

Question Paper

Exam Date & Time: 07-May-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmaceutical Chemistry [PCH-ER20-12T-S2]

Marks: 80

Duration: 180 mins.

MCQs

Answer all the questions.

Section Duration: 30 mins

20 Q x 1 mark = 20 marks

1) _____ is the major source of impurities in the process of inorganic pharmaceuticals. (1)

[acetic acid](#)

[water](#)

[benzene](#)

[Hydrochloric acid](#)

2) Which of the following is used as an indicator in the titration of a strong acid and a weak base? (1)

[Methyl orange](#)

[feroin](#)

[Thymol blue](#)

[d\) Fluorescein](#)

3) Inorganic compounds generally do not contain..... atoms. (1)

[Nitrogen](#)

[Carbon](#)

[Oxygen](#)

[Sulphur](#)

4) The yellow colour stain formed in the arsenic limit test is due to the formation of (1)

[Mercury arsenate](#)

[Mercury arsenide](#)

[Mercury arsenic acid](#)

[Mercury arsenous acid](#)

5) Which is not a class of topical agents. (1)

[Antibiotics](#)

[Protectives](#)

[Antimicrobial](#)

[Astringents](#)

6) The drug that neutralizes the excess of acid in the stomach is called as an (1)

[Acidifiers](#)

[antipyretics](#)

[Antacids](#)

- 7) [analgesic](#)
Boric acid is used as (1)
- [Urinary acidifier](#)
[Antimicrobial](#)
[Dentifrice](#)
[Inhalant](#)
- 8) Which one of the following drugs is an ultra-short-acting barbiturate? (1)
- [Thiopental sodium](#)
[Pentobarbital](#)
[Amobarbital](#)
[Phenobarbital](#)
- 9) Anti-epileptic, chemically derived from the tricyclic antidepressant is (1)
- [Phenytoin](#)
[Ethosuximide](#)
[Carbamazepine](#)
[Valproic acid](#)
- 10) Following is a brand name for Diazepam (1)
- [calpal](#)
[Campose](#)
[Restyl](#)
[Clonazep](#)
- 11) Which of the following drugs is an example of alpha-adrenergic blockers? (1)
- [Prazosin](#)
[Propranolol](#)
[Atenolol](#)
[Pindolol](#)
- 12) Which of the following drugs is a nonselective beta receptor antagonist? (1)
- [Metoprolol](#)
[Atenolol](#)
[Propranolol](#)
[Acebutolol](#)
- 13) _____ an example of mixed-acting sympathomimetic agents. (1)
- [Phenylephrine](#)
[Hydroxyamphetamine](#)
[Methyldopa](#)
[Ephedrine](#)
- 14) Phenytoin is used in the treatment of (1)
- [Petit mal epilepsy](#)
[Grand mal epilepsy](#)
[Myoclonic seizure](#)
[Generalized tonic clonic](#)
- 15) The drug used for malaria chemoprophylaxis and treatment is (1)

[Chloroquine](#)
[Quinidine](#)
[Amoxicillin](#)
[Sulfonamides](#)

- 16) Which of the following sulphonyl urea derivative of oral hypoglycaemic drugs stimulates both synthesis and release of insulin from beta islet cells: (1)

[Glibenclamide](#)
[Phenformin](#)
[Buformine](#)
[Metformin](#)

- 17) Which of the following gases is used as a respiratory stimulant? (1)

[Carbon Dioxide](#)
[Oxygen](#)
[Nitrogen](#)
[Nitrous oxide](#)

- 18) Example for pyrimidine analogs as antimetabolite for treating cancer (1)

[methotrexate](#)
[6 thioguanine](#)
[5](#)
[mercaptopurine](#)
[5 Fluorouracil](#)

- 19) Which of the following antidepressants is a selective serotonin reuptake inhibitor? (1)

[Phenelzine](#)
[Desipramine](#)
[Maprotiline](#)
[Fluoxetine](#)

- 20) Which of the following NSAIDs is a propionic acid derivative? (1)

[Ibuprofen](#)
[Ketorolac](#)
[Metamizole \(Analgin\)](#)
[Diclofenac](#)

Long Answers

Answer all the questions.

6 Q x 5 marks = 30 marks

- 1) What are redox titrations? Explain the principle involved in the assay of ferrous sulphate. (5)
- 2) What are impurities? Enlist the sources of impurities in pharmaceuticals. (5)
- 3) Classify Antidepressants giving one example to each class. (5)
- 4) Classify with example anticonvulsants and write the structure and uses of valproic acid. (5)
- 5) Classify sulphonamides by giving one example from each class and write the structure and uses of Sulphacetamide. (5)
- 6) What are antibiotics? Classify them with examples. Write the structure and brand name for Amoxicillin. (5)

Short Answers

Answer all the questions.

10 Q x 3 mark = 30 marks

- 1) Enlist the various steps involved in Gravimetric analysis. (3)
- 2) What are antiseptic and disinfectants? give examples. (3)
- 3) Explain the principle involved in the limit test for iron. (3)
- 4) Give the structure, uses, and one brand name for frusemide. (3)
- 5) Give the storage, properties, and use of Atropine. (3)
- 6) Give the properties, storage conditions, and use for Neostigmine. (3)
- 7) Write the structure, and uses for ketamine hydrochloride and diazepam. (3)
- 8) Enlist important anti-tubercular agents and write the structure of INH. (3)
- 9) Classify antifungal agents giving one example from each class. (3)
- 10) Write the structure and uses of any two non-steroidal anti-inflammatory agents. (3)

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