

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary End Semester Examination – Summer 2022

Course: B. Pharmacy

Sem: V

Subject Name: Medicinal Chemistry -II

Subject Code: BP501T

Max Marks: 75

Date: 13/07/2022

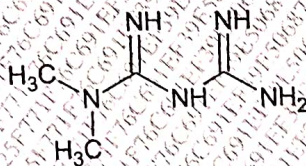
Duration: 3.45 Hr.

Instructions –

1. All questions are compulsory
2. Answers to MCQs should be written in full sentences
3. Draw diagrams / figures wherever necessary
4. Figures to right indicate full marks

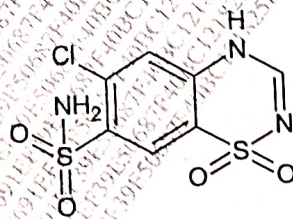
Q. 1. Multiple Choice Questions (MCQs) = $20 \times 1 = 20$ (All the questions are compulsory)

i) Identify the structure



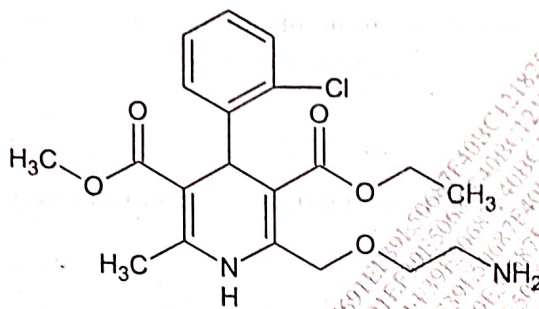
- a) Acarbose b) Metformin c) Glipizide d) Nateglinide.

ii) Identify the structure



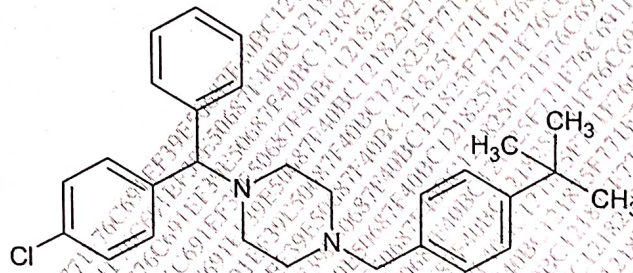
- a) Triamterene b) Chlorthiazide c) Bumetanide, d) Spironolactone.,

iii) Identify the structure



- a) Nifedipine b) Felodipine c) Amlodipine d) Nicardipine

iv) Identify the structure



- a) Meclizine b) Buclizine c) Chlorpheniramine d) Triprolidine

v) Which of the following is NOT example of Anti-arrhythmic drug

- a) Phenytoin sodium, b) Lidocaine
c) Menadione, d) Mexiletine

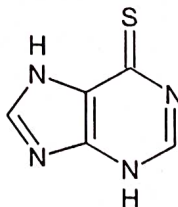
vi) Which of the following anticancer agent oxidatively damage the cell DNA by binding to metal ion like iron

- a) Bleomycin b) Cisplatin,
c) Mitotane, d) Fluorouracil,

vii) Following is an example of H1 antagonist

- a) Cimetidine b) Famotidine
c) Ranitidin, d) Chlorpheniramine

viii) Predict the following structure



- a) Floxuridine b) Thioguanine
c) Mercaptopurine d) Fluorouracil

ix) Following drug competitively inhibits aldosterone dependant sodium potassium exchange channels in the distal convoluted tubule

- a) Spironolactone
- c) Mannitol

- b) Furosemide
- d) Bumetanide,

x) Testosterone is

- a) 17 β -Hydroxyandrost-4-en-3-on
- b) 17,21-Dihydroxypregn-4-ene-3,20-dione
- c) 3 α -Hydroxy-5 α -androstan-17-one
- d) 17, hydroxypregn-4-ene-3,13-dione,

xi) Stomach discomfort, gas, bloating are the side effects of

- a) Pioglitazone
- c) Acarbose

- b) Rosiglitazone
- d) Chlorpropamide

xii) Which of the following is NOT oral-contraceptive agent

- a) Mifepristone
- c) Levonorgestrol

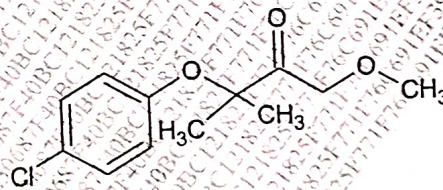
- b) Norgestril
- d) Prednisolone

xiii) The following sulphonamide used in the treatment of diabetes

- a) Acarbose
- c) Nateglinide.

- b) Tolbutamide
- d) All of above

xiv) Identify the structure



- a) Clofibrate
- c) Cholesteramine

- b) Lovastatin
- d) Cholestipol

xv) Use of cimetidine is

- a) Gastroesophageal reflux disease (GERD)
- c) Allergy

- b) Bloating
- d) Sneezing

xvi) find out the antimetabolite shares structural similarity with folic acid

- a) Mercaptopurine
- c) Fluorouracil,

- b) Thioguanine,
- d) Methotrexate

xvii) Which of following is NOT prodrug

- a) Lisinopril
- c) Cortisone

- b) Clofibrade
- d) Azathioprine

xviii) Onset of action of nitroglycerin is

a) 05- 06 mints

b) 01-03 mints

c) 05-10 mints

d) None of these

xix) which of the following local anesthetic agents belongs to ester group

a) Procain

b) Lignocain

c) Mepivacaine

d) Bupivacain

xx) The cisplatin can be used as

a) Alkylating antineoplastic agent

b) Antimetabolite antineoplastic agent

c) Antibiotic antineoplastic agent

d) Cytotoxic antineoplastic agent

Q. 2. Long Answers) = 2 x 10 = 20 (Answer 2 out of 3)

i) Define diuretics, give classification of diuretic with examples and explain mechanism of action and synthesis of Furosemide.

ii) Compare action mechanism of H1 antagonist and H2 antagonist explain advantages of H2 antagonist over H1 antagonist

iii) Classify antidabetic agent with example, explain mechanism of action of Repaglinide and give synthesis of Tolbutamide

Q. 3. Short Answers = 7 x 5 = 35 (Answer 7 out of 9)

i) Write a note on drugs for erectile dysfunction

ii) Explain Stereochemistry of testosterone

iii) Give synthesis of Promethazine hydrochloride

iv) Write synthesis of Warfarin

v) Write a note on SAR of Local anaesthetics

vi) Classify antineoplastic agents,

vii) Discuss pharmacological uses of thyroid and antithyroid drug

viii) Define and classify corticosteroid and give detailed account of prednisolone

ix) Elaborate the action mechanism of drugs used in Congestive Heart Failure

-----END OF THE PAPER-----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary End Semester Examination – Summer 2022

Course: B. Pharmacy

Sem: V

Subject Name: Industrial Pharmacy I

Subject Code: BP502T

Max. Marks: 75

Date: 16/07/2022

Duration: 3.45 Hrs.

Instructions –

1. All questions are compulsory
2. Answers to MCQs should be written in full sentences
3. Draw diagrams / figures wherever necessary
4. Figures to right indicate full marks

Q. 1. Multiple Choice Questions (MCQs) = 20 x 1 = 20 (All the questions are compulsory)

i) Which one of the following is NOT true? Different polymorphs forms of a drug can have different

- | | |
|-------------------|-----------------------|
| a) Melting points | b) Molecular formulae |
| c) Solubility | d) Crystal habits |

ii) The deliquescence is a property in which a solid,....

- | | |
|---|--|
| a) Absorbs moisture and remains solid | b) Absorbs moisture and turns to liquid form |
| c) Increases the number of water of crystallization | d) Loses water of crystallization |

iii) Which one is not a physical property of drug according to preformulation studies?

- | | |
|-----------------|------------------|
| a) Degradation | b) Particle size |
| c) Polymorphism | d) solubility |

iv) Which one is correctly stating the property for metastable polymorph?

- | | |
|--|---|
| a) Tightly packed molecules in crystal lattice | b) Less Tightly packed molecules in crystal lattice |
| c) Loosely packed molecules in crystal lattice | d) moderately packed molecules in crystal lattice |

v) Stability assessment is provided in ICH guideline for both API and product under

- | | |
|------------------|---------------|
| a) Q1A (R2) 2003 | b) Q1B 1996 |
| c) Q1A3 | d) Both 1 & 2 |

vi) Bloom strength is a prime test for?

- | | |
|-------------------------|------------------------|
| a) Powdered gelatin | b) Empty capsule shell |
| c) Filled capsule shell | d) Gelatin solution |

vii) Rotosort is a machine used to sort out?

- a) Coated Tablets
- b) Unfilled Capsules
- c) Sealed Ampoules
- d) Sealed Containers

viii) What should be the moisture content of a soft gelatin capsule?

- a) < 5 %
- b) 6-10 %
- c) 9-13 %
- d) > 15 %

ix) Which of the following use to fill Powder into Soft Gelatin Capsule?

- a) Rotofill
- b) Rotosort
- c) Accogel
- d) Rotoweight

x) Sample size for sterility testing in case of large volume and more than 500 containers is

- a) 2% or 20 containers, whichever is less
- b) 2% or 10 containers, whichever is less
- c) 20 Containers
- d) 6 containers

xi) Malvern particle & droplet size is

- a) Electrical sensing zone method
- b) Optical Sensing zone
- c) Laser diffraction method
- d) HIAC method

xii) HPMC is used in pelletization as

- a) Agglomeration inducer
- b) Flavouring agent
- c) Release modifier
- d) Surfactant

xiii) Water attack test is associated with

- a) Highly resistant borosilicate glass
- b) Treated soda lime
- c) Sodalime
- d) General purpose sodalime

xiv) In friability test IP, if average weight of tablet is less than 0.65 gm, what is sample size?

- a) 20
- b) No. tablets equivalent to 6.5 gm
- c) 10
- d) 12

xv) Ph-102 is the grade polymer of what

- a) Avicel
- b) MCC
- c) Both A & B
- d) Dicalciumsulphate

xvi) Lamination is

- a) Horizontal breaking of tablet
- b) Vertical breaking of tablet
- c) Separation of crown
- d) Discoloration of tablet

xvii) Drug administered to 'Intracisternal' is

- a) Into the spinal column
- b) Into the brain
- c) into the heart
- d) Pleural cavity

xviii) Among the propellants used in aerosols, one of the following is used for topical pharmaceutical aerosols

- (a) Trichloromonofluoro methane
- (b) Dichlorodifluoro methane
- (c) Dichloro tetra fluoro ethane
- (d) Propane

xix) 3. Manufacture of pharmaceutical aerosols can be done by

- a) Pressure filling apparatus
- b) Cold filling apparatus
- c) Compressed gas filling apparatus
- d) All of these

xx) The temperature used in cryopelletization is about.....degree Celsius

- a) 0
- b) 100
- c) -160
- d) -52

Q. 2. Long Answers) = $2 \times 10 = 20$ (Answer 2 out of 3)

- i) What is tablet as dosage form, explain various excipients and their roles used in the table formulation along with tablet defects and their remedies.
- ii) What is sterilization, what are the processes to sterilize product and what are their limitations
- iii) Explain hard gelatin shell manufacturing along with formulation components for powder and liquid filling

Q. 3. Short Answers = $7 \times 5 = 35$ (Answer 7 out of 9)

- i) Define preformulation, its objectives and 'hydrolysis' under chemical properties investigation
- ii) Elaborate on BCS classification and its significance
- iii) Tablet formulation is a challenging task, comment
- iv) Distinguish between cold cream and vanishing creams
- v) Explain need of tablet coating and formulation of coating composition
- vi) Justify the positive bioavailability aspects for liquid orals
- vii) Describe independent capsule filling in hard gelatin capsule formulation
- viii) What are ophthalmic preparations, explain its evaluation test
- ix) Elaborate stability aspects for packaging materials

-----END OF THE PAPER-----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary End Semester Examination – Summer 2022

Course: B. Pharmacy

Sem: V

Subject Name: Pharmacology II

Subject Code: BP503T

Max. Marks: 75

Date: 19/07/2022

Duration: 3.45 Hrs.

Instructions –

1. All questions are compulsory
2. Answers to MCQs should be written in full sentences
3. Draw diagrams / figures wherever necessary
4. Figures to right indicate full marks

Q. 1. Multiple Choice Questions (MCQs) = $20 \times 1 = 20$ (All the questions are compulsory)

i) Mannitol is contraindicated in

- a) Acute Tubular Necrosis b) Anuria c) Pulmonary Edema d) All of these

ii) Further doses of digitalis must be _____ at the earliest sign of toxicity.

- a) Stopped b) Continued c) Reduced d) Maintained

iii) Digitalis has direct effects on _____ via Na^+/K^+ ATPase Pump.

- a) Myocardial Contractility b) Liver c) CNS d) Skin

iv) _____ is a popular anti-arrhythmic in intensive care units.

- a) Mexiletine b) Lidocaine c) Propafenone d) Digitalis

v) Which of the following is not a potassium channel opener?

- a) Nicorandil b) Pinacidil c) Cromakalim d) Verapamil

vi) Half Life of Nitroglycerine is

- a) 2 min b) 40 min c) 4 – 6 hours d) 60 hours

vii) Which of the following is an Angiotensin Receptor Blocker?

- a) Losartan b) Candesartan c) Telmisartan d) All of these

viii) Oral absorption of Digitoxin is _____ %.

- a) 90 – 100 b) 60 – 80 c) 35 d) 10 – 15

xi) _____ is a Class IV antiarrhythmic.

- a) Lidocaine b) Phenytoin c) Verapamil d) Propafenone

- x) _____ is successfully used of unstable angina.
 a) Nitroglycerine b) Isosorbide Dinitrate c) Isosorbide Mononitrate d) Pentaerythrityl Tetranitrate
- xi) Identify a diuretic showing highest degree of Hypokalemia among the following
 a) Furosemide b) Hydrochlorothiazide c) Acetazolamide d) Indapamide
- xii) _____ is the safest anticoagulant in pregnancy.
 a) Warfarin b) Phenindione c) Heparin d) Dicumarol
- xiii) A thrombolytic capable of causing hypersensitivity reactions is
 a) Urokinase b) Streptokinase c) Alteplase d) Reteplase
- xiv) Aggregation of platelet is promoted by the
 a) Prostaglandin b) Prostacyclin c) Thromboxane d) Both option a) and c)
- xv) 5-HT appears to play a role in the following except
 a) Regulation of Normal BP b) Regulation of Intestinal peristalsis c) Haemostasis d) Causation of migraine
- xvi) Which is prostaglandin analogue ?
 a) Pirenzepine b) Hyoscine c) Latanoprost d) Norepinephrine
- xvii) Which of the following eicoasanoids is Ulcer Protective ?
 a) PGI₂ b) TXA₂ c) LTB₄ d) LTC₄
- xviii) _____ anti-anginal agents is a potassium channel opener.
 a) Dipyridamole b) Validol c) Atenolol d) Minoxidil
- xix) _____ is a common adverse effect of ACE inhibitors in susceptible individuals.
 a) Cough b) Platelet Aggregation c) Disorientation d) Gynaecomastia
- xx) Spironolactone belongs to _____ class.
 a) High efficacy diuretics b) Medium efficacy diuretics c) Adjunctive diuretics d) Other than a), b) and c)

Q. 2. Long Answers) = 2 x 10 = 20 (Answer 2 out of 3)

- i) Define and classify antihypertensive agents. Write a note on Vasodilators in hypertension.
- ii) Write a note on Angiotensin Converting Enzyme Inhibitors as a class of Diuretics.
- iii) What are autacoids? Write the Synthesis, Pharmacological action and Pathophysiological role of 5-HT.

Q. 3. Short Answers = 7 x 5 = 35 (Answer 7 out of 9)

- i) Explain shock and give clinically classification of shock.
- ii) Explain Triple Response of Histamine.

- iii) Classify anti-hyperlipidemic drugs with examples.
- iv) What is Congestive Heart Failure? Discuss cardiac glycosides in detail.
- v) Classify antiplatelet agents. Discuss thrombolytic agents with examples.
- vi) Give the mechanism of action, adverse reaction and uses of Loop diuretics.
- vii) Write in brief the mechanism of action of calcium channel blockers as anti-anginal.
- viii) What are anti-coagulants? Enlist their name and mention their uses.
- ix) Classify antihistaminic drugs and give their pharmacology

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