**23242**

**3 Hours / 80 Marks**

Seat No.

20112

*Instructions* –  (1) All Questions are Compulsory.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1.     **Attempt any SIX of the following:**     30

a) Draw the structure of chlorpromazine hydrochloride give its IUPAC name, therapeutic uses, formulations and brand names.

b) Draw the structure, IUPAC name, uses, formulations, and brand names of propranolol.

c) Enlist various sources of impurities in pharmaceuticals. Write any 4 effects of impurities.

d) Write uses of the following drugs:

i)   Ketoconazole                    ii)   Chloroquine

iii) Norfloxacin                      iv)   Remdesivir

v)   Pretomanid

e) Enlist two examples and uses for each of the following -

i)   Medicinal gases            ii)   Dental Products

f) Define Antibiotics. Classify antibiotics based on chemical structure.

g) Explain complexometric titrations and Acid-base titrations.

2.     **Attempt any TEN of the following:**     30

a) Enlist any 3 α-adrenergic blockers and any 3 β-adrenergic blockers.

b) Classify Anti-arrhythmic agents with examples.

c) Explain the principle and procedure involved in the limit test for sulphates.

d) Classify Non-steroidal anti-inflammatory agents with suitable examples.

e) Explain principle and reactions in the Assay of Ferrous sulfate.

f) Draw the structure of Metformin, write its uses and enlist brand names.

g) Classify Anti-depressants with examples. Draw the structure of Imipramine.

h) Draw the structure of Isoniazid, write its IUPAC name and enlist any 2 brand names.

i) Write uses of -

i)   Chloramphenicol                ii)   Streptomycin

iii) Azithromycin.

j) Draw the structure of 5-Fluorouracil and enlist its uses and write its storage condition.

k) Draw the structure of Frusemide and give its storage condition and uses.

P.T.O.

**Marks**

**3.** **Attempt ALL of the following:** **20**

a) Write the use of lead acetate cotton plug in a limit test for arsenic.

b) Draw structure of Furan ring.

c) Pyrimidine ring contains two nitrogen atoms at _____ and _____ position.
   i) 1 and 2
   ii) 1 and 4
   iii) 1 and 3
   iv) 2 and 3

d) Name any 2 anticonvulsant drugs.

e) Mordant Black is used in _____ type of titration.
   i) Acid-Base
   ii) Redox
   iii) Oxidation
   iv) Complexometric

f) Draw structure of Pyridine ring.

g) Which antacid produce carbon di-oxide?
   i) Aluminum hydroxide
   ii) Calcium carbonate
   iii) Magnesium hydroxide
   iv) All of these

h) Choose INCORRECT statement (s) -
   a) Heterocyclic rings are not aromatic.
   b) Thiazole have oxygen and nitrogen as hetero atoms.
   c) Pyrrole is five-membered heterocyclic ring.
   i) a only
   ii) b only
   iii) a and b
   iv) a, b and c

i) Enlist any two examples of cathartics.

j) Fill in the blank.
   Captopril contains _____ heterocyclic ring.

k) Choose INCORRECT statement (s) -
   a) Chlorpromazine is used in the treatment of Schizophrenia.
   b) Risperidone is first generation typical anti-psychotic.
   c) Phenobarbitone is used to induce epilepsy in rats.
   i) a only
   ii) b only
   iii) b and c
   iv) a and b

l) Enlist the uses of Isosorbide dinitrate.

m) Enlist example of anti-cancer agent from anti metabolites.

n) The following analgesic lacks anti-inflammatory action
   i) Ibuprofen
   ii) Paracetamol
   iii) Diclofenac Sodium
   iv) Piroxicam

o) Name one high ceiling diuretic.

p) Which of the following is an inhibitor of cyclooxygenase.
   i) Aspirin
   ii) Pethidine
   iii) Pentazocin
   iv) All of these

q) Name any 2 tetracyclines.

r) The following is a anticholinergic agent.
   i) Prazosin
   ii) Phentolamine
   iii) Yohimbine
   iv) Atropine

s) Draw the structure of Dapsone.

t) Which of the following drug is direct acting cholinomimetic agent?
   i) Pyridostigmine
   ii) Physostigmine
   iii) Acetyl Choline
   iv) Parathion

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