Registration no. | | | | | | | | | | |

Total Number of pages:02 **B.Pharma.**
15PH501

5th Semester Regular Examination 2017-18
Pharmaceutics-II(Pharmaceutical Technology - I)
BRANCH : B.Pharma.
Time : 3 Hours
Max Marks : 100
Q. Code: B112
Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions: multiple type or dash fill type** **(2x10)**

a) Granule density is _____ in'high shear paddle mixer',whereas granule density is _____ in 'fluidized granulator'.

b) For acidic compounds,
pH = pKa + log (_____drug) / [_____ drug]
For basic compounds,
pH = pKa + log (_____drug) / [_____drug]

c) Surfactants are chemically classified as
_____, _____, _____, _____ .

d) The melting point of a drug can be measured using three techniques,
_____ _____, _____ _____ _____, _____ _____.

e) Emulsification is caused by (i) reduction of _____ _____ ,(ii)formation of rigid _____ _____, (iii)formation of _____ _____ _____ .

f) Evaluation of tablets is carried out by several tests such as _____ test, _____ test,_____ rate and _____ _____ tolerance,_____ uniformity and _____ of tablet.

g) Finished capsules from all filling equipments require some sort of dusting and /or polishing operation such as _____ _____ and _____ ,_____ _____ and _____ _____.

h) Carr's index (%) = [(_____ - Pored density)/_____ _____]*100
andHausner ratio = _____ density/_____ density.

i) Barium sulfate in presence of sodium laurate (at pH 12) favors _____ type emulsions, whereas barium sulfate coated with sodium dodecyl sulfate will favor _____ type emulsions.

j) Weak acids with a pKa _____ 4.3 and weak bases with pKa _____ 8.5 are generally readily absorbed in the system.

Q2 **Answer the following questions:Short answer type**

a) Classify liquid dosage forms according to vehicles. **(2x10)**

b) What is intrinsic solubility?

c) Write about chewable tablet with example.

d) Why pKa of drug is important parameter for drug selection?

e) Why flowability of powder is important and how is it characterized?

f) What is HLB value and how is it useful in formulation?

g) Write about multiple emulsion with examples.

h) Give two examples of polyhydric alcohols. Why polyhydric alcohols are preferable than alcohols in the preparation of formulation?

i) What are the ingredients needed to manufacture soft gelatin shells and What types of different soft gel fill matrices are used ?

j) What are flocculated system and deflocculated system?

Q3 **a)** Describe with a flow sheet diagram, the method of tablet manufacturing by 'dry granulation method'. **(10)**

b) What is mottling of tablets and what is its preventive measure? **(5)**

Q4 **a)** What are the problems associated with the manufacturing of liquid dosage forms? **(10)**

b) Discuss in brief on various types of monophasic liquid dosage forms. **(5)**

Q5 **a)** Discuss Glass and Plastic as packaging system for liquid formulations. **(10)**

b) Write on ideal properties of packaging materials. **(5)**

Q6 **a)** State different objectives of preformulation studies. How is a drug moiety with potential pharmacological activity screened out from synthetic compounds? What are the significances of preformulation studies in designing of dosage forms? **(10)**

b) Discuss briefly on various preformulation parameters to be studied. **(5)**

Q7 **a)** Categorize various granulation techniques and write about characteristics of various granulating agents. **(10)**

b) Write on the mechanisms of granule formation. **(5)**

Q8 **a)** Write on the mechanisms of drug permeation of semi-solid dosage form through skin .What are the factors that influence skin permeation? **(10)**

b) Discuss about ointments, creams, pastes and gels with examples and their packaging system. **(5)**

Q9 **a)** Describe manufacturing method and quality control tests of soft gelatin capsules. **(10)**

b) What are the advantages and disadvantages of hard and soft gelatin capsules? **(5)**

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Total Number of Pages: 02 **B.Pharma**
15PH502

5th Semester Regular Examination 2017-18
Medicinal Chemistry-I
BRANCH: B.Pharma
Time: 3 Hours
Max Marks: 100
Q.CODE: B113

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions: *multiple type or dash fill up type*** **(2 x 10)**

a) Thiazides diuretics is used in
   a. Primary hyperaldosteronism.
   b. Nephrogenic diabetes insipidus
   c. Idiopathic hypercalciurea
   d. Hypercalcaemia

b) Acetzolamide has following characteristics
   a. acting on proximal tubules
   b. Inhibits carbonic anhydrase
   c. Competitively antagonize aldosterone
   d. Inhibits sodium secretion in the distal tubule

c) Acetylcholine and physostigmine are example of ---------- type drug interaction.
   a. Synergism
   b. Addition
   c. PotentiationAll of above.
   d. Antagonism

d) Phentolamine is competitive antagonism of
   a. Acetyl choline
   b. Isoprenaline
   c. Noradrenaline
   d. Atropine

e) Calcium channel blocker with predominant peripheral action is
   a. Nicardepine
   b. Verapamil
   c. Nifedipine
   d. Diltiazem

f) Famotidine acts as
   a. H1 histamine antagonist
   b. H2 histamine antagonist
   c. Proton pump inhibitor
   d. H1 agonist

g) Crohn's disease affects ---------part
   a. Gastrointestinal tract
   b. Kidney
   c. Lung
   d. Heart

h) Clonidine is used in
   a. Glucoma
   b. Migraine
   c. Opioid withdrawal syndrome
   d. All

i) Which of the following is used in the diagnosis of myasthenia gravis?
   a. Physostigmine
   b. Neostigmine
   c. Both
   d. None

j) Clonidine, metronidazole and tinidazole have which of the group in common?
   a. Quinidine
   b. Benzimidazole
   c. Imidazole
   d. None of the above

Q2 **Answer the following questions: *Short answer type*** **(2 x 10)**

a) Define the term autocoids with example.
b) Define Bioisosterism.
c) Write down the structure of Furosemide and Nifidipine.
d) What is the natural source of Chloramphenicol?
e) Write down the structure of Naproxan and their mode of action.
f) Define the term partition coefficient.
g) What are the causative organisms of tuberculosis and leprosy?
h) Mention the mechanism of action of Metronidazole and Thiabendazole.
i) What are diuretics?
j) Write down structure of any one antihistamine drug and one Eicosanoid drug.

Q3 **a)** Mention the physicochemical properties used in QSAR. **(10)**
b) Mention the relationship between logP and biological activity. **(5)**

Q4 **a)** Discuss the effect of electronic and steric parameter on lipophilicity. **(10)**
b) Write a note on Free Wilson model. **(5)**

Q5 **a)** Define and classify cholinergic and anticholinesterase drugs with examples. What are muscarinic and nicotinic effects? **(10)**
b) Outline the synthesis and uses of Carbachol and Neostigmine. **(5)**

Q6 **a)** Discuss the SAR and mode of action of adrenergic and antiadrenergic drugs. **(10)**
b) Outline the synthesis of any two β-adrenergic blockers with their uses. **(5)**

Q7 **a)** What is the meaning of 'autacoids'? Classify antihistaminic drugs with examples. Outline the mode of action and SAR of classic antihistaminics. **(10)**
b) Outline the synthesis and chemical name of Promethazine and Ranitidine. **(5)**

Q8 **a)** Define and classify diuretics with examples. Outline the mode of action and SAR of thiazide diuretics. **(10)**
b) Mention the synthesis and chemical name of Ibuprofen and Diclofenac sodium. **(5)**

Q9 **a)** Define and classify antihypertensive drugs with examples. Outline the synthesis of Clonidine and Methyldopa. **(10)**
b) Write a note on anthelmintics. **(5)**

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Total Number of Pages: 02 **B.Pharma**

15PH503

5th Semester Regular Examination 2017-18

Pharm. Analysis-II

BRANCH : B.Pharma

Time: 3 Hours

Max Marks: 100

Q.CODE: B114

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** **(2x10)**

a) Turbidity is carried out at wavelength
i) 450 nm ii) 680 nm
iii) 530 nm iv) 600 nm

b) The following light is measured in nephelometry
i) Scattered ii) Reflected
iii) Dispered iv) Transmitted

c) The following gas has got a higher thermal conductivity value:
i) Nitrogen ii) Helium
iii) Argon iii) Carbon

d) Diazotisation titration is used for the assay of
i) NSAIDs ii) Sulpha drugs
iii) Steroids iv) All of the above

e) The end point of complexometric titrations is shown by
i) Acid-base indicators ii) pH indicators
iii) Colorimeter iv) pH meter

f) Dropping mercury electrode is an important component of
i) HPLC ii) Spectrophotometer
iii) Poalarograph iv) Potentiometer

g) In polarography, to eliminate migrationcurrent which of the following is used?
i) NaCl ii) KCl
iii) NaOH iv) KOH

h) In redox titration, indicator electrode is
i) Pt wire ii) Ag wire
iii) Glass electrode iv) Hg electrode

i) Which of following is used as precipitating agent for Ca^{2+} ion in gravimetric ana

i) $BaCl_2$ ii) HNO_3

iii) NH_4SCN iv) $H_2C_2O_4$

j) Angle between source and detector in turbidimeter is

i) 90º ii) 180º

iii) 45º iv) 60º

Q2 **Answer the following questions:** **(2×10)**

a) Discuss briefly about digestion.
b) Write down the advantages and application of polarography.
c) What are the factors affecting amperometry.
d) Mention the factors that affect the Diazotization end point.
e) What are the radiation sources for nephelometr
f) Write down the application of radio-immunoassay.
g) Discuss different types of filters and monochromators related to turbidimetry.
h) What is the principle involved in conductometry?
i) Define and give examples of organic precipitations.
j) Write about the electrodes used in potentiometry.

Q3 **a)** Discuss the significance of solubility products and common ion effect on gravimetric assay. Define the following:- Co- precipitation, Post-precipitation, and peptization. **(10)**

b) What are the characteristics of precipitating substance and washing solution. **(5)**

Q4 **a)** What are different methods of conductivity measurements? **(10)**

b) Explain the ion selective electrodes principle. **(5)**

Q5 **a)** What are the main application of nephelometry and turbidimetry? **(10)**

b) What is the main difference in the working principles of nephelometry ? **(5)**

Q6 **a)** What is the principle involved in the diazotization titrimetry? Mention the condition required for diazotization titrimetry. **(10)**

b) Write a note on Kjeldal method of nitrogen estimation. **(5)**

Q7 **a)** Explain the principle involved in the Zone electrophoresis, gel lectrophoresis and capillary eletrophoresis. Discuss the instrumentation of electrophoresis. **(10)**

b) What is the principle and procedure involved in Radioimmunoassay? **(5)**

Q8 **a)** Discuss the principle and procedure involved in KarlFischer titration. **(10)**

b) Write a note on polarography **(5)**

Q9 **a)** Write a note on Gasometry. **(10)**

b) Mention the advantages, disadvantages and application of Potentiometric titration. **(5)**

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Total Number of Pages: 02 **B.Pharm**
15PH504

5th Semester Regular Examination 2017-18
Pharmacology - I
BRANCH : B.Pharma
Time: 3 Hours
Max Marks: 100
Q.CODE: B115

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** **(2 x 10)**

a) BCG vaccine is to be administered by …….. route. Most of the drugs are transported across the membrane by …….

b) Aspirin causes …….. damage by ……. Mechanism.

c) Myasthenia gravis is an …….. Disorder due to development of …….. it occur.

d) ……. Ion fluidizes the axonal membrane during neutrotransmitter release. Phenylephrine is used as nasal decongestant acts by …….. agonism.

e) Lithium is used for …… and it is excreted in ……..

f) Bromocriptine is effective in ……. . L-dopa stimulate …….. type of receptor.

g) …… appropriate antidote for the treatment of Pentazocine overdose.

Opoid mediated flushing and warming of the skin is due to ……..

h) Local anaesthetic acts by …….. local anaesthetic is given along with adrenaline for ……..

i) …….. is clinically used in treating grand mal seizures. Antiseizure drug ……. Probably acts principally at Ca channels.

j) ……. Is a neuromuscular blocker has histamine releasing property. All neuromascular agents should administered through ……. route.

Q2 **Answer the following question :** **(2×10)**

a) Write the definition of pharmacokinetics and pharmacodynamics.

b) Describe about the carrier mediated transport.

c) Briefly describe about partial agonist and inverse agonist with example.

d) Write the types of autonomic nervous system and write the names of principal neurotransmitters of these types.

e) Explain about the parasympatholytic and sympathomimetic drugs with example.

f) Shortly explain about therapeutic index.

g) What is opoid analgesics. Write about the types of opoid receptor.

h) What is the difference between local anaesthetics and general anaesthetics. Write some examples of these anaesthetics.

i) Describe the following terms :

Sedative

Hypnotics

j) Explain about microsomal and non-microsomal enzymes with their examples.

Q3 **a)** Write the definition of general anaesthesia. Explain the stages of general anaesthesia. Write about preanaesthetic medication of general anaesthesia. **(2+5+3)**

b) Write about the classification of general anaesthesia and briefly explain about nitrous oxide. **(2.5+2.5)**

Q4 **a)** Write the definition of affinity and efficacy. Discuss the different types of receptor. **(5+5)**

b) Write Briefly about the G-protein coupled receptor. **(5)**

Q5 **a)** What is apparent volume of distribution? Briefly discuss about neurohumoral transmission. **(5+5)**

b) Write about first pass metabolism of drug. **(5)**

Q6 **a)** Define parkinsonism. Write the classification of antiparkinsonism drug. How levodopa is helpful for parkinsonism. **(2+3+5)**

b) Why levodopa is used along with carbidopa. **(5)**

Q7 **a)** Write a note on : **(10)**

i) Tricyclic antidepressant

ii) Selective serotonin reuptake inhibitors

b) Explain briefly about passive diffusion and facilitated diffusion. **(5)**

Q8 **a)** Describe about the different types of administration along with their merits and demerits. **(10)**

b) Explain about the different types of adrenergic receptors along with their location and function. **(5)**

Q9 **a)** What is epilepsy, write about the types. How anticonvulsant drugs act generally on different types of seizures? Give some examples? **(2+3+5)**

b) What is endogenous opoid peptides. Write about the central pharmacological effects of Morphine. **(2.5+2.5)**

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Total number of pages: 02 **B. Pharma.**
15PH505

5th Semester Regular Examination 2017-18
Pharmacognosy-III
BRANCH: B.Pharma
Time: 3 Hours
Max Marks: 100
Q.CODE: B116

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Multiple Choice Questions :** **(2 x 10)**

a) Rhein is a
A) Sterol B) Anthraquinone C) Coumarin D) Phenol.

b) Keller-Kiliani test is performed for the detection of ……

c) Anthranilic acid is an intermediate in the biosynthesis of
A) Tryptophan B) Tyrosine C) Phenyl alanine D) Ornithine

d) Under UV radiation gentian extract shows …….. fluorescence.

e) *Cassia obovata* is commonly known as
A) PaltheSenna B) Mecca Senna C) Egyptian Senna D) Dog Senna

f) *Glycyrrhiza* belongs to the family of
Liliaceae B) Leguminosae C) Solanaceae D) Pinacee

g) Strophanthus glycosides + 80 % H_2SO_4
A) Violet B) Crimson red C) Emerald green D) Cream

h) Bitter wood obtained from dried stem wood of …….

i) BAP is a
Gibberalin B) Synthetic auxin C) Natural auxin D) Cytokinin

j) *Panaxquinquefolium* represents
American B) Chinese C) Korean D) Japanese variety of ginseng.

Q2 **Answer the following questions :** **(2 x 10)**

a) Distinguish between Cardenoloides and Bufadienolides.
b) Give examples of two cytotoxic compounds obtained from marine source.
c) Write down the biological source of Senega.
d) Define the term 'totipotency'.
e) Write down the biological sources of Trypsin and Pepsin.
f) How would you detect anthraquinone glycoside in a crude specimen?
g) Write down the biological source, chemical constituents and uses of Red Squill.
h) Give examples of two probiotics.
i) Write down the uses of Psoralea.
j) What down the name of the precursors involved in the biosynthesis of Tropane alkaloids?

Q3 **a)** Define and classify plant tissue culture. **(5)**
b) Write an account on the nutritional requirements for the in vitro growth of plant tissue. **(6)**
c) Write down the applications of plant tissue culture in the production of bioactive plant metabolites. **(4)**

Q4 **a)** Define and classify glycosides with suitable examples. **(5)**

b) Write down the biological source, microscopic features, chemical constituents and uses of Indian Senna. **(10)**

Q5 **a)** Describe schematically the 'Sta-Otto' method of isolation of glycosides. **(5)**

b) Write down the biological sources, chemical constituents and uses of Chirata and Rhubard. **(10)**

Q6 **a)** Write down the microscopic features of aloe leaf. **(5)**

b) Describe the methods of cultivation and collection of Digitalis and Dioscorea. **(10)**

Q7 **a)** Describe the biosynthetic pathways for the bio-production of indole alkaloids and steroidal aglycones. **(5 x2 =10)**

b) Describe schematically the biosynthesis of different amino acids via. shikimic acid pathway. **(5)**

Q8 **a)** Write down the biological sources, method of preparation, physical properties and uses of papain and diastase. **(10)**

b) Write note of poisonous plants of India. **(5)**

Q9 **a)** Give an account on marine drugs with special emphasis on antimicrobial agents and marine toxins. **(10)**

b) Write short note on nutraceuticals. **(5)**

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Total number of Pages: 02 **B. Pharma.**
15PH506

5th Semester Regular Examination 2017-18
Pharmaceutical Microbiology
BRANCH: B.Pharma.
Time: 3 Hours
Max Marks: 100
Q.CODE: B117

Answer Question No.1 and 2 which are compulsory and any four from the rest.
The figures in the right hand margin indicate marks.

Q1 **Multiple Choice Questions :** **(2 x 10)**

a) Teichoic acid is present in _____ bacteria. It consists of _____ and _____.

b) Penicillin was isolated from the fungus _____. It acts on _____ of bacteria.

c) Moist heat sterilization involves a temperature of ____ and a pressure of ____.

d) Gram staining involves _____ as the primary stain, _____ as the mordant and _____ as the counterstain.

e) Autoclaving is which type of sterilization?
- i. Physical
- ii. Chemical
- iii. Biological
- iv. None of these

f) Which one is a dimorphic fungus?
- i. *Candida tropicalis*
- ii. *Candida albicans*
- iii. *Penicillium notatum*
- iv. *Penicillium chrysogenum*

g) LPS is present in which type of bacterial cell wall?
- i. Gram positive
- ii. Gram negative
- iii. Both Gram positive and Gram negative
- iv. None

h) Acid fast staining is used to stain which bacteria?
- i. *Micobacterium sp.*
- ii. *Mycobacterium sp.*
- iii. *Mycrobacterium sp.*
- iv. None

i) Which of the following is an antifungal agent?
- i. Penicillin
- ii. Streptomycin
- iii. Nystatin
- iv. Rifampin

j) *Salmonella* has:
- **i.** Monotrichous flagella
- **ii.** Lophotrichous flagella
- **iii.** Peritrichous flagella
- **iv.** Amphitrichous flagella

Q2 **Answer the following questions :** **(2 x 10)**

a) What do you mean by the term 'Antibiotics'?
b) Define 'Gram staining'.
c) What is the meaning of 'Sterilization'?
d) Who discovered 'Penicillin'?
e) Define the term 'Fermentation'.
f) Which is the first phase of Bacterial growth curve? What is its significance?
g) Define 'Mutation'.
h) Define and differentiate genomic and plasmid DNA.
i) What is the difference between 'dry heat' and 'moist heat' sterilization?
j) What is the importance of 'Sex pili'?

Q3 **a)** Differentiate between prokaryotes and eukaryotes. **(10)**
b) Write down the mechanism of moist heat sterilization. **(5)**

Q4 **a)** Describe the phases of bacterial growth curve. **(10)**
b) Differentiate between endotoxin and exotoxin. **(5)**

Q5 **a)** Briefly describe the different types of bacteriological culture media**.** **(10)**
b) Write down the mechanism of filtration sterilization. **(5)**

Q6 **a)** Write a note on Gram staining. **(10)**
b) Describe the different modes of bacterial nutrition. **(5)**

Q7 **a)** Differentiate between Gram positive and Gram negative bacteria with suitable examples. **(10)**
b) Write down the different types of mutation. **(5)**

Q8 **a)** Write a note on Phenol Coefficient. What is its significance? **(10)**
b) Write down the different modes of action of important antibiotics. **(5)**

Q9 **a)** Write a note on the beneficial role of microbes**.** **(10)**
b) Write down the steps of conjugation with suitable diagram. **(5)**

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Total Number of pages: 01 **B.Pharma.**
PH.5.1

5th Semester Back Examination 2017-18
Pharmaceutics –IV (Pharm. Tech. -I)
BRANCH: B.Pharma.
Time : 3 Hours
Max Marks :70
Q. Code: B118

Answer Question No. 1 which is compulsory and any five from the rest .
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2x10)**

a) Classify liquid dosage form according to the route of administration.
b) Write on uses of Drops as liquid formulation.
c) Add a note on multiple emulsion.
d) What is phase inversion temperature and what is its significance?
e) Define suspension and mention the difference between flocculated and deflocculated suspension.
f) What is the need of granulation?
g) What type of problems may arise if lubricant is not added during tablet preparation?
h) Differentiate between cream and paste.
i) Write advantage of lanolin as ointment base.
j) How suspending agents act in a suspension ?Give some examples of suspending agents.

Q2 **a)** Write short notes on Mouth dissolving tablet and Chewable tablet with example of each. **(5)**
b) Explain defects found in tablet dosage form during manufacturing ,and what are the reasons? **(5)**

Q3 **a)** Write about the types and rationale of different coating processes. **(5)**
b) Explain equipments involved in coating. **(5)**

Q4 **a)** What are the problems associated with the manufacturing of liquid dosage forms? **(5)**
b) Discuss in brief on various types of monophasic liquid dosage forms. **(5)**

Q5 **a)** Describe any one industrial scale filling machines for hard gelatin capsules. **(5)**
b) Write in brief on quality control and storage of capsule dosage form. **(5)**

Q6 **a)** What are the ingredients needed to manufacture soft gelatin shells and What types of different soft gel fill matrices are used ? **(5)**
b) What are the rationale for the selection of soft gels dosage forms? **(5)**

Q7 Write in detail on pharmaceutical Granulation equipments. **(10)**

Q8 **Write short answer on any two of the following :** **(5x2)**

a) Write on the mechanism of granule formation.
b) Write a short note on packaging system of liquid dosage forms.
c) Ideal properties of packaging materials.
d) Discuss about various types of creams.

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Total Number of Pages: 01 **B.Pharma.**
PH.5.3

5th Semester Back Examination 2017-18
Applied Microbiology
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B120

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) What does generation time mean? What is incubation period ?
b) What is the difference between 'stain' and 'strain'?
c) What is the meaning of mutation? Give one example of a mutagen.
d) Name one thermophilic and one mesophilic microorganism.
e) Why does the microbial growth curve plateau at the stationary phase?
f) Differentiate between transformation and transduction.
g) What is the other name of vitamin B12 and which microorganism can produce it?
h) Penicillin and Streptomycin are produced by which fungi?
i) What is dimorphic fungus? Give an example.
j) What is exotoxin? Define pyrogen.

Q2 **a)** Write a note on membrane filtration technique. **(5)**
b) Differentiate between probiotics and prebiotics. **(5)**

Q3 **a)** Write down the different methods of microbial culture preservation. **(5)**
b) Describe the principle of radiation sterilization. **(5)**

Q4 **a)** Differentiate between flagella, cilia and fimbrae. **(5)**
b) Briefly describe the basic features of Gram negative bacterial cell wall. **(5)**

Q5 **a)** Differentiate between selective and differential media stating examples of each. **(5)**
b) Briefly write about the different microbiological assays of antibiotics. **(5)**

Q6 **a)** Describe the principle of Zeihl Neelsen staining. Which organisms can be viewed using this staining technique? **(5)**
b) Differentiate between plasmid and genomic DNA. **(5)**

Q7 Describe the working principle of an autoclave with mechanism of killing of microbes. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Lyophilization.
b) Protoplast fusion.
c) SEM.
d) R.W. Coefficient.

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Total Number of Pages: 01 **B.Pharma.**
PH.5.5

5th Semester Back Examination 2017-18
PHARM.CHEMISTRY - V (MED. CHEM - I)
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B121

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) What is geometric isomerism? Give example.
b) Classify adrenergic receptor mentioning atleast one agonist.
c) Mention the factors involved in drug-receptor interaction.
d) Mention the postulates of the Hansch analysis.
e) Define autacoids with example.
f) What are Eicosanoids?
g) Write down the structures of Chlorpheniramine and Ibuprofen.
h) Define the term Molecular connectivity Index?
i) Write down the structures of any two NSAIDs.
j) Define the term partition coefficient.

Q2 **a)** Classify sympathomimetics and discuss their therapeutic uses. **(5)**
b) Write down the synthetic scheme of Salbutamol and Phenylephrine. **(5)**

Q3 **a)** How do cholinergics interact with binding sites, discuss with an example. **(5)**
b) Discuss on SAR of cholinergic drugs. **(5)**

Q4 **a)** Define and classify antihistamine with examples. **(5)**
b) Outline the mode of action and SAR of classic antihistamines **(5)**

Q5 **a)** Discuss synthesis of Chlorpheniramine, Promethazine and Cimetidine. **(5)**
b) Write a note on Eicosanoids. **(5)**

Q6 **a)** What are the pathophysiology of inflammation, mention the cardinal symptoms of inflammation. **(5)**
b) Outline the synthesis and mode of action of the following. **(5)**
Phenylbutazone, Diclofenac sodium.

Q7 Discuss in brief the antipyretic and analgesic drugs and mention their mode of action and SAR of Salicylic acid derivatives & heteroarylacetic acid derivatives. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Antiulcer drugs.
b) Neuromuscular blocking agents.
c) Physicochemical aspects of drug design.
d) Free wilson model and Hansch analysis.

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Total Number of Pages: 01 **B.Pharma.**
PH.5.7

5th Semester Back Examination 2017-18
Pharmacology – I
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B122

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) Drug metabolism
b) Blood brain barrier
c) Tolerance
d) Teratogenicity
e) Therapeutic index
f) Idiosyncrasy
g) Plasma t1/2
h) Bioavailability
i) Prodrug
j) Apparent volume of distribution

Q2 **a)** Define and classify receptor. **(5)**
b) Briefly discuss about enzyme linked receptor. **(5)**

Q3 **Write short notes on :**
a) Synergism **(5)**
b) Antagonism **(5)**

Q4 **a)** Discuss the different factors that responsible for parkinsonism. **(5)**
b) Briefly discuss about L-dopa as antiparkinsonism drug. **(5)**

Q5 **a)** Define analgesic. Classify analgesic drugs. **(5)**
b) Write down the mode of action, therapeutic application and side effect of Aspirin. **(5)**

Q6 **a)** Define and classify sedative and hypnotics. **(5)**
b) Write shortly about Benzodiazepine. **(5)**

Q7 **a)** What are the different stages of general anaesthesia. **(5)**

b) Illustrate the term pre-anaesthetic medication. **(5)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Allopurinol
b) Narcotic analgesic
c) Tricyclic antidepressant

Registration No: | | | | | | | | | | |

Total Number of Pages: 01 **B.Pharma**
PH.5.9

5th Semester Back Examination 2017-18
Pharm. Analysis - II
BRANCH : B.Pharma
Time: 3 Hours
Max Marks: 70
Q.CODE: B123

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) What is the self indicator?
b) Define the term oxidizing and reducing agent.
c) Mention the factors that affect diazotization titrimetry.
d) What is the principle involved in coulometry?
e) What is the equivalent weight?
f) Mention the application of pH meter.
g) Mention the applications of potentiometry.
h) What is the redox indicator?
i) What is the cell representation?
j) Define the term Iodimetry titration.

Q2 **a)** Explain in detail about the Instrumentation of coulometry **(5)**
b) Explain the theory involved in conductometry. **(5)**

Q3 **a)** Define the term nephlometry and turbidimetry. **(5)**
b) Write down the working principle of nephlometry and turbidometry. **(5)**

Q4 **a)** How will you measure the electrode potential? **(5)**
b) Explain the term oxidation-reduction curve with example. **(5)**

Q5 **a)** What are the differences between zone electrophoresis and gel electrophoresis? **(5)**
b) Discuss the process involved in gel electrophoresis. **(5)**

Q6 **a)** Explain the theory involved in redox titration. **(5)**
b) What are the differences between Iodimetry and Iodometry titration? **(5)**

Q7 Explain the principle and procedure involved in Kjeldahl method for nitrogen estimation. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Radio immuno assay
b) Karl Fischer titration
c) Polarography
d) Amperometry

Registration No: | | | | | | | | | | |

Total Number of Pages: 01 **B.Pharma.**
PH.5.11

5th Semester Back Examination 2017-18
Community Pharmacy and Health Education
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B119

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2x10)**

a) What are the objectives of first aid?
b) What is Shock ?
c) Define physical health and mental health.
d) What is Epidemiology ?
e) What do you mean by balanced diet? Give example.
f) Write the two diseases occur due to malnutrition.
g) Write two live vaccines along with diseases in which they are used.
h) Which organ is affected in trachoma? What is causative organism of it?
i) Differentiate between tuberculoid and lepromatous leprosy.
j) What is trace elements? Give examples.

Q2 Give the causative organisms, mode of transmission and prevention of the following communicable diseases :

a) Chicken pox **(5)**
b) Malaria. **(5)**

Q3 **a)** Explain demography cycle with its different stages. **(5)**
b) Describe behavioural and mechanical methods of contraception. **(5)**

Q4 **a)** Discuss descriptive epidemiology in detail. **(5)**
b) Write about the role of pharmacist in community health care. **(5)**

Q5 **a)** Write on emergency treatment of snake bite or burns. **(5)**
b) Write short notes on cardio-pulmonary-resuscitation (CPR). **(5)**

Q6 **a)** Write about oral contraceptive pills. **(5)**
b) Write on immunization schedule. **(5)**

Q7 **Write short notes on :**

a) OTC Drugs **(5)**
b) HIV - AIDS **(5)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Legal requirements for establishment of Retail Drug Store.
b) MDR - TB.
c) Classification of different foods.
d) Sabin vaccine.