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Total Number of Pages : 02 **B.Pharm**
15PH602

6th Semester Regular Examination 2017-18
MEDICINAL CHEMISTRY - II
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 100
Q.CODE : C196

Answer Section 'A' which is compulsory and any Four from Section 'B'.
The figures in the right hand margin indicate marks.

SECTION-A

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

a) Mechanism of action of Zidovudine is:
a) Uncoating inhibitor
b) Reverse transcriptase inhibitor
c) Adsorption inhibitor
d) Protease inhibitor

b) Anaesthesia of mucous membranes is called:
a) Infiltration anaesthesia
b) Nerve block anaesthesia
c) Field block anaesthesia
d) Topical anaesthesia

c) Which one of the following belongs to long-acting barbiturate:
a) Phenobarbital
b) Pentobarbital
c) Thiopental
d) Hexabutal

d) Glibenclamide belongs to the class of:
a) Sulphonyl uraes
b) Benzoic acid derivatives
c) Thiazolidinediones
d) Biguanides

e) Xylocaine is:
a) Ethyl-p-aminobenzoate
b) 2-(Diethylamino)ethyl-P-aminobenzoate
c) 2-(Diethylamino)-N-(2,6-dimethylphenyl)acetamide
d) 4-Chloroacetophenone

f) Antidote used in Insulin toxicity is :
a) Glucagon
b) Phenformin
c) Glycogen
d) Repaglinide

g) The major route of elimination of the volatile general anaesthetics is via :
a) Kidney
b) Lungs
c) Skin
d) Liver

h) The stage of general anaesthesia in which the patient may move about and have a low tone of voice is:
a) Stage-I
b) Stage-III
c) Stage-II
d) Stage-IV

i) Which one of the following statement is TRUE on antineoplastic:
a) selective toxicity to cancer cells
b) kill cells by zero-order kinetics
c) easy access to cancer cells of any region
d) easily develop resistance

j) Why does only female anopheles mosquito cause malaria?
a) because female is evolutionarily designed to be cruel
b) because female need blood from vertebral host to nourish eggs
c) males find it difficult to suck blood
d) blood is the only diet for female mosquitoes

Q.2 **Answer the following Questions :** **(2 x 10)**

a) Name the different types of CNS Stimulants with suitable examples.
b) Differentiate between Opioid and non opioid analgesic with examples.
c) Discuss the role of Amantidine in parkinsonism disease
d) Write the structure and chemical name of Thiotepa
e) Give the name and structure of 5,5-Diethyl barbituric acid.
f) Differentiate between Barbiturates and Benzodiazepines
g) Define Biochemical theory of General anaesthetics.
h) Write synthesis and uses of Thiopental sodium.
i) Write synthesis and uses of Methadone.
j) Give the mechanism of action of Neuroleptics.

SECTION-B

Q3 **a)** Classify oral hypoglycemic agents with examples.Give the synthesis, uses and mode of action of Chlorpropamide. **(10)**
b) Write short notes on Insulin and Insulin preparations. **(5)**

Q4 **a)** Define and Classify antibiotics with examples. Discuss the SAR and Stereochemistry of Penicillin. **(10)**
b) Write synthesis, mechanism of action and uses of Chloramphenicol. **(5)**

Q5 **a)** Classify the Antimalarials based on their chemical nucleus. Give synthesis, chemical name and uses of Pyrimethamine. **(10)**
b) Write the synthetic route mechanism of action and uses of Chloroquine. **(5)**

Q6 **a)** What are the different stages of viral Infection? Classify anti-HIV agents with example.write the synthesis of Zidovudin. **(10)**
b) Write Pharmaceutical significance of ACE Inhibitors. **(5)**

Q7 **a)** Classify anticonvulsants with examples. Outline the synthetic route of Primidone and Phenytoin. **(10)**
b) Write note on immunosuppressive agents. **(5)**

Q8 **a)** Define and classify sedatives and hypnotics. Write the synthesis of Cyclobarbital and Diazepam. **(10)**
b) Classify anxiolytics and give synthesis and therapeutic uses of Haloperidol. **(5)**

Q9 **a)** Outline the synthesis and uses of following drugs **(10)**
i. Procainamide
ii. Chlorambucil
iii. Levodopa
iv. Dibucaine
(b) Write note on Antithyroid drugs. **(5)**

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PH.6.11

6th Semester Back Examination 2017-18
PHARMACEUTICAL JURISPRUDENCE AND ETHICS
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q. CODE : C197

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) Define the terms 'Patent' and 'Patentee'.
b) What facilities are available in a factory under 'The Factories Act'?
c) Write Schedule – I & II under The Drugs Price Control Order.
d) Who are elected members of Pharmacy Council of India (PCI)?
e) Name Chairperson and Assistant secretary of Drug Enquiry Committee.
f) What ethics a pharmacist should follow in relation to handling of drugs?
g) What is Schedule P and X?
h) Define the term 'Adulterated Drugs'?
i) Which month and year The Medicinal and Toilet Preparation Act was effectively implemented in India?
j) What are the duties of Narcotic commissioner?

Q2 **a)** Explain Education Regulation-1991 according to Pharmacy Act? **(5)**
b) Describe the constitution of State Pharmacy Councils. **(5)**

Q3 **a)** What experience or training shall obtain by Registered Medical Practitioner (RMP) under The Medical Termination of Pregnancy Act? **(5)**
b) Give in details on Pharmacist in relation to his profession under Code of Pharmaceutical ethics. **(5)**

Q4 Discuss on whole sale and retail sale of drugs. Write specimen labeling of Pentobarbitone Sodium Injection U.S.P. **(10)**

Q5 **a)** Describe the qualification and duties of Government analysts. **(5)**
b) What type and condition of advertisements are exempted under The Drugs and Magic remedies Act? **(5)**

Q6 **a)** Describe Import and Export of Narcotic Drugs under the Act. **(5)**
b) Write the constitution and function of Institutional Animal Ethics Committee (IAEC). **(5)**

Q7 **a)** What are the procedure to obtaining patent with reference to provisional and complete specification of Patent? **(5)**
b) Describe the provisions of the Factory Act relating to 'Cleanliness and safety officer'. **(5)**

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

a) Poisons Act 1919.
b) Import and manufacture of Cosmetics under Drug & Cosmetics Act.
c) How to calculate the retail price of a formulation under Drugs and Price control order?
d) Registration of pharmacist under Pharmacy Act.

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6th Semester Regular Examination 2017-18
PHARMACEUTICS – III (PHARM. TECH. - II)
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 100
Q.CODE : C132

Answer Part-A which is compulsory and any four from Part-B.
The figures in the right hand margin indicate marks.

Part – A (Answer all the questions)

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

a) HEPA filters are capable of removing particles of _____ or greater with an efficiency of _____%.

b) Pyrogen is _____. Mention which test is performed to selected the proper animals for the main test for pyrogen testing.

c) _____ & _____ are used as antioxidant in ophthalmic products.

d) Ophthalmic products must be _____ & pH should be _____.

e) The basic components of aerosol are _____ & _____.

f) The solution system of aerosol is called as _____ and water based system is called as _____.

g) The active ingredient integrated within the matrix of the shell material is called as _____. The method of choice for the preparation of protein and polysaccharide micro-capsules is _____.

h) Mention two water soluble resins used in microencapsulation.

i) SVP is _____ & LVP is _____.

j) Type I glass is called as _____ and Type II glass is called as _____.

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

a) Name four routes of administration parenterally.

b) Name the therapeutic category of drugs used in ophthalmic preparations.

c) Give the differences between spray drying and spray congealing methods.

d) Name four non aqueous vehicles for parenteral products.

e) Name any four pharmaceutics applications of microencapsulation.

f) What is propellant? Give two examples of compressed gas propellant.

g) What is tamper proof packaging? Name any two tests conducted for primary packaging.

h) What is the role of actuator in aerosol?

i) Water attack test is used only with type I glass. True or false justify?

j) What is clean room class 100?

Part – B (Answer any four questions)

Q3. **a)** Discuss details about vehicles and ingredients used in parenterals. **(10)**

b) Define details about LAL test. **(5)**

Q4. **a)** What is primary packaging? Briefly explain the selection criteria for primary packaging. **(10)**

b) Name various quality control tests conducted for pharmaceutical primary packaging. **(5)**

Q5. **a)** Define microencapsulation. Discuss different types of coating materials used for microencapsulation. Mention different methods used for preparation of microencapsulation. **(10)**

b) Narrate briefly about the Coacervation-phase separation technology. **(5)**

Q6. **a)** What do you mean by aseptic process of parenteral dosage form? Write, in details, the design and facilities used in aseptic areas. **(10)**

b) Mention about different types of LVP. **(5)**

Q7. **a)** Discuss the manufacturing of Ophthalmic ointments. **(10)**

b) Describe about contact lenses. **(5)**

Q8. **a)** What are the roles of propellants used in an aerosol system? Describe, in details, about formulation of different types of aerosols. **(10)**

b) Describe the valves used in aerosol. **(5)**

Q9. **a)** Give a note on packaging components with reference to parenteral products. **(10)**

b) Describe the evaluation process of microcapsules. **(5)**

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PH.6.3

6th Semester Back Examination 2017-18
PHARMA CHEMISTRY - VI
(MED. CHEMISTRY - II)
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q.CODE : C407

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) Give the structure and uses of amantadine.
b) Differentiate between neuroleptics and analeptics with suitable examples.
c) Write the synthesis of a non steroidal synthetic estrogen.
d) Give one structure and nomenclature of hydantoin derivative drug.
e) Write any one structure and nomenclature of diuretics.
f) Outline the different stages of General Anesthesia with drug examples.
g) Explain androgens and anabolic agents with suitable examples.
h) Write the structure and uses of Alprazolam.
i) Differentiate between steroids and opioids with suitable examples.
j) What is hypertension? Give the structure and uses of nifedipine.

Q2 **a)** Define and classify hypnotics and sedatives with suitable examples. **(5)**
b) Outline the synthesis of phenobarbitone and diazepam. **(5)**

Q3 **a)** Discuss the nomenclature and stereochemistry of steroids with suitable examples. **(5)**
b) Outline the synthesis, mode of action and uses of progesterone. **(5)**

Q4 **a)** Define and classify antihypertensive agents with suitable examples. **(5)**
b) Write the synthesis, mode of action and uses of clonidine. **(5)**

Q5 **a)** Define and classify diuretics giving structure and nomenclature of each class. **(4)**
b) Write the synthesis, mode of action and uses of acetazolamide. **(6)**

Q6 **Write the synthesis and therapeutic uses of the following drugs :** **(2.5 x 4)**

a) LIgnocaine
b) Thiopental sodium
c) Pethidine
d) Amphetamine

Q7 **a)** Classify various psychopharmacological agents with suitable examples. **(4)**
b) Outline the synthesis and uses of chlorpromazine and imipramine. **(6)**

Q8 **Write Short Notes on :**

a) General anaesthetics **(5)**
b) CNS stimulants **(5)**

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PH.6.7

6th Semester Back Examination 2017-18
PHARMACOGNOSY - IV
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q.CODE : C472

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.

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

a) Write the biological source of Lobelia.
b) Give an account on Asava.
c) Mention the biological source of Satavari.
d) Name two marketed products of Bhasma.
e) What are the Chemical constituents and uses of Neem
f) Mention the biological source of Rauwolfia.
g) Which important chemicals are present in Tulsi.
h) What is the biological source of Spirulina?
i) Highlight the source and utilization of Quinine.
j) Specify the important chemical constituents of Gokhru.

Q2. Explain the detail Pharmacognosy of Belladona. **(10)**

Q3. Write the general methods of Extraction and Isolation of Alkaloids. **(5+5)**

Q4. Describe in details about the production and utilization of Podophylotoxin and Diosgenin. **(5+5)**

Q5. Write down the method of preparation of Ayurvedic dosage forms:

a) Arista **(5)**
b) Taila **(5)**

Q6. Give the details of Botanical source, Chemical constituents, Uses and marketed formulations of:

a) Punarnava **(5)**
b) Gymnema **(5)**

Q7. What are the Biological source, Chemical constituents, Chemical test and Uses of following drugs:

a) Colchicum **(5)**
b) Ipecac **(5)**

Q8. Explain the detail Pharmacognosy of following drugs:

a) Ergot **(5)**
b) Brahmi **(5)**

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PH.6.9

6th Semester Back Examination 2017-18
PHARMACOLOGY - II
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q.CODE : C320

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) Define coagulants. Write any two coagulants.
b) Write the difference between Quantal and Graded Bioassay.
c) Write one example of heparin antagonist and its use.
d) What are fibrinolytics, write one example.
e) Name any four Class III anti-arrhythmic drugs.
f) What is PSVT? Name any two drugs used for the treatment of PSVT.
g) What are antitussive drugs? Metion any two antitussive agents.
h) Write two examples of AT1 blockers and their uses.
i) Name any two anti-platelet drugs and their uses.
j) Write any two respiratory stimulants and their uses.

Q2. **a)** Classify antiasthmatic drugs with suitable examples. Write down about the mechinism of theophylline for its anti-asthmatic activity. **(5)**
b) Write the mechanism, adverse effect and uses of mast cell stabilizer. **(5)**

Q3. **a)** Classify diuretics with examples. Write the mechanism of action of spironolactone. **(5)**
b) Write about the mechanism and adverse effects of thiazide diuretics. **(5)**

Q4. **a)** Briefly discuss about the pharmacology of ACE inhibitors. **(5)**
b) Describe about the mechanism of action and uses of calcium channel blockers. **(5)**

Q5. **a)** Write the mechanism, adverse effect & uses of digoxin. **(5)**
b) Briefly discuss about the pharmacology of quinidine. **(5)**

Q6. **a)** Define aticoagulants. Write the mechanism and adverse effect of warfarin. **(5)**
b) Give a brief account on haematinics. **(5)**

Q7. Classify antianginal drugs. Write the mechanism, adverse effects & uses of Glyceryl trinitrate. **(10)**

Q8. **Write note on any TWO :** **(5 x 2)**

a) Bioassay of Insulin.
b) 3 point bioassay method.
c) 5-HT Antagonist
d) Plasma volume expanders

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PH.6.5

6th Semester Back Examination 2017-18
PHYTOCHEMISTRY
BRANCH : B.Pharma
Time : 3 Hours
Max Marks : 70
Q.CODE : C272

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 :** **(2 x 10)**

a) Write the structure and numbering pattern of penicillin.
b) How do you know the presence of tertiary nitrogen in an alkaloid?
c) What is Shinoda test and Its' use?
d) How TLC helps in the separation of phyto constituents.
e) What is isoprene rule? Explain with examples.
f) Write the difference between cardinolide and bufadinolides.
g) Write the structure and numbering pattern of Scillaren A.
h) Write the stereochemistry of Menthol.
i) What is super critical fluid, and how it is helpful in the extraction.
j) What is Zesel's method? What purpose it is used?

Q2. **a)** Define and classify terpenoid. **(3)**
b) Elucidate the structure of Citral. **(7)**

Q3. Write the general methods used for isolation of phytoconstituents from the extracts. **(10)**

Q4. What are cardiac glycosides? Write the chemistry of Digitoxin and Oubain. **(2+8)**

Q5. What are vitamins? Classify them and elucidate the structure of vitamin C. **(1+1+8)**

Q6. Write down the chemistry and therapeutic uses of tetracycline. **(8+2)**

Q7. **a)** Define and classify flavonoids. **(4)**
b) Write the chemistry of Quercitrin. **(6)**

Q8. Classify alkaloid with examples. Elucidate the structure of Ephidrine by chemical method. Write the stereochemistry of Ephidrine. **(2+6+2)**