

Registration No :

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Total Number of Pages : 02

B.Pharm
BP501T

5th Semester Regular Examination 2019-20

MEDICINAL CHEMISTRY II – THEORY

BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : HR061

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part- A

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- a) Write down the structure, mechanism of action and uses of Nifedipine.
- b) Write down the structure and uses of Betamethasone.
- c) Name two plant products used in the treatment of cancer.
- d) Write down two thiazolidinedione derivative used in hyperglycemia.
- e) Write down the structure, mechanism action and uses of Lovastatin.
- f) What is loop diuretic? Mention its chemical name with structure.
- g) Name two drugs used in erectile dysfunction.
- h) What do you mean by PPI? Write down the structure, mechanism of action and uses of Pantoprazole.
- i) Write down the structure uses and nomenclature of Methimazole.
- j) Give the structure nomenclature and uses of 5-Fluorouracil.

Part- B

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (5 x 7)

- a) Write a note on Insulin and its preparation.
- b) Define and classify antihypertensive agents. Outline the synthesis, mechanism of action and uses of Methyldopa.
- c) Define Antihistamine. Write down the synthesis and uses of Cimetidine.
- d) What do you mean by congestive heart failure? Mention its treatment.
- e) Define antiarrhythmic agents. Write down the synthesis, mechanism of action and uses of Disopyramide phosphate.
- f) Write notes on oral contraceptives.
- g) Classify the alkylating agents with suitable examples. Write down the mechanism of action of it.
- h) Classify oral hypoglycemic agent with suitable examples. Outline the synthesis and mechanism of action of Tolbutamide.
- i) Define anticoagulants. Write down the synthesis, mechanism of action and uses of Warfarin.

Part-C

Only Long Answer Type Questions (Answer Any Two out of Four)

- 257 Q3 257 Define Diuretics. Classify it with suitable examples. Write down the SAR of thiazide groups and outline the synthesis of Chlorothiazide and Acetazolamide. (10) 257
- Q4 Discuss the nomenclature and stereochemistry of steroids with suitable examples. (10)
- Q5 Classify antihistamine with suitable examples. Write down the SAR of H1-receptor blockers. Write down the synthesis and uses of Diphenhydramine and Promethazine. (10)
- 257 257 257 257 257 257 257 257
- Q6 Define and classify local anaesthetics. Discuss the SAR of local anaesthetics. Outline the synthesis and uses Procaine and Dibucaine. (10)

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Total Number of Pages : 01

B.Pharm
BP502T

5th Semester Regular Examination 2019-20

INDUSTRIAL PHARMACY-I THEORY

BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : HR152

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part- A

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- State polymorphism and its significance.
- How flow properties affect design of solid dosages form?
- Write any two identification tests of emulsion.
- Define tablet and give some examples of granulating agent.
- Mention any two manufacturing defects of tablet.
- In syrup preparation needs of preservative is essential or not. Justify.
- Write any two evaluation parameters of suspension.
- Give some examples of non-aqueous solvent used in parenteral formulations.
- Define propellant. Give some examples of it.
- Write any two differences between cold cream and vanishing cream.

Part- B

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (5 x 7)

- Write BCS classification of drugs and its significance?
- State and explain solubility profile related to PH & PKa value.
- Write about in general requirements of tablet formulation.
- Differentiate between hard gelatin & soft gelatin capsule. Which capsule number is largest capacity for powder filling?
- Write details about pyrogen and sterility test of parenteral formulation.
- Define Lipsticks. Write about formulation of it.
- State and write briefly different steps of ophthalmic preparation.
- Differentiate between flocculated and de-flocculated suspension
- Why tablet requires coating? Explain details about sugar coating.

Part-C

Q3 Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3** What is a pre-formulation study? Discuss in details about pre-formulation goal, objectives and physico-chemical properties of drug substance. **(10)**
- Q4** Define compression of powders. Write different methods of preparation of tablets **(10)**
- Q5** Explain details about formulation of parenteral preparation. **(10)**
- Q6** What is Aerosol? Discuss details about formulation, manufacture and any two evaluations **(10)**

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B.Pharm
BP503T

5th Semester Regular Examination 2019-20

PHARMACOLOGY II – THEORY

BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : HR214

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part- A

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Write any two 5HT receptor antagonist with their uses.
- Name any two anti-platelet drugs and their uses.
- Define haematinics. Write any two oral iron preparations with their uses.
- Name any two antidiuretics. Mention their uses.
- What are fibrinolytics? Write two examples.
- Differentiate between the Quantal and Graded Bioassay methods with examples.
- Quinidine should not be administered along with the digoxin- Justify.
- State the mechanism and uses of nicorandil.
- Name any four prominent adverse effects of thiazide diuretics.
- Write any two plasma volume expanders and their uses.

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any FIVE out of EIGHT) (5 x 7)

- Write the mechanism, adverse effects & uses of Glyceryl trinitrate.
- Explain about any one official method of bioassay of Insulin.
- Write about the pharmacology of ACE inhibitors.
- Describe about the mechanism of action and uses of calcium channel blockers.
- Give brief account on coagulants with their uses.
- Write the mechanism, adverse effects and uses of spironolactone.
- Write brief note about oral anticoagulants with special reference to mechanism of warfarin.
- Write the mechanism, adverse effects & uses of quinidine.
- Explain about the pharmacology of sulfonyl ureas used as oral hypoglycaemic drugs.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3** What are cardiac glycosides? Describe the M.O.A., adverse effects and uses of digoxin. (10)
- Q4** Classify NSAIDS. Explain about the various pharmacological actions of Aspirin. (10)
- Q5** Classify H₁ antihistaminic drugs. Briefly explain about the pharmacology of H₁ antihistaminic drugs. (10)
- Q6** Define Bioassay. Describe briefly about the various methods of bioassay. (10)

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B.Pharm
BP504T

5th Semester Regular Examination 2019-20
PHARMACOGNOSY AND PHYTOCHEMISTRY II- THEORY
BRANCH : B.Pharma
Max Marks: 75
Time : 3 Hours
Q.CODE : HR273

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part-A

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- a) Write the biological source and uses of Liquorice.
- b) Define Glycoside.
- c) Write the therapeutic uses of Aloes.
- d) State about basic metabolic pathway?
- e) What are the biosources and chemical constituents of Ginger?
- f) Write the general properties of resins.
- g) Write the biological source and therapeutic uses of Mentha.
- h) Define isolation.
- i) What are the biological source and uses of Rauwolfia?
- j) State about secondary metabolites.

Part-B

Q2 Only Focused-Short Answer Type Questions- (Answer Any FIVE out of SEVEN) (5 x 7)

- a) Write the biosynthetic study of amino acid pathway.
- b) Explain the isolation and identification of Rutin.
- c) Write the chemical classification of tannin with examples.
- d) Write the therapeutic applications of Fennel and Gentian.
- e) Illustrate the identification and analysis of Podophyllotoxin.
- f) Explain the biosources, chemistry and commercial applications of Tea.
- g) Illustrate the principle of electrophoresis in the isolation of crude drugs.
- h) What are the applications of Spectroscopy?
- i) Explain the utilization of radioactive isotopes in the investigation of biogenesis.

Part-C

Q3 Only Long Answer Type Questions (Answer Any TWO out of FOUR)

Describe industrial production, estimation and utilization of Caffeine. **(10)**

Q4 Discuss in detail about the isolation, identification and utilization of Atropine. **(10)**

Q5 Write the general introduction of alkaloids. Discuss the biological sources, Chemical composition, therapeutic uses and commercial applications of Belladonna. **(10)**

Q6 Describe the general properties of volatile oil. Write the detailed Pharmacognostic study of Clove. **(10)**

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B.Pharm
BP505T

5th Semester Regular Examination 2019-20
PHARMACEUTICAL JURISPRUDENCE – THEORY
BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : HR378

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.

The figures in the right hand margin indicate marks.

Part- A

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Write the function of Drug Consultative Committee?
- What do you mean by MAPE?
- Define Bonded and Non-bonded laboratory?
- Differentiate drug store and Pharmacy?
- Name the two government opium factory in India?
- Write the objectives of DPCO?
- Name four types of Psychotropic substances?
- Write the warning statement written on the labeling of Ophthalmic product?
- Give the legal definition of Spurious and Misbranded drugs?
- Define schedule "P" and schedule "J" drugs?

Part- B

Q2 Only Focused-Short Answer Type Questions- (Answer Any FIVE out of SEVEN) (5 x 7)

- Calculation of retail price as per DPCO?
- Write short note on DTAB?
- Write the qualification and duties of Government analyst?
- Write a short note on loan license?
- Write short notes on experimentation on animal (as per prevention of Cruelty to animal act)?
- Write in details about Licensing authority?
- Write the qualification and duties of Drug inspector?
- Define advertisement? List out the different types of prohibited type according to Drug and Magic remedies (Objectionable advertisement) Act and Rule?
- What is Drug Inquiry Committee? What are the recommendation were given in that committee?

Part-C

Q3 Only Long Answer Type Questions (Answer Any TWO out of FOUR) (10)
What is code of Pharmaceutical ethics? Discuss the detail about code of Pharmaceutical ethics of a Pharmacist in relation to his Job and Trade?

Q4 Discuss the different features of Medical Termination of Pregnancy Act and the rules under the act? **(10)**

Q5 What are narcotic drugs? Discuss the NDPS act in brief. What are the penalties for committing an offence under the act? **(10)**

Q6 What are the significant features of Pharmacy act? Write the constitution and function of PCI? Give a short note about State Pharmacy Council? **(10)**

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B.Pharm
15PH501

5th Semester Back Examination 2019-20
PHARMACEUTICS-II(PHARMACEUTICAL TECHNOLOGY - I)
BRANCH : B.Pharma
Max Marks : 100
Time : 3 Hours
Q.CODE : HB060

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Define preformulation. Write its objectives?
- What is intrinsic solubility? Write its importance in preformulation study.
- Define common ion effect. Write its significance
- What is creaming and cracking of emulsion?
- Write down about displacement value.
- Differentiate between paste and creams.
- Differentiate between hard gelatin and soft gelatin capsules.
- What is suspending agent? Write two examples of suspending agent.
- Define superdisintegrants. Give two examples.
- Differentiate between glidant and lubricant with suitable examples.

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Write briefly about coating defects of tablet.
- Discuss sugar coating process.
- Write the mechanism of drug permeation through skin.
- Write down the formulation of suspension.
- Explain briefly about different additives used in tablet formulation.
- Explain pH solubility profile.
- Describe stability tests of emulsion.
- Discuss the manufacturing processes of soft gelatin capsules.
- Enlist the preformulation study protocol.
- Give a short note on evaluation tests of suppository.
- Write notes on partition coefficient.
- Discuss the process variables in film coating of tablet.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

Discuss the role of various additives in the formulation of monophasic liquid dosage forms.

Q4 Describe various methods of preparation and evaluation of tablet. (16)

Q5 Discuss ointment bases. Describe the method of preparation and evaluation of ointment. (16)

Q6 Define capsule? Describe the production and quality control of hard gelatin capsule. (16)

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**B.Pharm
15PH502**

5th Semester Back Examination 2019-20

MEDICINAL CHEMISTRY-I

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB151

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) : (2 x 10)

- Write down the synthesis of Paracetamol.
- What do you mean by partition coefficient?
- Write down any two anticholinesterase drugs and mention their uses.
- Write down the structure and uses of Clonidine.
- Write down the structure and uses of Salbutamol and Propranolol.
- Mention the uses and structure of Chlorocyclizine and Ranitidine.
- Write down the structure and uses of Dicyclomine.
- What is Free Wilson model?
- Give one example of H₂-receptor antihistamine. Write its structure and uses.
- What is loop diuretic? Mention its chemical name with structure.

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- What is the causative agent for amoebic dysentery? Outline the synthesis of Metronidazole and Diloxanide furoate.
- Discuss the effects of optical isomerism on biological activity. Justify with suitable examples.
- Write a note on anthelmintic.
- Define adrenergic drugs, classify it. Write down the synthesis and uses of Adrenaline.
- Outline the synthesis of Carbachol and Neostigmine.
- Discuss briefly on Hansch analysis and the different parameters involved in quantitative description of drug action.
- What are eicosanoids? Write down their occurrences and medicinal application.
- Write down a note on diagnostic agents.
- Classify the cardio vascular drugs with examples and outline the synthesis of Methyldopa.
- Define cholinergic drugs. Classify it with suitable examples. Write down the SAR of Acetylcholine.
- Mention the causative agents of TB and Leprosy. Outline the synthesis of INH and Ethambutol.
- Write down a note on neuromuscular blocking agents.

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B.Pharm
15PH504

5th Semester Back Examination: 2019

PHARMACOLOGY-I

BRANCH: B.PHARMA

Max Marks: 100

Time: 3 Hours

Q.Code: HB377

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Only Short Answer Type Questions (Answer All-10) (02x10)

- Define dependence. Name two examples of drugs causing dependence.
- Write the disadvantages of oral route of administration.
- Aspirin is a prodrug. Justify it.
- Define CNS stimulant with two examples.
- Give any two examples of nasal decongestants.
- Write various types of adrenergic receptors with their location.
- What is general anesthesia? Give any two examples of the drugs.
- Give examples of two irreversible cholinesterase inhibitors.
- Define bioavailability and mention its significance.
- Why Levodopa used in combination with Carbidopa in Parkinsonism?

Part- II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (06x08)

- Give a short note on different parenteral routes of administration.
- Describe the process of neurohumoral transmission.
- Explain about various route of excretion of drugs.
- Write the classification of Anticholinergic drugs with examples.
- What is hypnotic and sedatives? Classify the drugs with two examples.
- Define Local anesthesia. Write their mechanism of action.
- Write the classification of antidepressants with examples. Explain the mechanism of action of Tricyclic Antidepressants.
- Give a short note on skeletal muscle relaxants.
- Define and classify receptors. Explain about Ion channel receptors with examples.
- Define and classify NSAIDs. Write the pharmacological action and uses of aspirin.
- Write the classification of drugs used in Parkinsonism with examples.
- Give a note on various factors affecting absorption of drugs.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

(02X16)

Q3 Define Biotransformation. Describe various types of biotransformation with examples.

Q4 Classify cholinergic drugs. Write the Pharmacological actions of acetylcholine.

Q5 Classify antiepileptic drugs. Write the mechanism of action, adverse effect of Phenytoin

Q6 Define Opioid analgesics. Write the mechanism of action, adverse effect of morphin.

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**B.Pharm
15PH505**

5th Semester Back Examination 2019-20

PHARMACOGNOSY-III

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB272

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Write the biological source of Papain.
- Define Tissue culture.
- State some examples of Proteolytic enzyme.
- What is the biological source of Ginseng?
- What are the vitamins used in the preparation of nutrient media?
- What are the chemical constituents of Dioscorea?
- Define Marine Pharmacognosy.
- Write the Chemical constituents and uses of Chirata.
- State the chemical constituents and uses of Rhubarb.
- What is the biological source and uses of Squill?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Write the Biological source, Chemical constituents and Uses of Psoralea.
- Explain the biogenesis of Steroidal glycoside.
- Write about Basic metabolic pathway.
- Describe details about Nutraceuticals with examples.
- Illustrate the applications of Plant tissue culture.
- Write the Biological source, Chemical constituents and Uses of Senna.
- Describe the Biological source, Chemical constituents and Uses of Aloes.
- Write notes on Poisonous plants of India.
- Mention the Biological source, Chemical constituents and Uses of Liquorice.
- Write Biological source, Preparation, Identification test and Uses of Pepsin.
- Explain about the Biological source, Chemical constituents and Uses of Gentian.
- Illustrate the biosynthetic study of Aromatic amino acid.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 Describe the detail Pharmacognosy of Digitalis. Write about the general methods of isolation of Glycosides. (8+8)

Q4 Explain in details about historical development and different types of Plant tissue culture. (16)

Q5 Write the biosynthetic study of Tropane alkaloid and Indole alkaloid. (16)

Q6 Enumerate Biological source, Preparation, Identification test and Uses of Diastase and Trypsine. (16)

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**B.Pharm
15PH506**

**5th Semester Back Examination 2019-20
PHARMACEUTICAL MICROBIOLOGY**

BRANCH : B.Pharma

Max Marks : 100

Time : 3 Hours

Q.CODE : HB447

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Bacteria belong to which class produces antibiotics.
- Write the composition of Agar media.
- Bacteria involve in evaluation of disinfectant by phenol-coefficient test.
- Give one example of moist heat sterilisation.
- type of ribosome present in bacterial cell.
- What do you mean by differential staining?
- Define antiseptic.
- Write the expanded form of HEPA.
- Give one example of fungi which produce conidiospore.
- Capsid is the outer protein coat of -----.

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Write the difference between Gram +ve and Gram -ve bacteria.
- Write short notes on pasteurisation.
- Classify bacteria according to the position of flagella.
- Write the role of bacteria in human welfare.
- Write the important characters of an Ideal disinfectant.
- Write short notes on serial dilution methods for assay of antibiotic.
- Write short notes on culture of viruses.
- Write the important factors influencing mutation.
- Write short notes on Bacterial growth curve.
- Write short notes on Gram's staining.
- Write short notes on industrial production of lactic acid.
- Write about the nutritional media used in cultivation of anaerobic organisms.

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

Q4 Write in detail the various methods of Isolation of Pure culture of micro-organisms. (16)

Q5 What is Sterilisation? Explain in detail the various methods of sterilisation. (16)

Q6 Describe various methods used for evaluation of disinfectants. Discuss the Phenol-coefficient test. (16)

Q6 Write a detailed note on Microbiological assay of Vitamin B₁₂. (16)

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**B.Pharm
PH.5.3**

5th Semester Back Examination 2019-20

APPLIED MICROBIOLOGY

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 70

Q.CODE : HB215

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 are plasmids?
- b) Classify bacteria according to their morphological shapes with examples.
- c) Write the functions of Mesosomes in Gram positive bacteria.
- d) Write briefly about protoplast fusion.
- e) What is the difference between TDT and TDP?
- f) What is cold sterilization? Write few applications of cold sterilization.
- g) Moist heat is more effective than dry heat for sterilization- comment
- h) Differentiate Gram positive and Gram negative cell wall.
- i) What do you mean by decimal reduction time (D_{121})?
- j) What are the control tests employed in test for sterility? Give their importance.

Q2 a) Write about structure & morphological features of a bacterial cell with a neat labeled diagram. (5)

b) Describe the normal growth curve of bacteria by depicting a typical growth curve. (5)

Q3 a) What the different methods used for isolation of pure cultures? Describe in detail the "Pour plate" technique with its merits & demerits. (5)

b) Give a brief note on methods used for preservation of pure cultures (5)

Q4 a) Write a brief note on structure and Morphology of virus. Describe with diagram lytic and lysogenic cycle in virus. (5)

b) What is mutation? Write about Mutagens and give a brief note on induced mutation. (5)

Q5 a) What is sterilization? Classify different methods of sterilization. Give a brief note on working principle and construction of autoclave. (5)

b) What are the different methods used for evaluation of disinfectants? Explain phenol-coefficient method. (5)

Q6 What is the principle of sterility testing? Describe about the general methods used for sterility testing of pharmaceuticals. Give a note on how Inactivation of inhibitory substances carried out during sterility testing (10)

Q7 Write the principle involved in the microbiological assay of antibiotics and vitamins. Describe the method used for microbial assay of tetracycline as per I.P. (10)

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

- a) Transduction
- b) Isolation of pure cultures
- c) Gram's staining techniques.