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Total Number of Pages : 02

**B.Pharm  
15PH601**

**6<sup>th</sup> 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 pharmaceuticals 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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Total Number of Pages : 02

B.Pharm  
15PH602

**6<sup>th</sup> 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 c) Adsorption inhibitor  
b) Reverse transcriptase inhibitor d) Protease inhibitor
- b) Anaesthesia of mucous membranes is called:  
a) Infiltration anaesthesia c) Field block anaesthesia  
b) Nerve block anaesthesia d) Topical anaesthesia
- c) Which one of the following belongs to long-acting barbiturate:  
a) Phenobarbital c) Thiopental  
b) Pentobarbital d) Hexabital
- d) Glibenclamide belongs to the class of:  
a) Sulphonyl uraes c) Thiazolidinediones  
b) Benzoic acid derivatives 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 c) Glycogen  
b) Phenformin d) Repaglinide
- g) The major route of elimination of the volatile general anaesthetics is via :  
a) Kidney c) Skin  
b) Lungs 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 c) Stage-II  
b) Stage-III 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 Cyclobarbitol 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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Total Number of Pages : 03

**B.Pharm.  
15PH603**

**6<sup>th</sup> Semester Regular Examination 2017-18**

**PHARMACOLOGY - II**

**BRANCH : B.Pharma**

**Time : 3 Hours**

**Max Marks : 100**

**Q.CODE : C319**

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

**Part-A**

**Q.1 Choose the correct answer :**

**(2 x 10)**

- a) Which of the following is an ACE inhibitor?
- Saralasin
  - Diltiazem
  - Captopril
  - Spirinolactone
- b) The mechanism of action of digitalis is-
- Increase in heart rate with increase in oxygen consumption
  - Increase in heart rate without increase in oxygen consumption
  - Decrease in heart rate with increase in oxygen consumption
  - Decrease in heart rate with decrease in oxygen consumption
- c) Phase 0 in action potential in cardiac muscle is due to-
- opening of Na<sup>+</sup> channels
  - closing of Na<sup>+</sup> channels
  - opening of Ca<sup>2+</sup> channels
  - closure of calcium channels
- d) Verapamil acts by-
- Blocking membrane depolarization
  - Calcium channel blockers
  - Membrane stabilizing
  - Blockers membrane repolarisation
- e) All drugs are used in Asthma except
- Salbutamol
  - Sodium cromoglycate
  - Corticosteroids
  - Organophosphates
- f) Loop diuretics act by-
- Inhibition of Na<sup>+</sup>-Cl<sup>-</sup> symport
  - Inhibition of Na<sup>+</sup>-K<sup>+</sup>-2Cl<sup>-</sup> cotransport
  - Inhibition of Na<sup>+</sup>-K<sup>+</sup> ATPase
  - Inhibition of Na<sup>+</sup> channel
- g) Nitroglycerine causes all except
- Hypotension and bradycardia
  - Methemoglobinemia
  - Hypotension and tachycardia
  - Vasodilatation

h) Which of the following action is not caused by H<sub>1</sub> receptor

- i. Vasoconstriction
- ii. Gastric acid secretion
- iii. Increase Permeability
- iv. Bronchoconstriction

i) Mechanism of action of theophylline

- i. Mast cell stabilization
- ii. Phosphodiesterase inhibition
- iii. Leukotriene antagonist
- iv.  $\beta_2$  sympathomimetic

j) Name the drug use for treatment of acute angina

- i. Nitroglycerine .
- ii. Ramipril
- iii. Verapamil
- iv. Propranolol

**Q.2 Write the mechanism of action of following drugs :**

**(2 x 10)**

- a) Quinidine
- b) Nifedipine
- c) Nitroglycerine
- d) Atorvastatin
- e) Hydrochlorothiazide
- f) Salbutamol
- g) Cetirizine
- h) Spironolactone
- i) Diclofenac
- j) Ramipril

### Part-B

**Q.3 a) What is Angina pectoris? Classify the antianginal drugs.**

**(5)**

**b) Write the pharmacological actions, mechanism of action and therapeutic uses of Digitalis.**

**(10)**

**Q.4 a) Define and classify Hypertension.**

**(5)**

**b) Classify antihypertensive. Write the pharmacology of ACE inhibitors.**

**(4+6)**

**Q.5 a) Define and classify diuretics with suitable examples. Write the Pharmacology of Loop diuretics.**

**(5+5)**

**b) Write briefly on Antidiuretics**

**(5)**

**Q.6 a) Classify the drugs used in bronchial asthma. Write short notes on Bronchodilator.**

**(5)**

**b) Write short notes on :**

**(5 x 2)**

- i. Respiratory stimulant
- ii. Expectorant

**Q.7 a) Discuss in details about the synthesis, storage and metabolism of histamine.**

**(5)**

**b) Write different types of histamine receptors and their functions. Write pharmacology of H<sub>1</sub> antagonists.**

**(10)**

- Q.8

a)

Define and classify anticoagulants. Discuss the mechanism and side effects of warfarin.

(5+5)

b)

Write brief notes on fibrinolytics and haematinics.

(5)

- Q.9

Write notes on Any THREE :

(5 x 3)

a)

Prostaglandin

b)

Angiotensin

c)

5-HT antagonist

d)

NSAIDs

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Total Number of Pages : 02

**B.Pharm.  
15PH604**

**6<sup>th</sup> Semester Regular Examination 2017-18**

**PHARMACOGNOSY-IV**

**BRANCH : B.Pharma**

**Time : 3 Hours**

**Max Marks : 100**

**Q.CODE : C471**

**Answer Section 'A' which is compulsory and any Four from Section 'B'.**

**The figures in the right hand margin indicate marks.**

**Answer all parts of a question at a place.**

**Section 'A'**

**Q1. Answer the correct option of the followings :**

**(2 x 10)**

- a) Family of Tea is -----.
- |                  |                    |
|------------------|--------------------|
| i) Theaceae      | ii) Apocynaceae    |
| iii) Leguminosae | iv) Zygophyllaceae |
- b) ----- gives stimulant & diuretic properties of Coca.
- |                |              |
|----------------|--------------|
| i) Theobromine | ii) Caffeine |
| iii) Coumarin  | iv) Xanthene |
- c) Shankhapushpi is used as -----.
- |                |              |
|----------------|--------------|
| i) Sedative    | ii) Narcotic |
| iii) Purgative | iv) Diuretic |
- d) Family of Gymnema is -----.
- |                 |                    |
|-----------------|--------------------|
| i) Acanthaceae  | ii) Asclepiadaceae |
| iii) Asteraceae | iv) Araliaceae     |
- e) Guggul is an -----resin.
- |             |             |
|-------------|-------------|
| i) Oleo-gum | ii) Acid    |
| iii) Oleo   | iv) Alcohol |
- f) Ipecac is ----- alkaloid.
- |              |                  |
|--------------|------------------|
| i) Indole    | ii) Isoquinoline |
| iii) Tropane | iv) Quinoline    |
- g) ----- is the Family of Bael.
- |                |                |
|----------------|----------------|
| i) Rutaceae    | ii) Rubiaceae  |
| iii) Liliaceae | iv) Solanaceae |
- h) Amla is the rich source of -----.
- |                |               |
|----------------|---------------|
| i) Vitamin A   | ii) Vitamin C |
| iii) Vitamin D | iv) Vitamin K |
- i) Synonyms of Catharanthus is -----.
- |                |                |
|----------------|----------------|
| i) Sarpagandha | ii) Periwinkle |
| iii) Henbane   | iv) Monkshood  |
- j) Ma-Huang is the common name of -----.
- |             |               |
|-------------|---------------|
| i) Veratrum | ii) Ephedra   |
| iii) Kurchi | iv) Colchicum |

**Q2. Answer the following questions :**

**(2 x 10)**

- a) Enumerate the Biological source of Rauwolfia?
- b) Specify the important Chemical constituents present in Spirulina.
- c) Mention the name of two marketed formulations of Neem.



- d) Write the therapeutic uses of Satavari.
- e) What are the Chemical constituents of Lobelia?
- f) Mention the pharmaceutical utilization of Quinine.
- g) Write the Biological source of Kurchi.
- h) What are the Chemical constituents of Gokhru?
- i) Name two marketed products of Taila.
- j) Describe the applications of TLC.

### Section 'B'

- Q3. a)** Describe the detail Pharmacognosy of Belladonna. **(10)**  
**b)** Give the details of biological source, Chemical constituents and uses of Colchicum. **(5)**
- Q4. a)** Explain the general methods of extraction and isolation of Alkaloids. **(10)**  
**b)** Write in details about the Biological source, Chemical constituents and Uses of Nux-vomica. **(5)**
- Q5. a)** Write a note on the Production and Utilization of Podophylotoxin and Diosgenin. **(10)**  
**b)** Explain the source and utilization of Tropane alkaloid. **(5)**
- Q6. a)** Describe the detail and systematic Pharmacognostic study of Cinchona. **(10)**  
**b)** Mention the Biological source, Chemical constituents and Uses of Arjuna. **(5)**
- Q7. a)** Discuss in details on Alkaloids with its classification and suitable examples. **(10)**  
**b)** Describe the method of preparation of Bhasma. **(5)**
- Q8. a)** Give an account of Biological source, Chemical constituents and Uses of Tulsi and Punarnava. **(10)**  
**b)** Emphasize the applications of HPLC in evaluation of herbal drugs. **(5)**
- Q9. a)** Write down the Biological Source, Life cycle and Chemical constituents of Ergot. **(10)**  
**b)** Illustrate the method of preparation of Asava and Arista. **(5)**

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Total Number of Pages : 02

**B.Pharm.  
15PH605**

**6<sup>th</sup> Semester Regular Examination 2017-18**

**PHARM. BIOTECH**

**BRANCH : B.Pharma**

**Time : 3 Hours**

**Max Marks : 100**

**Q.CODE : C271**

**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. Define the followings : (2 x 10)**

- a) Write the definition of Gene expression.
- b) Define Microbial biotransformation.
- c) What is Immunological tolerance?
- d) Define Southern blotting.
- e) Define Clonal expansion.
- f) Write the definition of Immobilization.
- g) Define the term "Genetic Code".
- h) What do you mean by Genetic Recombination?
- i) Define Antigen?
- j) Write the definition of Immunity.

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

- a) Explain "*Natural acquired passive immunity*".
- b) What is Antibody?
- c) Write the applications of Gene cloning.
- d) Write the name of first Immobilized enzyme.
- e) Write the principle of Immunology.
- f) What is Transcription in protein synthesis?
- g) Write the uses of streptokinase.
- h) Write about "*Artificially acquired active immunity*".
- i) What are the applications of Hybridoma Technology?
- j) Write the uses of Penicillinase enzyme.

**Part – B (Answer any four questions)**

**Q3. a) How Genetic code helps for Protein synthesis? (10)**  
**b) Write about PCR. (5)**

**Q4. a) Describe in details about the classification and applications of Biosensor. (10)**  
**b) Write the Properties and application of Amylases. (5)**

- Q5.** a) Explain the different types of hypersensitivity reactions in details. (10)  
b) Write the advantages of Microbial transformation. (5)
- Q6.** a) Describe the design and control of different parameters of a Fermenter. (10)  
b) Write the difference between Humoral immunity and Cellular immunity. (5)
- Q7.** a) What are the different types of Immuno blotting techniques? Describe ELISA. (10)  
b) Write short notes on Mutation with it's classification. (5)
- Q8.** a) Explain any two methods of Enzyme immobilization. (10)  
b) Write the different applications of Enzyme immobilization. (5)
- Q9.** a) Explain the process involved in isolation of Penicillin. (10)  
b) Write Preparation, standardization and storage of Vaccines. (5)

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Total Number of Pages : 02

B.Pharm.  
15PH606

6<sup>th</sup> Semester Regular Examination 2017-18

PHARMACEUTICAL JURISPRUDENCE

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 100

Q.CODE : C406

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: Choose the correct answer : (2 x 10)**

- a) The state Government may appoint desired number of \_\_\_\_\_ officers which is necessary to carry out the provisions of the \_\_\_\_\_ and Toilet Preparation Act and Rules.
- i) Police, Spirit ii) Excise, Medicinal  
iii) Income tax, Alcohol iv) Custom, Medicinal
- b) The Pharmacy Council of India is reconstituted in every \_\_\_\_\_ years.
- i) Seven ii) Six  
iii) Five iv) Four
- c) \_\_\_\_\_ and \_\_\_\_\_ licenses are issued for retail sale of drugs.
- i) Restricted, Non-restricted ii) Non-general, Restricted  
iii) General, Non-general iv) General, Restricted
- d) GMP for Ayurvedic, Siddha and Unani Medicines are included in which of the following schedule of Drug and Cosmetic Act.
- i) Schedule Y ii) Schedule W  
iii) Schedule S iv) Schedule T
- e) In the opinion of \_\_\_\_\_ RMP; the pregnancy can be terminated in a period of pregnancy that exceeds \_\_\_\_\_ weeks but does not exceeds \_\_\_\_\_ weeks.
- i) Two, 12, 22 ii) Two, 10, 20  
iii) Two, 12, 20 iv) Two, 10, 24
- f) When did the prevention of cruelty to Animals Act was passed.
- i) 1970 ii) 1959  
iii) 1960 iv) 1980
- g) Governments of India introduced Pharmacy Act in \_\_\_\_\_ and regulate the \_\_\_\_\_ and \_\_\_\_\_ of Pharmacy.
- i) 1945, profession, practice  
ii) 1940, non-professional, practice  
iii) 1947, profession, non-practice  
iv) 1945, profession, non-professional
- h) IAEC Under Act denote to \_\_\_\_\_.
- i) Indian Atomic Energy Commission  
ii) Institutional Animals Ethics Committee  
iii) Inter-American Economic Council  
iv) International Association of Elevator Consultants
- i) Requirement of factory premises for manufacture of medical device in Schedule \_\_\_\_\_ and under Rule \_\_\_\_\_.
- i) Schedule M I, 139 ii) Schedule M III, 76  
iii) Schedule M II, 86 iv) Schedule M IV, 76

j) Pharmaceutical Enquiry Committee was constituted under chairmanship of

i) Col. R. N. Chopra

ii) Sir Joseph Bhore

iii) Lt. Col. H. A. J. Gidney

iv) Major General S. S. Bhatia

**Q2 Answer the following questions :**

**(2 x 10)**

- a) Name the year of important legislation passed by Indian Parliament on pharmacy.
- b) Define first and subsequent Registrar of Pharmacy act.
- c) Write constitution and function of the Narcotic and Psychotropic Substance Consultative Committee.
- d) Define 'Advertisement' and 'Magic remedy'.
- e) Give important features of Bonded Laboratory.
- f) What criteria shall have needed for performing experiment on animals?
- g) Define 'Proprietary medicine' and 'Misbranded drug'.
- h) Highlight on prohibited advertisement under Drugs and Magic remedies Act, 1954.
- i) What is Schedule C & C<sub>1</sub>?
- j) Give a formula for calculating retail price of drug.

**Part – B (Answer any four questions)**

- Q3** a) Describe the constitution and important functions of Pharmacy Council of India. **(10)**  
b) What are the educational regulation of pharmacy council of india? **(5)**
- Q4** a) Give an overview on Code of Pharmaceutical Ethics. **(10)**  
b) Explain constitution and function of Drugs Technical Advisory Board. **(5)**
- Q5** a) How the Medical Termination of Pregnancy Act and Rules are regulating unwanted or medical undesirable pregnancy in India. **(10)**  
b) How prices of bulk drugs are determined under Drug Price Control order, 1995. **(5)**
- Q6** a) Discuss on prohibition, control and regulation of Narcotic and Psychotropic substances under the Act. **(10)**  
b) Write duties of Drug Inspector. **(5)**
- Q7** a) What are the important features of the Medicinal and Toilet Preparation Act and Rules? **(10)**  
b) Write short note on 'The Drugs Price Control Order'. **(5)**
- Q8** a) How unethical practice on animals can be controlled under the Prevention of Cruelty of animal act? **(10)**  
b) Explain different substances regulated under Narcotic Drugs and Psychotropic Substances Act, 1985 and rules framed there under from time to time. **(5)**
- Q9** a) Write on Prohibition, Exemptions of advertisement and penalties under the Drugs and Magic Remedies Act. **(10)**  
b) Give a detail study on The Drugs Consultative Committee. **(5)**

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Total Number of Pages : 01

B.Pharm  
PH.6.1

**6<sup>th</sup> Semester Back Examination 2017-18**  
**PHARMACEUTICS – V (PHARM. TECH. - II)**

**BRANCH : B.Pharma**

**Time : 3 Hours**

**Max Marks : 70**

**Q.CODE : C133**

**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) Differentiate between Microcapsule and microsphere.
- b) What is HEPA filter, mention it's function.
- c) Define Disinfectant with two examples.
- d) Discuss various factors influencing choice of Container.
- e) Write the difference between Pull sealing and Tip sealing
- f) Mention the core materials used for microencapsulation and write the application of microencapsulation
- g) Write the importance of Ophthalmic preparation
- h) Water attack test is only used in type I glass. True or false, justify?
- i) Mention different types of Propellants.
- j) What are different parts of aerosol package?

**Q2. a) Discuss different method used for preparation of microencapsulation. (5)**  
**b) Mention briefly about the Coacervation-phase separation technology. (5)**

**Q3. a) Write notes on evaluation of aerosols. (5)**  
**b) Write in details about the evaluation process of Parenterals. (5)**

**Q4. a) What is packaging, define it's components? (5)**  
**b) Mention the types of glass used in pharmaceutical packaging. (5)**

**Q5. a) Describe the sterility test of parenterals. (5)**  
**b) Methods are used to manufacture aerosol. (5)**

**Q6. a) What is ophthalmic preparation? (5)**  
**b) Discuss various ingredients required for it's preparations with example. (5)**

**Q7. What is aseptic area? Discuss the layout and design of aseptic area for parenteral products. (10)**

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

- a) Additives used in parenterals.
- b) Pharmaceutical aerosol solution system.
- c) Evaluation of microcapsules.
- d) Contact lenses.

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B.Pharm  
PH.6.11

**6<sup>th</sup> 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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**B.Pharm.  
PH.6.3**

**6<sup>th</sup> 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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**B.Pharm.  
PH.6.5**

**6<sup>th</sup> 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 cardenolide and bufadienolides.
- 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 Ziesel'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 Ephedrine by chemical method. Write the stereochemistry of Ephedrine. (2+6+2)**

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**B.Pharm.  
PH.6.7**

**6<sup>th</sup> 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 Belladonna. (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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B.Pharm.  
PH.6.9

6<sup>th</sup> 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)**

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

**Q2. a) Classify antiasthmatic drugs with suitable examples. Write down about the mechanism 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 anticoagulants. 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)**

- Bioassay of Insulin.
- 3 point bioassay method.
- 5-HT Antagonist
- Plasma volume expanders