmaceutical formulations, storage and uses of Boric acid.
10. Write the structures of (a) indole, (b) quinoline and (c) thiazole.
11. Define general anesthetics and write any two general anesthetics drugs with their brand names.
12. Write the formulations, storage conditions, brand names and uses of Salbutamol.
13. Write the formulations, storage conditions, brand names and uses of Nifedipine.
14. Write the formulations, storage conditions, brand names and uses of Acetazolamide.

15. Give the structure, storage, brand names and uses of Glibenclamide.
16. Write a note on Morphine analogues.
17. Give the structure, chemical name and uses of Dapsone.
18. Give the structure, uses and storage conditions of Cisplatin.

**PART—C**

1×20=20

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **one** marks.  
(3) Choose the correct answer or write the correct answer.

19. Regent used in limit test for lead is

- (a)  $\text{BaCl}_2$
- (b)  $\text{AgNO}_3$
- (c) Thioglycolic acid
- (d)  $\text{H}_2\text{S}$

20. Indicator used in complexometric titrations is

- (a) Erichrome Black T
- (b) Xylenol orange
- (c) Mordant Black II
- (d) All of the above

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**21.** EDTA is

- (a) monodentate
- (b) tetradentate
- (c) hexadentate
- (d) bidentate

**22.** Hydrogen peroxide is used as

- (a) dentifrice
- (b) mouth wash
- (c) antiseptic
- (d) antacid

**23.** Haloperidol belongs to the chemical class of

- (a) barbiturate
- (b) butyrophenone
- (c) benzodiazepines
- (d) None of the above

**24.** Phenytoin is used as

- (a) anticonvulsant
- (b) antidepressant
- (c) antipsychotic
- (d) None of the above

**25.** Which of the following is adrenergic antagonist?

- (a) Epinephrine
- (b) Dopamine
- (c) Propranolol
- (d) Acetyl choline

**26.** The antihypertensive drug that inhibit ACE is

- (a) Nifedipine
- (b) Ramipril
- (c) Propranolol
- (d) Clonidine

**27.** Example for opioid analgesics is

- (a) Aspirin
- (b) Morphine
- (c) Paracetamol
- (d) Diclofenac

**28.** Biguanide derivative of Anti-malarial drug is

- (a) Quinine
- (b) Cycloguanil
- (c) Chloroquine
- (d) Primaquine

29. Bacteriostatic agent act on bacteria by
- (a) killing
  - (b) stopping the growth
  - (c) multiply the bacteria
  - (d) stimulating
30. Which is **not** an Alkylating agent?
- (a) Chlorambucil
  - (b) Cisplatin
  - (c) Busulfan
  - (d) Mercaptopurine
31. Which of the following is propionic acid derivative?
- (a) Morphine
  - (b) Paracetamol
  - (c) Ibuprofen
  - (d) Asprin
32. \_\_\_\_\_ is an ultra short acting barbiturate.
33. \_\_\_\_\_ is used for both epilepsy and arrhythmias.
34. Propofol is a \_\_\_\_\_ .
35. The structure of Pyrimidine is \_\_\_\_\_ .
36.  $\text{Al}(\text{OH})_3$  gel is an example for \_\_\_\_\_ .
37. Deviation from the true value is called \_\_\_\_\_ .
38. Closeness between experimental and true value is called \_\_\_\_\_ .



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BOARD DIPLOMA EXAMINATION, (ER-20)

JANUARY—2023

DPH – FIRST YEAR EXAMINATION

PHARMACEUTICAL CHEMISTRY

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

5×6=30

- Instructions :**
- (1) Answer *any* **six** questions.
  - (2) Each question carries **five** marks.
  - (3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

1. Write the principle and procedure involved in limit test for Arsenic.
2. What are topical antiseptics? Write the formula, storage, uses and formulations of Silver nitrate.
3. What are Sedatives and Hypnoitics? Write the formula, storage and uses of Diazepam.
4. What are Sympatholytics? Write the formula, storage and uses of Atenolol.
5. What are antibiotics? Write the formula, storage and uses of Amoxicillin.
6. Write the structure, chemical name, uses and marketed formulations of Acyclovir.
7. Write the structure, chemical name, uses and marketed formulations of Cyclophosphamide.

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## PART—B

3×10=30

- Instructions :**
- (1) Answer *any ten* questions.
  - (2) Each question carries **three** marks.
  - (3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

8. Define the following terms :
  - (a) Accuracy
  - (b) Error
  - (c) Precision
9. Write the principle involved in acid-base and complexometric titrations.
10. What are Dentifrices? Give two examples.
11. Write the formula and any one use of (a) boric acid, (b) sodium bicarbonate and (c) ferrous sulphate.
12. Write the structure and numbering for the following heterocycles (a) quinoline, (b) acridine and (c) piperidine.
13. Write the structure, IUPAC name and uses of Ketamine.
14. What are NSAIDs? Write the structure, IUPAC name and properties of Aspirin.
15. What are Anti-TB drugs? Write any three examples.
16. Write the structure, IUPAC name, properties, storage and uses of Neostigmine.
17. Write the structure, IUPAC name, properties, storage and uses of Epinephrine.
18. Write the structure, IUPAC name, brand names and uses of Phenytoin.

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## PART—C

1×20=20

- Instructions :** (1) Answer **all** questions.  
(2) The question carries **one** mark.

**19.** Reagent used in limit test for Chloride is

- (a)  $\text{AgNO}_3$
- (b)  $\text{BaCl}_2$
- (c) Thioglycolic acid
- (d)  $\text{HgNO}_3$

**20.** Titrant(s) used in complexometric titrations is/are

- (a) Disodium EDTA
- (b) Mordant black T
- (c) Standard HCl
- (d) All of the above

**21.**  $\text{Al(OH)}_3$  used as

- (a) dentifrice
- (b) mouth washes
- (c) antimicrobial
- (d) antacid

**22.** Proline derivative among the following is

- (a) Hydralazine
- (b) Captopril
- (c) Propranol
- (d) Aspirin

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- 23.\*** Antidote for organophosphate poisoning is
- (a) Neostigmine
  - (b) Diazepam
  - (c) Muscarine
  - (d) Prali doxime
- 24.** Salbutamol used in the treatment of
- (a) Ulcer
  - (b) Asthma
  - (c) Angina
  - (d) Psychosis
- 25.** Example of carbonic anhydrase inhibitor is
- (a) Furosemide
  - (b) Acetazolamide
  - (c) Spiranolactone
  - (d) Mannitol
- 26.** Stavudine is used as
- (a) anti malarial
  - (b) anti fungal
  - (c) antiviral
  - (d) anthelmintic
- 27.** Phenanthrene derivative among the following is
- (a) Paracetamol
  - (b) Piroxicam
  - (c) Aspirin
  - (d) Morphine

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28.\* Example of natural penicillin is

- (a) Penicillin-V
- (b) Penicillin-G
- (c) Amoxicillin
- (d) Nafacillin

29. Anticancer antibiotic among the following

- (a) Methotrexate
- (b) Mercaptopurine
- (c) Doxorubicin
- (d) Asperginase

30. Molecular formula of ferrous sulphate is

- (a)  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$
- (b)  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$
- (c)  $\text{Fe}_2\text{SO}_3$
- (d)  $\text{MgSO}_4 \cdot 5\text{H}_2\text{O}$

31. Indicator used in Mohr's method

- (a) Phenolphthalein
- (b) Potassium chromate
- (c) Mordant black II
- (d) Methyl orange

32. Which of the following is **not** a benzodiazepine derivative?

- (a) Diazepam
- (b) Nitrazepam
- (c) Chlorodiazepoxide
- (d) Paraldehyde

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**33.\*** Apparatus used in the limit test for Arsenic is called \_\_\_\_.

**34.** Cotrimoxazole is combination of \_\_\_\_.

**35.** Sodium fluoride is used as \_\_\_\_.

**36.** Example for Cyclic GABA analogue \_\_\_\_.

**37.** Pyridostigmine is \_\_\_\_ enzyme inhibitor.

**38.** Spiranolactone is an \_\_\_\_ antagonist.

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8002

BOARD DIPLOMA EXAMINATION, (ER-20)

SEPTEMBER—2023

DPH - FIRST YEAR EXAMINATION

PHARMACEUTICAL CHEMISTRY

Time : 3 Hours ]

[ Total Marks : 80

**PART—A**

5×6=30

**Instructions :** (1) Answer *any* **six** questions.

(2) Each question carries **five** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

1. Draw and label Gutzeit apparatus neatly. Write the principle and procedure involved in the limit test for arsenic. 2+3=5
2. Define the word titration. Classify them. Explain briefly about acid-base titration. 1+2+2=5
3. What are antacids? Write the molecular formula, pharmaceutical formulations, storage and uses of sodium bicarbonate. 1+4=5
4. Define sedative and hypnotics, classify with examples. Write the structure, chemical name, brand names and uses of Phenobarbital. 1+1+3=5
5. Define antihypertensives. Classify them. Write the structure, chemical name and uses of Propranolol. 1+1+3=5
6. What are hypoglycemic agents? Classify them with examples. Give the structure, chemical name and uses of Metformin. 1+1+3=5
7. What are NSAIDs? Classify them with examples. Give the structure, chemical name, brand names and uses of Aspirin. 1+1+3=5

**PART—B**

3×10=30

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- Instructions :** (1) Answer *any ten* questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

8. Give the structure, chemical name and uses of Dapsone. 3
9. Write the structure, brand names and uses of Ibuprofen. 3
10. What is insulin? Mention its various preparations. 1+2=3
11. Write the storage conditions, formulations and uses of Acetazolamide. 3
12. Define cardiac arrhythmias. Give two examples of drugs used with their brand names. 1+2=3
13. Write the structure, brand names and uses of Atenolol. 3
14. Define general anaesthetics. Write any two general anaesthetic drugs with their brand names. 1+2=3
15. Write the structures of (a) Pyrrole, (b) Phenothiazine and (c) Furan. 3
16. Write the molecular formula, storage and uses of calcium carbonate. 3
17. Define the terms (a) 'Titrant', (b) 'Titrand' and (c) 'Indicator'. 3
- \* 18. Write the principle involved in limit test for chlorides. 3

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## PART—C

1×20=20

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- Instructions :** (1) Answer **all** questions.  
(2) The question carries **one** mark.  
(3) Choose the correct answer or write the correct answer.

**19.** Reagent used in limit test for sulphates is

- (a)  $\text{BaSO}_4$  reagent
- (b)  $\text{AgNO}_3$
- (c) Thioglycolic acid
- (d)  $\text{H}_2\text{S}$

**20.** Oxidation refers to

- (a) addition of oxygen
- (b) removal of electron
- (c) removal of hydrogen
- (d) All of the above

**21.** In basic medium methyl orange colour changes from

- (a) red to yellow
- (b) yellow to red
- (c) colourless to red
- (d) red to colourless

**22.** Which is **not** a haematinic?

- (a) Ferrous sulphate
- (b) Carbonyl iron
- (c) Chlorinated lime
- (d) Ferrous ascorbate

**23.** Which of the following is a tricyclic compound?

- (a) Acridine
- (b) Isoquinoline
- (c) Piperazine
- (d) Benzofuran

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**24.** Which of the following is a structural analogue of GABA?

- \* (a) Valproic acid
- (b) Lamotrigine
- (c) Gabapentin
- (d) Phenytoin

**25.** Which of the following is an adrenergic antagonist?

- (a) Epinephrine
- (b) Dopamine
- (c) Propranolol
- (d) Acetylcholine

**26.** Which of the following is a dihydropyridine derivative?

- (a) Frusemide
- (b) Nifedipine
- (c) Verapamil
- (d) Both (a) and (b)

**27.** Which among the following is phthalazine derivative?

- (a) Nifedipine
- (b) Verapamil
- (c) Hydralazine
- (d) Methyldopa

**28.** Sulphonamide derivative used as diuretic is

- (a) acetazolamide
- (b) spironolactone
- \* (c) bumetanide
- (d) benzthiazide



**29.** Insulin is administered through

- \* (a) IV route
- (b) SC route
- (c) intrathecal route
- (d) Both (a) and (b)

**30.** Example for opioid analgesics is

- (a) Aspirin
- (b) Morphine
- (c) Paracetamol
- (d) Diclofenac

**31.** Griseofulvin is used as

- (a) antimalarial
- (b) anticancer
- (c) antiulcer
- (d) antifungal

**32.** Closeness between two experimental values is called \_\_\_\_.

**33.** Nitrous oxide can be used as \_\_\_\_.

**34.** Sodium fluoride is used as \_\_\_\_.

**35.** Diazepam is \_\_\_\_ derivative.

**36.** Neostigmine is \_\_\_\_ enzyme inhibitor.

**37.** Aldosterone antagonist used as diuretic is \_\_\_\_.

**38.** The antimalarial drug quinine is obtained from \_\_\_\_ alkaloid.

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