

# Question Paper

Exam Date & Time: 30-Apr-2024 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

### PHARMACOLOGY [PHA-ER20-21T-S1]

Marks: 80

Duration: 180 mins.

#### MCQs

Answer all the questions.

Section Duration: 30 mins

20 Q x 1 mark = 20 marks

1) \_\_\_\_\_ is added to a local anaesthetic solution as a preservative. (1)

[Lignocaine](#)

[Thymol](#)

[Sodium metabisulphite](#)

[Methyl](#)

[parahydroxybenzoate](#)

2) Which is NOT an ocular action of pilocarpine? (1)

[Decrease in intraocular pressure](#)

[Decrease in aqueous outflow / lacrimation](#)

[Contraction of the ciliary muscle](#)

[Contraction of the pupillary sphincter muscle](#)

3) \_\_\_\_\_ increases outflow of aqueous humor and is used in the treatment of open angle glaucoma. (1)

[Prostaglandins](#)

[Alpha-2 agonists](#)

[Carbonic anhydrase inhibitors](#)

[Beta-blockers](#)

4) Moclobemide, an antidepressant, is classified as \_\_\_\_\_. (1)

[Selective serotonin reuptake inhibitor \(SSRI\)](#)

[Tricyclic antidepressant \(TCA\)](#)

[Reversible inhibitor of MAO-A \(RIMA\)](#)

[Atypical antidepressant](#)

5) \_\_\_\_\_ is characterized by deficiency in erythropoietin. (1)

[Macrocytic anemia](#)

[Normocytic anemia](#)

[Microcytic anemia](#)

[Hemolytic anemia](#)

6) \_\_\_\_\_ is an anti-asthmatic drug classified as mast cell stabilizer. (1)

[Terbutaline](#)

[Ketotifen](#)

[Fluticasone](#)

[Etiophylline](#)

7) \_\_\_\_\_ is a centrally acting antitussive that does not affect the mucociliary function. (1)

[Benzonatate](#)

[Promethazine](#)

[Dextromethorphan](#)

[Chlorpheniramine](#)

8) \_\_\_\_\_ is classified as peptide autocoid. (1)

[Prostaglandin](#)

[Angiotensin](#)

[Serotonin](#)

[Gastrin](#)

9) Select which is NOT the pharmacological action of anti-histaminics. (1)

[Induces bronchodilation](#)

[Inhibit release of adrenaline](#)

[Induces hypersensitivity](#)

[Prevents anaphylactic fall in blood pressure](#)

10) \_\_\_\_\_ is a 5-HT antagonist that has anti-histaminic action. (1)

[Methysergide](#)

[Cinnarazine](#)

[Phenoxybenzamine](#)

[Chlorpromazine](#)

11) In biologicals, "zomib" suffix is used for \_\_\_\_\_. (1)

[Protease inhibitors](#)

[Angiogenesis inhibitors](#)

[Tyrosine kinase inhibitors](#)

[RAF kinase inhibitors](#)

12) Nomenclature for monoclonal antibodies derived from murine source. (1)

[-omab](#)

[-zumab](#)

[-ximab](#)

[-umab](#)

13) Which of the following is NOT a class I anti-arrhythmic drug? (1)

[Procainamide](#)

[Lidocaine](#)

[Amiodarone](#)

[Verapamil](#)

14) Statins target which of the following enzyme? (1)

[Lipoprotein lipase](#)

[Triglyceride synthesis](#)

[HMG CoA reductase](#)

[Malonyl-CoA synthetase](#)

- 15) Which of the following is a common side effect of ACE (Angiotensin-Converting Enzyme) inhibitors? (1)
- [Hyperkalemia](#)  
[Hypocalcemia](#)  
[Hypoglycemia](#)  
[Hyponatremia](#)
- 16) Which of the following is NOT a cause of peptic ulcers? (1)
- [Excessive gastric acid secretion](#)  
[Helicobacter pylori infection](#)  
[Excess eating](#)  
[Nonsteroidal anti-inflammatory drugs \(NSAIDs\)](#)
- 17) Which of the following is a characteristic feature of osmotic laxatives? (1)
- [They stimulate intestinal motility](#)  
[They increase stool bulk](#)  
[They draw water into the intestinal lumen](#)  
[They inhibit water reabsorption in the colon](#)
- 18) Which of the following diuretics is a loop diuretic? (1)
- [Hydrochlorothiazide](#)  
[Spironolactone](#)  
[Furosemide](#)  
[Amiloride](#)
- 19) The mechanism of action of thiazide diuretics involves \_\_\_\_\_. (1)
- [Inhibition of carbonic anhydrase](#)  
[Inhibition of sodium-potassium-chloride cotransporter](#)  
[Inhibition of sodium-chloride cotransporter](#)  
[Activation of aldosterone receptors](#)
- 20) Selective estrogen receptor modulators (SERMs) like tamoxifen are commonly used in the treatment of \_\_\_\_\_. (1)
- [Breast cancer](#)  
[Prostate cancer](#)  
[Ovarian cancer](#)  
[Testicular cancer](#)

### Long Answers

**Answer all the questions.**

6 Q x 5 marks = 30 marks

- 1) Write a short note on rectal route of administration. List its advantages and disadvantages. (5)
- 2) Describe the mechanism of action of d-tubocurarine on the skeletal muscles. (5)
- 3) Discuss the mechanism of action of general anaesthetics. Give its classification. (5)
- 4) Describe the synthesis of thyroid hormones using a figure and outline the class of drugs used in hyperthyroidism. (5)
- 5) Which class of antimicrobial agents are broad spectrum? Give examples of drugs and describe mechanism of action. (5)
- 6) Define anti-hypertensives. Describe the mechanism of action of anti-hypertensives acting over kidney. (5)

### Short Answers

Answer all the questions.

10 Q x 3 mark = 30 marks

- 1) Explain the role of active transport in the drug absorption process. (3)
- 2) What is the importance of volume of distribution ( $V_d$ ) of a drug? (3)
- 3) How do we treat myasthenic crisis? (3)
- 4) Why does chronic use of NSAIDs lead to gastric ulceration? (3)
- 5) How do benzodiazepines act as a hypnotic agent? (3)
- 6) Write a short note on the anti-platelet activity of thienopyridines. (3)
- 7) What are folate antagonists? Give their uses. (3)
- 8) What are prokinetic drugs? (3)
- 9) What are different types of insulin preparations and how they differ from each other? (3)
- 10) Discuss anti-retroviral therapy. (3)

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