



**Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2019-2020

Subject: Industrial Pharmacy-I (BP502T) **Day & Date:** Friday & 27/09/2019

Class: Third Year B. Pharm

Semester: V

Time: 10.30 – 12.00 pm

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Preformulation study of drug describe which properties –
a. Physical b. Chemical c. Physicochemical d. Physiological
2. Very weak base drug with $pK_a \leq 5$ will absorb from
a. Stomach b. Intestine c. Colon d. Entire length of GIT
3. The optical activity of compound due to Racemization is
a. Zero b. Dextro (+) c. Leavo (-) d. *trans* rotatory
4. Disintegration time of film coated tablet is
a. 15 min b. 30 min c. 60 min d. 120 min
5. The formation of compact mass in dry granulation is known as
a. Slug b. Granules c. Pellets d. Beads
6. The brand name of freely flowable directly compressible diluent
a. Lactose b. Avicel c. Primogel d. Mannitol
7. The size of nozzle in inch for High pressure airless system is
a. 0.9-0.20 b. 20-60 c. 0.020-0.060 d. 0.009-0.020
8. The effect high temperature on tablet coating leads to film defect known as
a. Blistering b. Picking c. Roughness d. Orange Peel effect
9. Bloom Strength of Gelatin for hygroscopic drug is
a. 150 -180 gm b. 180 - 250 gm c. 150 – 250 mg d. 100 – 150 mg
10. Ratio of Dry Plasticizer / Dry Gelatin for Hard gelatin capsule is
a. 0.6 b. 0.4 c. 1.2 d. 0.8

Q.II Long Answers (Answer any 1 out of 2)

10

1. Define Tablet & Explain in brief about IPQC test for Tablet manufacturing.
2. Discuss in details about steps involved in mfg. of Hard gelatin capsule and Piston . Tamp fill principle/vibratory fill principle.

Q.III Short Answers (Answer any 2 out of 3)

10

1. Describe in brief about principle of Wet granulation.
2. What is significance of polymorphism and solubility in preformulation study.
3. Enlist in processing problems of tablet mfg. and give causes and remedy for capping and lamination.

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**First Sessional Theory Examination 2020-2021
(Odd Sem)**

Subject: Industrial Pharmacy-I (BP 502 T) **Day & Date:** 21/10/2020

Class: T.Y. B. Pharm

Semester: Vth

Time: 10.30 am- 12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- The conductivity test comes positive in.....emulsion.
a. W/O type; **b.** O/W type; **c.** Both a and b; **d.** None of the above
- Which of the following technique measure the particle size by determining volume?
a. Microscopy; **b.** Sedimentation; **c.** Coulter counter; **d.** Dynamic light scattering
- Type A gelatin istreated and has isoelectric pH.....
a. Alkali treated, 4.7; **b.** Acid treated, 4.7; **c.** Acid treated, 9; **d.** Alkali treated, 9.
- Which technique(s) are used for polymorph screening?
a. Differential scanning calorimetry; **b.** FTIR spectroscopy; **c.** XRD analysis; **d.** all of the above.
- In which of the following capsule filling method slugs/plugs are formed?
a. Auger Fill Principle; **b.** Piston-Tamp Principle; **c.** Vibratory Fill Principle, **d.** none of the above.
- Based on BCS classification, BA/BE waivers (biowaivers) can be applied for BCS and..... IR solid oral dosage forms.
a. Class 3 and class 2; **b.** Class 2 and class 4; **c.** Class 1 and class 3; **d.** Class 1 and class 2
- The difference in potential between the actual surface and the electroneutral region is called as...
a. Electrothermodynamic potential; **b.** zeta potential; **c.** Nernst potential; **d.** both a and c.

8. The iron contents of gelatin should be present in between...

a. 25-45 poise; b. 25-45 millipoise; c. 45-50 millipoise; d. 50-100 millipoise

9. Read the following statements:

A. Stable polymorphic form have low energy state, high M.P., least aqueous solubility

B. Metastable polymorphic form have lowest energy state, high M.P., and lesser aqueous solubility

a. Both A and B are true; b. Both A and B are False; c. A is false and B is true; d. A is true and B false

10. Angle of repose ($\tan \theta$) is given by the formula...

a. $\tan \theta = \frac{2h}{r}$; b. $\tan \theta = \frac{2h}{D}$; c. $\tan \theta = \frac{h}{D}$; d. $\tan \theta = \frac{D}{2h}$

QII Long Answers (Answer any 1 out of 2)

10

1. Enlist various official and non-official quality control tests for evaluation of tablets. Explain in detail about the friability test, disintegration test, weight variation test, and content uniformity test.
2. Enlist various physical and chemical properties involved in the preformulation. Explain about i. pKa ii. Partition coefficient, iii. Hydrolysis, and iv. Oxidation

QIII Short Answers (Answer any 2 out of 3)

10

1. Explain the steps and the theory involved in wet granulation.
2. Explain in the process of capsule shell manufacturing. Give important properties of gelatin.
3. Discuss in detail compression and processing defects (problems) of Tablet.



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**First Sessional Theory Examination 2020-2021
(Odd Sem)**

Subject: Industrial Pharmacy-I (BP 502 T) **Day & Date:** Tuesday 12/10/2021
Class: T.Y. B. Pharm **Semester:** Vth
Time: 10.30 am- 12.00 pm **Max. Marks:** 30

- Instructions:*
- 1. All questions are compulsory*
 - 2. Draw a well labeled diagram wherever necessary*
 - 3. Right hand side number indicates full marks*

QI Multiple Choice Questions (MCQs)

10

1. Remedy for Capping is
 - a. Use of suitable colors/dyes; b. Precompression; c. Incorporate dry colour additive; d. use of glidant
2. The friability of the tablet should not exceed.....
 - a. 0.5%; b. 2%; c. 1%; d. 1.5%
3. The raising and lowering frequency per minute of basket-rack assembly in disintegration tester is...
 - a. 35-40 cycles; b. 32-35 cycles; c. 29-32 cycles; d. 22-26 cycles
4. The bloom strength of gelatin should be present in the range of.....
 - a. 250-300 g; b. 100-150 g; c. 50-100 gm; d. 150-250 g
5. In which of the following capsule filling method slugs/plugs are formed?
 - a. Dosing disk machine b. Dosator machine; c. Auger Fill Principle; d. both a and b
6. The relationship between pH, solubility and pKa value of an acidic drug is given by
 - a. Henderson Hasselbalch equation; b. Bragg's Equation; c. Noye's Whitney Equation; d. All of the above
7. Amorphous nature of the material can be identified by.....
 - a. unique set of intensity peaks in XRD studies; b. broad diffraction pattern called as "Halo" in XRD studies; c. Both a and b; d. None of these

8. Formaldehyde is degraded mainly by..... reaction.
a. Hydrolysis; b. Polymerization; c. Oxidation; d. Racemization.
9. Drug is said to be sparingly soluble, if Parts of solvent required for solubilizing its one part.
a. 1-10; b. 10-30; c. 30-100; d. 100-1000
10. Crystal habit describes the.....
a. molecular arrangement within the crystal; b. Outer appearance of the crystal; c. Both a and b; d. None.

QII Long Answers (Answer any 1 out of 2)

10

1. Enlist various materials used in capsule shell manufacturing. Discuss in detail the process of manufacturing of capsule shell and quality control of gelatin used.
2. Elucidate in detail Wet and Dry granulation process in Tablet manufacturing.

QIII Short Answers (Answer any 2 out of 3)

10

1. Illustrate in brief about:
 - i. PKa
 - ii. Oxidation
2. Write about Biopharmaceutical Classification system (BCS) of drug and give its significance.
3. Discuss about the formulation of emulsion.



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First Sessional Theory Examination- (ODD SEM) 2023-2024

Subject :	Industrial Pharmacy-I (BP502T)	Day & Date :	Tuesday, 31/10/2023
Class :	Third Year B. Pharm	Semester :	V <i>Write Your Seat No. Here</i>
Time :	10.30 am – 12.00 pm	Max. Marks :	30 <input type="text"/>

Instructions:	1. All questions are compulsory	2. Draw a well labeled diagram wherever necessary
	3. Right hand side number indicates full marks	4. Do not write/tick on the question paper

QI	Objective Type Questions (5 x 2) = 5 x 2 = 10 (Answer all the questions)	10 M
1.	Define Preformulation. Classify and enlist various preformulation parameters. (LL1, CO1)	
2.	Write the significance of particle size in preformulation. Enlist various methods to determine the particle size. (LL3, CO1)	
3.	a. Define: Polymorphism? (LL1, CO1) b. State the role of Glidants in tablets? (LL1, CO2)	
4.	Distinguish between hard gelatin capsules and soft gelatin capsules. (LL2, CO2)	
5.	What is capping and lamination in tableting? (LL2, CO2)	
QII	Long Answers Question (Answer any 1 out of 2)	10 M
1.	Explain in detail about capsule shell manufacturing and capsule filling principles of hard gelatin capsules. (LL3, CO2)	
2.	Illustrate in detail about the manufacturing techniques of tablets. (LL3, CO2)	
Q.III	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Explain the BCS classification of drug. Give its significance. (LL3, CO1)	
2.	Write the applications of preformulation studies in the development of solid dosage forms. (LL3, CO1)	
3.	Explain the chemical properties of the drug with suitable examples. (LL3, CO1)	



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First Sessional Theory Examination-(ODD SEM) 2022-2023

Subject	Industrial Pharmacy-I (BP502T)	Day & Date	WED, 09/11/2022
Class	Third Year B. Pharmacy	Semester	V
Time	10:30 am – 12:00 pm	Max. Marks	30
			Write Your Seat No. Here <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px auto;"></div>

Instructions: 1. All questions are compulsory 2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks 4. Do not write/tick on the question paper

QI Multiple Choice Questions (MCQs) 10 M

1.	Following are the tablets used in oral cavity except.....
A. Buccal tablets B. Sublingual tablets C. Floating Tablets D. Troches and Lozenges	
2.	Percent deviation allowed for weight variation test for uncoated tablets with average weight less than 80 mg is-
A. 5% B. 10% C. 2.5% D. 12%	
3.	Following are the examples of polymers used in enteric coating except.....
A. Cellulose acetate phthalate B. Eudragit S100 C. Hydroxypropyl methylcellulose phthalate D. polyvinyl acetate phthalate	
4.	Which of the following defect occur due to inadequate spreading of the coating solution?
A. Hazing B. Lamination; C. Orange peel effect D. Sticking	
5.	Rotating drum of Friability tester rotates for....
A. 50 times B. 150 times C. 120 times D. 100 times	
6.	Negative Log of acid dissociation constant is...
A. pOH B. pH C. pKa D. Log P	
7.	Crystalline materials possess the following properties.....
A. Characteristic melting point B. Molecules packed in defined order C. Both A and B D. Do not have specific melting point	
8.	Particle size distribution is quantified by determining the weight of particles in ----- method.
A. coulter counter B. microscopy C. dynamic and laser light D. sieving	
9.	Drug is said to be very rapidly dissolving, if it dissolves.....
A. More than 85% in 15 min; B. More than 85% in 30 min; C. More than 75% in 15 min; D. More than 75% in 30 min	
10.	X-ray diffraction pattern indicate -----.
A. Solubility B. Crystallinity C. Functional groups D. Permeability	

QII Long Answers Question (Answer any 1 out of 2) 10 M

1.	Illustrate in detail about granulation methods in tablet manufacturing.
2.	Explain about various excipients used in formulation of tablet.

QIII Short Answers Question (Answer any 2 out of 3) 10 M

1.	Illustrate in detail any two physical properties of drug and give their significance in preformulation studies.
2.	Explain the oxidation and hydrolysis of drug with suitable examples.
3.	Explain the BCS classification of drug and state its significance.



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First Sessional Theory Examination 2019 - 2020

Subject: Medicinal Chemistry-II (BP501T) **Day & Date:** Thu, 26 Sep.2019

Class: T.Y.B. Pharm

Semester: V

Time: 10.30 am to 12.00 pm

Max. Marks: 30

- Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

Q I Multiple Choice Questions (MCQs)

10

- Diphenhydramine is a
 - Cyclic basic chain analogue
 - Amino alkyl ether analogue
 - Mono amino propyl analogue
 - Ethylene diamine analogue
- Anti allergic common name for -
 - H₂ antagonist
 - H₁ antagonist
 - 5HT₂ antagonist
 - Both a & b
- Basic nucleus present in proton pump inhibitor is
 - Quinoline
 - Indole
 - Benzimidazole
 - Isoquinoline
- Which of the following nucleophilic sites on *cytosine* are susceptible for nucleophilic attack by an alkylating agent
 - N2
 - N3
 - N7
 - N6
- Dipyridamole has a mode of action
 - Blocks the calcium channel
 - Vasodilator
 - Blocks the β receptor
 - Inhibits adenosine deaminase enzyme
- Which of the following drug has benzothiazepine ring containing calcium channel Blocker
 - Diltiazem
 - Verapamil
 - Ketoconazole
 - Nifedipine
- Which of the following prodrug nitrogen mustard
 - Chlorambucil
 - Mechlorethamine
 - Mephalan
 - Cyclophosphamide
- Dichlorphenamide belongs to which class of diuretics
 - Loop diuretic
 - Thiazide diuretic
 - Carbonic anhydrase inhibitor
 - Potassium sparing diuretic
- Pyrrolidine ring containing antihypertensive drug
 - Lisinopril
 - Diazoxide
 - Losartan
 - None of the above
- Atrial flutter characterized by
 - 150-300 beats/min
 - 350-600 beat/min
 - 60-70 beats/min
 - 100-180 beats/min

QII. Long Answers (Answer any 1 out of 2)

10

- Classify antineoplastic agents. Write each two structures from every class and write a note on alkylating agents.
- What is hypertension? Write brief etiology of hypertension and give the detailed classification of antihypertensive agents with example. Write the SAR of ACE inhibitors

QIII. Short Answers (Answer any 2 out of 3)

10

- Write the detailed SAR of Classical Antihistaminic with eg.
- Define diuretics and classify it Give a brief SAR of thiazide diuretics with e.g.
- Write down a mode of action and SAR of Calcium channel blockers



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First Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: MC-II (BP 501T)

Day & Date: 20/10/2020

Class: T.Y.B. Pharm

Semester: V

Time: 10:30am-12:00pm

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
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Q I Multiple Choice Questions (MCQs) **10**

1. S-Enantiomer of which drugs is called as Esomeprazole
a. Rabeprazole b. Omeprazole c. Lansoprazole d. None of the above
2. Which of the following anticancer drug contains planar Phenoxazone ring in their structure
a. Vinblastine b. Doxorubicin c. Dactinomycin d. Azithromycin
3. Identify the Vasodilator drug which yield's **Thiocyanate** as a metabolite
a. Minoxidil b. Dizoxide c. Hydralazine HCl d. Sodium Nitroprusside
4. Which of the following drugs contains the steroid ring as a basic nucleus
a. Bumetenide b. Spiranolactone c. Aldosterone d. both b & c
5. Nifedipine is
a. K⁺ Channel Opener b. Calcium Channel Opener
c. Calcium Channel Blocker d. β blocker
6. Pteridine containing Diuretic drug
a. Methotrexate b. Triamterene c. Acetazolamide d. Lidocaine HCl
7. Cyclizine is a
a. H₂ Antagonist b. H₁ Antagonist
c. Both H₁ and H₂ Antagonist d. None of the above
8. Statins acts as a
a. Bile acid sequestrants
b. Inhibits the incorporation of acetate in cholesterol synthesis
c. HMG CoA Reductase inhibitors
d. All of the above
9. Quinine ring is present in following antiarrhythmic drug
a. Phenytoin b. Procainamide c. Tocainide d. Quinidine
10.is an anticancer antibiotic isolated from *Streptomyces verticilles*
a. Dactinomycin b. Bleomycin c. Epiubicin d. Doxorubicin

Q II Long Answers (Answer any 1 out of 2) **10**

1. What is Cancer? Give the causes of cancer? Classify antineoplastic agents with suitable example from each class. Write synthesis and IUPAC Nomenclature of Methotrexate
2. Define Hypertension and write the detailed classification of all antihypertensive agents along with structures. Outline the synthesis and IUPAC of Methyl dopate HCl

Q III Short Answers (Answer any 2 out of 3) **10**

1. What is Hyperlipoproteinemia? Write a detailed classification of all antihyperlipidemic drugs along with structures from each class
2. Write SAR of first-generation Classical antihistamines along with examples
3. Write the chemistry of Carbonic acid inhibitors as a diuretic



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First Sessional Theory Examination 2021-2022

(Odd SEM)

Subject & Subject Code: MC-II (BP 501T) **Day & Date:** Mon, 11/10/2021

Class: T.Y.B. Pharm **Semester:** V

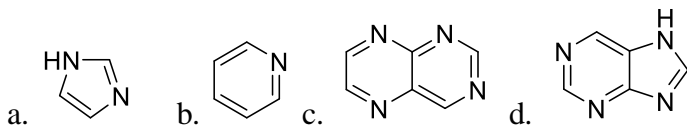
Time: 10:30am-12:00pm **Max. Marks:** 30

- Instructions:* 1. All questions are compulsory
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Q I Multiple Choice Questions (MCQs)

10

- Unsubstituted benzimidazole containing PPI is
 - Rabeprazole
 - Omeprazole
 - Lansoprazole
 - None of the above
- Anticancer drugs of plant origin are
 - Vinblastine
 - Doxorubicin
 - Bleomycin
 - Etoposide
- Identify the Vasodilator drug which yield's **Thiocyanate** as a metabolite
 - Minoxidil
 - Dizoxide
 - Hydralazine HCl
 - Sodium Nitroprusside
- Which of the following drug act as high ceiling diuretics
 - Bumetenide
 - Spiranolactone
 - Ethacrynic Acid
 - Both a & c
- Verapamil is
 - Benzothiazepine
 - Phenylalkylamine
 - 1,4-Dihydropyridine
 - None of the above
- Triamterene has following basic nucleus



7. Buclizine is a

- H₂ Antagonist



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- b. H₁ Antagonist
 - c. Both H₁ and H₂ Antagonist
 - d. None of the above
8. Which of the following is pyrimidine antagonist
- a. Cytrabine
 - b. Floxuridine
 - c. 5-Flurouracil
 - d. All of the above
9. Reserpine is
- a. Catecholamine Depletor
 - b. Vasodilator
 - c. ACE Inhibitor
 - d. Prolonging action potential duration
- 10.....is a peptide type of anticancer antibiotic
- a. Dactinomycin
 - b. Bleomycin
 - c. Etoposide
 - d. Doxorubicin

Q II Long Answers (Answer any 1 out of 2)

10

1. Classify anticancer agents with suitable examples. Give the causes of cancer in brief. Discuss antimetabolites as an anticancer agent
2. What are classical antihistamines? Give chemical classification. Write SAR of first-generation Classical antihistamines along with examples

Q III Short Answers (Answer any 2 out of 3)

10

1. Classify antihypertensive drugs with example. Discuss ACE inhibitors as an antihypertensive agent
2. Correlate chemical structures of calcium channel blockers with biological activity and mode of action
3. Write Synthesis and IUPAC of
 - a. Disopyramide phosphate
 - b. Isosorbide dinitrate

Course Outcome	Question	Marks
CO 5011: Classify histaminic and antihistaminic and anticancer drugs, explain their chemistry and should be able to write chemical structures and Outline the synthesis of important drugs from these classes	Q.1- 1,2,7,10	19
	Q.2- 1	



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Level	Q.3 -2	
CO 5012: Explain general aspects of cardiovascular agents like antihypertensive, antianginal, diuretics. classify the cardiovascular agents and explain their chemistry, Nomenclature, SAR, Mode of action, and chemical synthesis of important drug Level	Q.1 - 3,4,5,6	19
	Q.2 - 2	
	Q.3 - 3	
CO 5013: Describe general aspects of anti-hyperlipidemic, anti-arrhythmic, coagulants and anticoagulants classify them and explain their chemistry, Nomenclature SAR, Mode of action, and chemical synthesis of important drug Level	Q.1 - 8,9	07
	Q.2 - 0	
	Q.3 -1	



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(Odd SEM)

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Class: T.Y.B. Pharm **Semester:** V

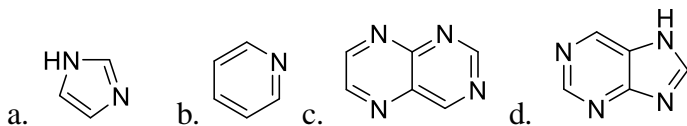
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 - c. Both H₁ and H₂ Antagonist
 - d. None of the above
8. Which of the following is pyrimidine antagonist
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 - b. Floxuridine
 - c. 5-Flurouracil
 - d. All of the above
9. Reserpine is
- a. Catecholamine Depletor
 - b. Vasodilator
 - c. ACE Inhibitor
 - d. Prolonging action potential duration
- 10.....is a peptide type of anticancer antibiotic
- a. Dactinomycin
 - b. Bleomycin
 - c. Etoposide
 - d. Doxorubicin

Q II Long Answers (Answer any 1 out of 2)

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 - b. Isosorbide dinitrate

Course Outcome	Question	Marks
CO 5011: Classify histaminic and antihistaminic and anticancer drugs, explain their chemistry and should be able to write chemical structures and Outline the synthesis of important drugs from these classes	Q.1- 1,2,7,10	19
	Q.2- 1	



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Level	Q.3 -2	
CO 5012: Explain general aspects of cardiovascular agents like antihypertensive, antianginal, diuretics. classify the cardiovascular agents and explain their chemistry, Nomenclature, SAR, Mode of action, and chemical synthesis of important drug Level	Q.1 - 3,4,5,6	19
	Q.2 - 2	
	Q.3 - 3	
CO 5013: Describe general aspects of anti-hyperlipidemic, anti-arrhythmic, coagulants and anticoagulants classify them and explain their chemistry, Nomenclature SAR, Mode of action, and chemical synthesis of important drug Level	Q.1 - 8,9	07
	Q.2 - 0	
	Q.3 -1	



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First Sessional Theory Examination-(ODD SEM) 2022-2023

Subject	: Medicinal Chemistry-II (BP501T)	Day & Date	: Mon, 07/11/2022
Class	: Third Year B. Pharmacy	Semester	: V Write Your Seat No. Here
Time	: 10:30 am – 12:00 pm	Max. Marks	: 30

Instructions: 1. All questions are compulsory 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks 4. Do not write/tick on the question paper

QI Multiple Choice Questions (MCQs) 10 M

1.	Antiallergic drug belonging to ethanolamine class is	
	A. Diphenhydramine B. Chlorpheniramine C. Cetirizine D. Ranitidine	
2.	Identify the structure	
	A. Chlorpheniramine B. Cetirizine C. Ranitidine D. Promethazine	
3.	Ranitidine contains heterocycle in the structure	
	A. pyrrole B. furan C. imidazole D. thiazole	
4.	The following antineoplastic drug is a mitotic inhibitor and causes metaphase arrest.	
	A. Busulphan B. Vincristine C. Cytarabine D. Procarbazine	
5.	A pyrimidine antagonist anticancer drug is	
	A. Fluorouracil B. Mercaptopurine C. Thioguanine D. Methotrexate	
6.	Which of following is anthranilic acid derivative?	
	A. Furosemide B. Bumetanide C. Ethacrynic acid D. None	
7.	Nifedipine belongs to the following class	
	A. Organic nitrate B. Barbiturate C. 1,4-dihydropyridine D. benzodiazepine	
8.	Identify the structure	
	A. clonidine B. epinephrine C. Acetazolamide D. norepinephrine	
9.	Which of the following drugs decreases cholesterol synthesis by inhibiting the enzyme HMG-CoA reductase?	
	A. Fenofibrate B. Niacin C. Cholestyramine D. Lovastatin	
10.	Isobutyric acid group is essential for activity in	
	A. Statins B. Fibrates C. Bile acid Sequestrants D. all of the above	

QII Long Answers Question (Answer any 1 out of 2) 10 M

1.	What are antihypertensive drugs? Classify them with examples. Write note on loop diuretics.	
2.	Classify anti anginal drugs. Discuss the MOA uses of nitrates. Outline synthesis of nitroglycerin.	

QIII Short Answers Question (Answer any 2 out of 3) 10 M

1.	Explain mechanism of proton pump inhibitors with examples	
2.	Explain alkylating agents as antineoplastic drugs.	
3.	Write synthesis of diphenhydramine and promethazine.	



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First Sessional Theory Examination-(ODD SEM) 2022-2023 (Indradhanushya Participants)

Subject :	Medicinal Chemistry-II (BP501T)	Day & Date :	Mon, 14/11/2022
Class :	Third Year B. Pharmacy	Semester :	V
Time :	10:30 am – 12:00 pm	Max. Marks :	30

Write Your Seat No. Here

Instructions: 1. All questions are compulsory
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3. Right hand side number indicates full marks
4. Do not write/tick on the question paper

QI Multiple Choice Questions (MCQs)		10 M
1.	Antiallergic drug belonging to propylamine class is	
	A. Diphenhydramine B. Chlorpheniramine C. Cetirizine D. Ranitidine	
2.	Identify the structure	
	A. Chlorpheniramine B. Cetirizine C. Ranitidine D. Promethazine	
3.	Cimetidine contains heterocycle in the structure	
	A. pyrrole B. furan C. imidazole D. thiazole	
4.	The following antineoplastic drug is a mitotic inhibitor and causes metaphase arrest.	
	A. Busulphan B. Vincristine C. Cytarabine D. Procarbazine	
5.	A folate antagonist anticancer drug is	
	A. Fluorouracil B. Mercaptopurine C. Thioguanine D. Methotrexate	
6.	Which of following is anthranilic acid derivative?	
	A. Furosemide B. Bumetanide C. Ethacrynic acid D. None	
7.	Isosorbide dinitrate belongs to the following class	
	A. Organic nitrate B. Barbiturate C. 1,4-dihydropyridine D. benzodiazepine	
8.	Identify the structure	
	A. clonidine B. epinephrine C. methyldopa D. norepinephrine	
9.	Which of the following drugs decreases triglycerides by stimulating the enzyme lipoprotein lipase?	
	A. Clofibrate B. Niacin C. Cholestyramine D. Lovastatin	
10.	3,5-dihydroxyheptonic acid group is essential for activity in	
	A. Statins B. Fibrates C. Bile acid Sequestrants D. all of the above	

QII	Long Answers Question (Answer any 1 out of 2)	10 M
1.	What are diuretics? Classify them with examples. Write note on thiazide diuretics.	
2.	Classify anti anginal drugs. Discuss the MOA and uses of calcium channel blockers.	
QIII	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Explain mechanism of Histamine H2 antagonists with examples.	
2.	Write a note on second generation H1-antihistamines.	
3.	Write synthesis of 6-mercaptopurine and mechloehamine.	



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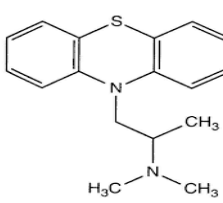
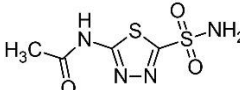
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First Sessional Theory Examination-(Odd Sem) 2023-2024

Subject :	Medicinal Chemistry-II (BP501T)	Day & Date :	Monday, 30/10/2023	
Class :	Third Year B. Pharmacy	Semester :	V	Write Your Seat No. Here <input type="text"/>
Time :	10:30 am – 12:00 noon	Max. Marks :	30	

Instructions:	1. All questions are compulsory	2. Draw a well labeled diagram wherever necessary
	3. Right hand side number indicates full marks	4. Do not write/tick on the question paper

Q.I	Objective Type Questions (5 x 2) = 5 x 2 = 10 (Answer all the questions)	10 M
1.	Describe histamine receptors with respect to their distribution & role.	(LL3, CO1)
2.	How antimetabolites will function as an anticancer agents ?	(LL3, CO1)
3.	Write synthetic scheme of diphenhydramine and nitroglycerin.	(LL3, CO1,2)
4.	Draw renin angiotensin system and represent site of mechanism of action of captopril.	(LL3, CO2)
5.	Draw the structure and write uses of ethacrynic acid / warfarin.	(LL3, CO2)
Q.II	Long Answers Question (Answer any 1 out of 2)	10 M
1.	What is cancer? Classify antineoplastic agents and note on alkylating agents.	(LL4, CO1)
2.	Classify antihistaminic agents. Explain mechanism of Gastric Proton Pump Inhibitors with suitable diagram & examples.	(LL4, CO1)
Q.III	Short Answers Question (Answer any 2 out of 3)	10M
1.	Classify diuretic agents and note on Carbonic anhydrase Inhibitors.	(LL2, CO2)
2.	Write in brief about vasodilators as antianginal agents and note on anti-hyperlipidemic agents.	(LL4, CO2)
3.	Note on Calcium channel blockers as an antianginal agents.	(LL2, CO2)



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First Sessional Theory Examination-(Odd Sem) 2023-2024

Subject :	Medicinal Chemistry-II (BP501T)	Day & Date :	Monday, 30/10/2023	
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First Sessional Theory Examination-(Odd Sem) 2023-2024

Subject :	Medicinal Chemistry-II (BP501T)	Day & Date :	Monday, 30/10/2023	
Class :	Third Year B. Pharmacy	Semester :	V	Write Your Seat No. Here <input type="text"/>
Time :	10:30 am – 12:00 noon	Max. Marks :	30	

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First Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: Pharmacognosy & Phytochemistry-II (BP504T)

Day & Date: Friday, 23/10/2020

Class: T.Y. B. Pharmacy

Time: 10: 30 am to 12:00 noon

Semester: V

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. The melting point of menthol is _____
a) 41-44 °C b) 40-43 °C c) 41-45 °C d) 42-45 °C
2. _____ mobile phase used for identification of glycyrrhetic acid
a) Ethyl acetate: Chloroform b) Methanol: Chloroform c) Methanol: Water d) Toluene: Water
3. *Vitali morin* test is positive test for _____
a) Vincristine b) Reserpine c) Atropine d) Morphine
4. _____ is the precursor for biosynthesis of Tropane alkaloids
a) Ornithine b) Asparagine c) Methionine d) Leucine
5. _____ detector are called counters
a) Geiger Muller b) Autoradiograph c) Spectrophotometer d) Radio paper chromatography
6. Autoradiography enables characterization of _____.
a) Functional group b) Receptors c) intermediates d) None of all
7. Which of the following is Not an alkaloid?
a) Quinine b) Reserpine c) Morphine d) Diosgenin
8. How many vittae cells are present in Fennel fruit?
a) 4 b) 6 c) 8 d) 10
9. _____ test is used for identification of tannins.
a) Keller Kiliani b) Goldbeater's Skin c) Vitali Morin d) Shinoda
10. Calcium oxalate crystals are absent in _____
a) Vinca b) Datura c) Rauwolfia d) Opium

QII Long Answers Question (Answer any 1 out of 2)

10

1. Describe Shikimic Acid Pathway
2. Describe Phytopharmacognosy and Cultivation, Collection and Preparation of Opium

QIII Short Answers Question (Answer any 2 out of 3)

10

1. Write B.S, C.C and Uses of Digitalis and Vinca
2. Explain Isolation, Identification of Artemisin and Glycyrrhetic acid
3. Draw well label T.S of Cinnamon and Coriander



First Sessional Theory Examination 2020-2021
(Odd SEM)

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Day & Date: Friday, 23/10/2020

Class: T.Y. B. Pharmacy

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Semester: V

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10

1. Describe Shikimic Acid Pathway
2. Describe Phytopharmacognosy and Cultivation, Collection and Preparation of Opium

QIII Short Answers Question (Answer any 2 out of 3)

10

1. Write B.S, C.C and Uses of Digitalis and Vinca
2. Explain Isolation, Identification of Artemisin and Glycyrrhetic acid
3. Draw well label T.S of Cinnamon and Coriander



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First Sessional Theory Examination-(ODD SEM) 2022-2023

Subject	Pharmacognosy & Phytochemistry-II (BP504T)	Day & Date	Friday, 11/11/2022
Class	Third Year B. Pharmacy	Semester	V
Time	10:30 am – 12:00 pm	Max. Marks	30
			Write Your Seat No. Here <input style="width: 50px; height: 20px;" type="text"/>

Instructions:	1. All questions are compulsory 3. Right hand side number indicates full marks	2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper
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QI Multiple Choice Questions (MCQs) 10 M

1.	Uridyl transferase is an enzyme involved in biosynthesis of _____. (CO1, Level-2)
A. Glycosides B. Alkaloids C. Iridoids D. Terpenoids	
2.	The tentative precursor is also called _____. (CO1, Level-2)
A. Intermediate B. Presumed precursor C. Both of these D. None of these	
3.	Shikimic acid pathway _____. (CO1, Level-2)
A. Gives three aromatic amino acid B. C6-C3 units C. None of these D. All of these	
4.	Acetate melonate and acetate mevalonate pathways are same. (CO1, Level-2)
A. Yes B. No	
5.	Steroidal moieties are biosynthesized in plants from _____. (CO1, Level-2)
A. Squalene B. Heroine C. Cholesterol D. Tryptophan	
6.	_____ plant belong to the family: Solanaceae (CO2, Level-3)
A. Opium B. Chotachand C. Deadly night Shade D. Catharanthus	
7.	Tropane alkaloids present in _____. (CO2, Level-3)
A. Sarpagandha B. Afu C. Vinca D. None of all	
8.	<i>Eugenia caryophyllus</i> belong to the family: _____ (CO2, Level-3)
A. Umbelliferae B. Myrtaceae C. Lauraceae D. Zinziberaceae	
9.	Which of the drug act as dental analgesic? (CO2, Level-3)
A. Cinnamon B. Clove C. Fennel D. Coriander	
10.	_____ is the precursor for the biosynthesis of various steroidal drugs/harmones.
A. Digoxin B. Glycyrrhizinic acid C. Diosgnin D. Sennoside	

QII Long Answers Question (Answer any 1 out of 2) 10 M

1.	Describe the biosynthesis of Secondary Plant Metabolites via Shikimic Acid Pathway. (CO1, Level-2)
2.	Write a brief account on Utilization of Radioactive Isotopes in biogenetic study. (CO1, Level-2)

QIII Short Answers Question (Answer any 2 out of 3) 10 M

1.	Write about Chemical constituents and Uses of Vinca, Rauwolfia and Opium. (CO2, Level-3)
2.	Write the Biological Source, Chemical constituents and Uses of Steroidal Glycoside containing drug. (CO2, Level-3)
3.	Define Terpenes. Write pharmacognostical account of Cinnamon. (CO2, Level-3)



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Subject	Pharmacognosy & Phytochemistry-II (BP504T)	Day & Date	Friday, 11/11/2022
Class	Third Year B. Pharmacy	Semester	V
Time	10:30 am – 12:00 pm	Max. Marks	30
			Write Your Seat No. Here <input style="width: 50px; height: 20px;" type="text"/>

Instructions:	1. All questions are compulsory 3. Right hand side number indicates full marks	2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper
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QI Multiple Choice Questions (MCQs) 10 M

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A. Glycosides B. Alkaloids C. Iridoids D. Terpenoids	
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3.	Shikimic acid pathway _____. (CO1, Level-2)
A. Gives three aromatic amino acid B. C6-C3 units C. None of these D. All of these	
4.	Acetate melonate and acetate mevalonate pathways are same. (CO1, Level-2)
A. Yes B. No	
5.	Steroidal moieties are biosynthesized in plants from _____. (CO1, Level-2)
A. Squalene B. Heroine C. Cholesterol D. Tryptophan	
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9.	Which of the drug act as dental analgesic? (CO2, Level-3)
A. Cinnamon B. Clove C. Fennel D. Coriander	
10.	_____ is the precursor for the biosynthesis of various steroidal drugs/harmones.
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QII Long Answers Question (Answer any 1 out of 2) 10 M

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First Sessional Theory Examination-(Odd SEM) 2023-2024

Subject : Pharmacognosy & Phytochemistry II (BP504T)	Day & Date : Thursday, 2/11/2023	
Class : Third Year B. Pharmacy	Semester : V	Write Your Seat No. Here <input type="text"/>
Time : 10:30 am to 12:00 noon	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
3. Right-hand side number indicates full marks 4. Do not write/tick on the question paper

Q. I: Objective type questions. (Write precisely)		10 M
1	A plant in Amazon Forest found to contain a novel phytoconstituent. You are I/C of a plant research lab. What would you do to confirm the tentative biosynthetic pathways? (CO1, LL1)	
2	Define primary and secondary plant metabolites. (CO1, LL1)	
3A	Explain acetate pathway. What metabolites are formed from this pathway? (CO1, LL1)	
3B	Write botanical source of a sweet expectorant given in your syllabus. (CO2, LL1)	
4	Define tannins with examples. (CO2, LL1)	
5	What are the uses of senna? Write its biological sources also. (CO2, LL1)	
Q. II: Long Answers Questions (Answer any 1 out of 2)		10 M
1. Describe the biosynthesis of aromatic and aliphatic amino acids via shikimic acid pathway and TCA cycle. (CO1, LL5)		
2. How biosynthetic pathways are traced? Explain competitive feeding and precursor product method with examples. (CO1, LL5)		
Q. III: Short Answers Questions (Answer any 2 out of 3)		10 M
1.	Write complete biological source, chemical constituents and uses of belladonna and opium alkaloids. (CO2, LL5)	
2.	Write complete biological source, chemical constituents and uses of digitalis and dioscorea. (CO2, LL5)	
3.	Write complete biological source, chemical constituents and uses of ginger and clove. (CO2, LL5)	



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Mapping of Course Outcome with First Sessional Exam

Course Outcome	Question	Marks
CO 504.1: Understand basic metabolic pathways and formation of different primary & secondary metabolites through different pathways besides learning how these pathways are traced. Level 2 (Understanding)	Q.1 – 1,2,3,4,5	15
	Q.2 – 1,2	
CO 504.2: Explain biological sources, chemistry and uses of various secondary metabolites belonging to alkaloids, glycosides, phenolics and others. Level 3 (Application)	Q.1 – 6,7,8,9,10	15
	Q.3 – 1.2.3	



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First Sessional Theory Examination-(Odd SEM) 2023-2024

Subject : Pharmacognosy & Phytochemistry II (BP504T)	Day & Date : Thursday, 2/11/2023	
Class : Third Year B. Pharmacy	Semester : V	<i>Write Your Seat No. Here</i> <input type="text"/>
Time : 10:30 am to 12:00 noon	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
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3A	Explain acetate pathway. What metabolites are formed from this pathway? (CO1, LL1)	
3B	Write botanical source of a sweet expectorant given in your syllabus. (CO2, LL1)	
4	Define tannins with examples. (CO2, LL1)	
5	What are the uses of senna? Write its biological sources also. (CO2, LL1)	
Q. II: Long Answers Questions (Answer any 1 out of 2)		10 M
1. Describe the biosynthesis of aromatic and aliphatic amino acids via shikimic acid pathway and TCA cycle. (CO1, LL5)		
2. How biosynthetic pathways are traced? Explain competitive feeding and precursor product method with examples. (CO1, LL5)		
Q. III: Short Answers Questions (Answer any 2 out of 3)		10 M
1.	Write complete biological source, chemical constituents and uses of belladonna and opium alkaloids. (CO2, LL5)	
2.	Write complete biological source, chemical constituents and uses of digitalis and dioscorea. (CO2, LL5)	
3.	Write complete biological source, chemical constituents and uses of ginger and clove. (CO2, LL5)	



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First Sessional Theory Examination-(Odd SEM) 2023-2024

Subject : Pharmacognosy & Phytochemistry II (BP504T)	Day & Date : Thursday, 2/11/2023	
Class : Third Year B. Pharmacy	Semester : V	Write Your Seat No. Here <input type="text"/>
Time : 10:30 am to 12:00 noon	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
3. Right-hand side number indicates full marks 4. Do not write/tick on the question paper

Q. I: Objective type questions. (Write precisely)		10 M
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	Q.3 – 1.2.3	



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Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2019-2020

Subject : Pharmaceutical Analysis Day & Date : 03/10/2019
Class : T Y B. Pharmacy Semester : V
Time : 10:30 am- 12:00 pm Max. Marks : 30

Instructions: 1. All questions are compulsory
2. Draw a well labelled diagram wherever necessary
3. Right hand side number indicates full marks

Q.1 Multiple Choice Questions [10]

1. According to Lorry-Bronsted, bases are _____
 - a. Electron pair donor
 - b. Electron pair acceptor
 - c. Proton donor
 - d. Proton acceptor
2. Aprotic Solvents are bothandCharacters
 - a. Aprotic, Protophillic
 - b. Protophillic, Protogenic
 - c. Protogenic, Aprotic
 - d. None of the above
3.is most suitable method to analysed Weak acid and Weak base
 - a. Aqueous titration
 - b. Non-aqueous titration
 - c. Precipitation titration
 - d. Complexometric titration
4. Normality is
 - a. 1 mole / lit of solution
 - b. 1 g / lit. of solution
 - c. M.W. of solute in g / lit. of solution
 - d. 1 g / lit. of solution
5. Argentometric titrations mainly utilizes _____ as a titrant.
 - a. 0.1 N perchloric acid
 - b. 0.1 M sodium hydroxide
 - c. 0.1 N Silver chloride
 - d. None of the above
6. Accuracy is expressed by
 - a. Correctness of measurement
 - b. Standard value
 - c. Reproducibility of measurement
 - d. True value
7. _____ is a compound of sufficient purity from which a standard solution can be prepared by direct weighing of a quantity of it, followed by dilution to give a defined volume of solution.
 - a. External standard
 - b. Primary standard
 - c. Secondary standard
 - d. a & c both
8. _____ are the methods of minimisation of error
 - a. Amplification methods
 - b. Standard addition
 - c. Internal standards
 - d. All of the above
9. Acetone is a _____ solvent
 - a. Protophillic
 - b. Protogenic
 - c. Amphiprotic
 - d. Aprotic
10. Dichloroflurescein is _____ indicator
 - a. Basic
 - b. Adsorption
 - c. Acidic & Basic both
 - d. None of the above

Q.2. Answer in detail of following (any one) [10]

- a Explain the various titration curves with suitable example
- b Describe End point determination methods in Precipitation titration

Q.3. Answer the following short questions (any two) [10]

- a What are primary and secondary standards? Explain theirs types with suitable example
- b Write short note on Errors.
- c Define non aqueous titrations? Explain the types of solvent used.



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Institute of Pharmacy, Dhule**

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2019-2020

Subject: P'cognosy & Phytochem-II (BP504T)

Day & Date: Monday, 30/9/2019

Class: Third Year B.Pharm

Semester: V

Time: 10:30 am to 12: noon

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Keller-Kiliani test is used for identification of :
a) Sennoside b) Taxol c) Digitoxose d) Caffeine
- Artemesin is also known as:
a) Kino tree b) Qninghao c) Peru , d) vinca
- _____ type of ca-oxalate are present is coriander fruit.
a) Rosette b) Prism c) Cylindrical d) Shperical
- Guggul contains:
a) Oleo gum b) Oleo-gum-resin c) Oleo resin d) gum-resin
- On addition of a drop of _____ to a drop of volatile oil produce pale green colour.
a) Acetic acid b) Ferric chloride c) Iodine d) Nitric acid
- Santonica means:
a) Worm seed b) Mentha c) Jesthmadh d) Yam
- Caryophyllus is the species of:
a) Sadafuli b) Mulethi c) Bari sauf d) Catechu
- Guggul plant is propagated by:
a) Stolons b) Stem c) Roots d) Suckers
- Dioscorea is also known as:
a) Radix b) Musabbar c) Deadly night shade d) Rheumatism root
- _____ is the precursor for the biosynthesis of corticosteroids.
a) Digitalis b) Yam c) Guggul d) Mulethi

QII Long Answers (Answer any 1 out of 2)

10

- Describe in details any one biosynthetic pathway
a) Shikimic acid pathway b) Amino Acid pathway
- Discuss about of biosynthesis of Fatty acids

QIII Short Answers (Answer any 2 out of 3)

10

- Write isolation and Identification of Citral and Artemisin
- Explain the biosource, Chemistry and therapeutic uses of any two drugs
a) Mulethi b) Sadafuli c) Catechu d) Taxus
- Write a note on utilization of radioactive isotopes in investigation of biogenetic studies.



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First Sessional Theory Examination 2021-2022
(ODD SEM)

Subject & Subject Code: PHARMACOLOGY-II, BP503T

Day & Date: Wednesday, 13.10.2021

Class: B. Pharm. Third Year

Time: 10:30 am-12.00 noon

Semester: 5th

Max. Marks: 30

MS Teams Link: <https://teams.microsoft.com/l/meetup-join/19%3aea024740d80640f1be574098c7ac96e8%40thread.tacv2/1634099801847?context=%7b%22Tid%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cbc81%22%2c%22Oid%22%3a%22e8b97b05-cc00-4df9-b771-987932d20edb%22%7d>

Instructions:

1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI. Multiple Choice Questions (MCQs)

10

1. A 78-year-old patient of stage C heart failure on digoxin therapy was admitted to the emergency room. He presented symptoms like dizziness, fainting, fatigue, chest pain and shortness of breath. Examinations revealed ventricular tachycardia. Which is a drug of choice to manage the condition?
 - a. Nifedipine
 - b. Captopril
 - c. Lidocaine
 - d. Verapamil
2. Which drug inhibits cholesterol absorption from small intestine?
 - a. Ezetimibe
 - b. Cholestyramine
 - c. Clofibrate
 - d. Atorvastatin
3. Two weeks ago, a 50-year-old man diagnosed with stable angina, had started a nitroglycerine treatment as transdermal (skin) patch for a continuous drug delivery. As directed by the physician, he applied a new patch carefully every morning immediately after removal of the old patch. The attacks of angina had completely disappeared in the first week of nitroglycerine patch therapy; however, the anginal episodes were back in second week. What is the reason for angina attacks in second week?
 - a. Variant angina complicating the stable angina
 - b. Cellular tolerance to a drug
 - c. Inadequate doses of a drug
 - d. Decreased drug absorption from patches through the skin
4. Which statement is FALSE for digoxin?
 - a. It does not increase oxygen demand of failing heart significantly
 - b. It produces positive inotropic effect
 - c. It decreases activity of SA and AV nodes
 - d. It increases rate and force of contraction of heart
5. A 58-year-old man was recently diagnosed with the vasospastic angina. Four days after beginning of the therapy, he visited to a clinic, and reported dizziness and fast-beating heart (palpitation) to the physician. What is the most likely reason for the symptoms reported by a patient?
 - a. Dilation of peripheral blood vessels
 - b. Vagus nerve stimulation
 - c. Coronary dilation
 - d. Decreased contractility of myocardium
6. Which anticoagulant is safe in pregnancy?



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- a. Rivaroxaban
 - b. Warfarin
 - c. Heparin
 - d. Phenindione
7. Activation of plasminogen is caused by:
- a. Aspirin
 - b. Urokinase
 - c. Clopidogrel
 - d. Heparin
8. Which statement is CORRECT for amiloride?
- a. It acts in DCT and inhibits Na⁺/Cl⁻ symporter
 - b. It acts in CD and inhibits tubular Na⁺ channel
 - c. It acts in thick AsLH and inhibits Na⁺/K⁺/2Cl⁻ symporter
 - d. It acts in PCT and inhibits Na⁺/H⁺ antiporter
9. A 75-year-old patient having history of heart disease was admitted to the emergency ward due to difficulty in breathing. On examination, it was observed that the patient had a pulmonary edema. Which is the best treatment that can be indicated?
- a. Furosemide
 - b. Spironolactone
 - c. Hydrochlorothiazide
 - d. Mannitol
 - e. Acetazolamide
10. A 65-year-old patient diagnosed with arterial hypertension started a therapy of thiazide. His blood pressure improved well and reached to a normal range. However, after few months of the treatment, he complains to physician of being weak and tired. Blood analysis of patient shows low values of one of the following:
- a. Glucose
 - b. Calcium
 - c. Potassium
 - d. Sodium
 - e. Uric acid

QII. Long Answers (Answer any 1 out of 2)

10

1. Classify antihypertensive drugs. Explain mechanism of action, therapeutic uses and adverse effects of captopril.
2. Classify NSAIDs. Explain their mechanism of action, therapeutic uses, adverse effects and interactions.

QIII. Short Answers (Answer any 2 out of 3)

10

Explain mechanism of action and therapeutic uses of ANY TWO:

1. Digoxin.
2. Nitrates.
3. Statins.

Subject-in-charge

Dr. Kartik Nakhate



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First Sessional Theory Examination

11:09

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Participants

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Presenters (1)

- Kartik Nakhate (Dr.) Organizer

Attendees (102)

- ABOLI PATIL - 15001190047
- ADITYA CHAVAN3 - 1500119...
- AMOL WAGH - 15001190097
- ANIKET ADE - 15001190001
- ANIKET PATIL1 - 15001190048
- ANUSHKA PATIL - 150011900...
- Atul Wagh - 15001200001
- BHAVESH CHAUDHARI - 1500...
- Bhushan Ahire - 15001200008

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First Sessional Theory Examination-(ODD SEM) 2022-2023

Subject : Pharmacology-II (BP503T)	Day & Date : Thu, 10/11/2022	
Class : Third Year B. Pharmacy	Semester : V	Write Your Seat No. Here <input type="text"/>
Time : 10:30 am – 12:00 pm	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
3. Right-hand side number indicates full marks 4. Do not write/tick on the question paper

Q. I: Multiple Choice Questions (MCQs)		10 M
1.	Digoxin inhibits _____ in cardiac myocytes. A. Na ⁺ /K ⁺ -ATPase B. Na ⁺ /Ca ⁺⁺ -exchanger C. Ca ⁺⁺ channels D. Ca ⁺⁺ -ATPase	
2.	Which drug is contraindicated with nitrates due to the risk of life-threatening hypotension? A. β-blockers B. Aspirin C. Sildenafil D. Trimetazidine	
3.	Reflex tachycardia is a side effect of _____: A. Nitrates B. Atenolol C. Verapamil D. Captopril	
4.	Which β-blocker antiarrhythmic drug has additional K ⁺ channel blocking property? A. Propranolol B. Sotalol C. Esmolol D. Metoprolol	
5.	Which drug is preferred to treat ventricular fibrillation resulting from acute myocardial infarction? A. Lidocaine B. Nifedipine C. Aspirin D. Digoxin	
6.	Which drug is a potassium-sparing diuretic? A. Acetazolamide B. Hydrochlorothiazide C. Furosemide D. Spironolactone	
7.	Which diuretic inhibits Na ⁺ /K ⁺ /2Cl ⁻ symporter in the thick ascending loop of Henle? A. Hydrochlorothiazide B. Spironolactone C. Acetazolamide D. Furosemide	
8.	Which drug is contraindicated with β1-blockers? A. Nifedipine B. Hydrochlorothiazide C. Verapamil D. Nitrates	
9.	Which drugs prevent cardiac and vascular remodeling? A. Anticoagulants B. Cardiotonics C. NSAIDs D. ACE inhibitors	
10.	Which drug prevents platelets activation and aggregation? A. Aspirin B. Heparin C. Atorvastatin D. Warfarin	

Q. II: Long Answers Questions (Answer any 1 out of 2)		10 M
1.	Classify antihypertensives. Explain the mechanism of action, uses and adverse effects of ACE inhibitors.	
2.	Classify NSAIDs. Explain their mechanism of action, uses and adverse effects.	

Q. III: Short Answers Questions (Answer any 2 out of 3)		10 M
1.	Classify lipid-lowering drugs. Write in brief the mechanism of action and side effects of statins.	
2.	Justify the use of nitrates in the treatment of stable angina.	
3.	Justify the use of digoxin in controlling ventricular rate during atrial fibrillation.	



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**First Sessional Theory Examination 2021-2022
(ODD SEM)**

Subject & Subject Code: PHARMACOLOGY-II, BP503T

Day & Date: Wednesday, 13.10.2021

Class: B. Pharm. Third Year

Time: 10:30 am-12.00 noon

Semester: 5th

Max. Marks: 30

MS Teams Link: <https://teams.microsoft.com/join/19%3aea024740d80640f1be574098c7ac96e8%40thread.tacv2/1634099801847?context=%7b%22Ti d%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cbc81%22%2c%22Oid%22%3a%22e8b97b05-cc00-4df9-b771-987932d20edb%22%7d>

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI. Multiple Choice Questions (MCQs)

10

1. A 78-year-old patient of stage C heart failure on digoxin therapy was admitted to the emergency room. He presented symptoms like dizziness, fainting, fatigue, chest pain and shortness of breath. Examinations revealed ventricular tachycardia. Which is a drug of choice to manage the condition?
 - a. Nifedipine
 - b. Captopril
 - c. Lidocaine
 - d. Verapamil
2. Which drug inhibits cholesterol absorption from small intestine?
 - a. Ezetimibe
 - b. Cholestyramine
 - c. Clofibrate
 - d. Atorvastatin
3. Two weeks ago, a 50-year-old man diagnosed with stable angina, had started a nitroglycerine treatment as transdermal (skin) patch for a continuous drug delivery. As directed by the physician, he applied a new patch carefully every morning immediately after removal of the old patch. The attacks of angina had completely disappeared in the first week of nitroglycerine patch therapy; however, the anginal episodes were back in second week. What is the reason for angina attacks in second week?
 - a. Variant angina complicating the stable angina
 - b. Cellular tolerance to a drug
 - c. Inadequate doses of a drug
 - d. Decreased drug absorption from patches through the skin
4. Which statement is FALSE for digoxin?
 - a. It does not increase oxygen demand of failing heart significantly
 - b. It produces positive inotropic effect
 - c. It decreases activity of SA and AV nodes
 - d. It increases rate and force of contraction of heart
5. A 58-year-old man was recently diagnosed with the vasospastic angina. Four days after beginning of the therapy, he visited to a clinic, and reported dizziness and fast-beating heart (palpitation) to the physician. What is the most likely reason for the symptoms reported by a patient?
 - a. Dilation of peripheral blood vessels
 - b. Vagus nerve stimulation
 - c. Coronary dilation
 - d. Decreased contractility of myocardium
6. Which anticoagulant is safe in pregnancy?



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- a. Rivaroxaban
 - b. Warfarin
 - c. Heparin
 - d. Phenindione
7. Activation of plasminogen is caused by:
- a. Aspirin
 - b. Urokinase
 - c. Clopidogrel
 - d. Heparin
8. Which statement is CORRECT for amiloride?
- a. It acts in DCT and inhibits Na⁺/Cl⁻ symporter
 - b. It acts in CD and inhibits tubular Na⁺ channel
 - c. It acts in thick AsLH and inhibits Na⁺/K⁺/2Cl⁻ symporter
 - d. It acts in PCT and inhibits Na⁺/H⁺ antiporter
9. A 75-year-old patient having history of heart disease was admitted to the emergency ward due to difficulty in breathing. On examination, it was observed that the patient had a pulmonary edema. Which is the best treatment that can be indicated?
- a. Furosemide
 - b. Spironolactone
 - c. Hydrochlorothiazide
 - d. Mannitol
 - e. Acetazolamide
10. A 65-year-old patient diagnosed with arterial hypertension started a therapy of thiazide. His blood pressure improved well and reached to a normal range. However, after few months of the treatment, he complains to physician of being weak and tired. Blood analysis of patient shows low values of one of the following:
- a. Glucose
 - b. Calcium
 - c. Potassium
 - d. Sodium
 - e. Uric acid

QII. Long Answers (Answer any 1 out of 2)

10

1. Classify antihypertensive drugs. Explain mechanism of action, therapeutic uses and adverse effects of captopril.
2. Classify NSAIDs. Explain their mechanism of action, therapeutic uses, adverse effects and interactions.

QIII. Short Answers (Answer any 2 out of 3)

10

Explain mechanism of action and therapeutic uses of ANY TWO:

1. Digoxin.
2. Nitrates.
3. Statins.

Subject-in-charge


Dr. Kartik Nakhate



Shri. Vile Parle Kelavani Mandal's
Institute of Pharmacy, Dhule

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2019-2020

Subject: Pharmacology – II (BP503T)

Day & Date: 28.09.2019, Saturday

Class: T. Y. B. Pharm

Semester: V

Time: 10.30 am to 12.00 noon

Max. Marks: 30

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- ACE inhibitor prevent metabolism of –
a. Acetylcholine b. Histamine c. Bradykinin d. Serotonin
- One of the following drug can be lifesaving in scleroderma crisis –
a. Beta blockers b. Diuretics c. Ca²⁺ channel blockers d. ACE inhibitors.
- Which of the following antiarrhythmic drug is not effective orally?
a. Phenytoin b. Mexiletine c. Tocainide d. Lignocaine
- The short acting nitrite is –
a. Amylnitrate b. Isosorbide dinitrate
c. Sodium nitrite d. Penta erythritol tetranitrate
- Antihypertensive drug having no action on renin release is
a. Clonidine b. Methyldopa c. Prazosin d. Guane thidine
- Fursemide can cause all except –
a. Ototoxicity b. Hyperkalemia c. Hyperuricemia d. Hypovolemia
- Toxic level of digitalis is –
a. 0.5 ng/ml b. 0.5 – 1.5 ng/ml
c. 1.5 – 2.0 ng/ml d. More than 2.5 ng/ml
- Which of the following interferes with platelet aggregation? –
a. Aspirin b. Dextran - 40 c. Dipyridamole d. All of above
- The iron preparation that can be given i.v. is
a. Ferrous sulphate b. Iron dextran
c. Iron sorbitol citric acid complex d. Colloidal ferric hydroxide
- Heparin is –
a. Polysaccharide b. Lipoprotein c. Monosaccharide d. Ceramide

QII Long Answers (Answer any 1 out of 2)

10

- Define and classify angina pectoris. Write in detail pharmacology of organic nitrates.
- Classify antihypertensive agents with suitable examples. write pharmacology of calcium channel blockers.

QIII Short Answers (Answer any 2 out of 3)

10

- Classify diuretics with suitable examples. Explain mode of action, therapeutic uses and adverse effects of thiazide diuretics
- Classify anticoagulants with suitable examples. Write mode of action, therapeutic uses and adverse effects of warfarin.
- Define and classify bioassay. Write the bioassay of digitalis.



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First Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: Pharmacology II

Day & Date: 22/10/2020

Class: TY

Semester: V

Time: 10:30-01:30PM

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks*

QI Multiple Choice Questions (MCQs)

10

1. Automaticity is
 - a) Transmission of action potential
 - b) Increased contraction
 - c) Increased relaxation
 - d) Spontaneous generation of action potential
2. Oxygenated blood comes into heart via
 - a) Pulmonary artery
 - b) Pulmonary veins
 - c) Coronary sinus
 - d) All of the above
3. The anticoagulant effects of heparin can be promptly arrested by administration of
 - a) Epsilon amino caproic acid
 - b) Protamine sulfate
 - c) Adrenaline
 - d) Vitamin K
4. Hydroxyethyl starch is a
 - a) Plasma expander
 - b) Haemostatic
 - c) Heparin substitute
 - d) Bile acid sequestrant
5. Exertion-induced angina, which is relieved by rest, nitroglycerin, or both, is referred to as
 - (a) Prinzmetal's angina
 - (b) Unstable angina
 - (c) Classic angina
 - (d) Variant angina
 - (e) Preinfarction angina
6. Cardiac glycosides are obtained from following plant source.
 - (a) Rauwolfia serpentina
 - (b) Strophanthus gratus
 - (c) Ricinus commounts.
 - (d) Atropa belladonna
7. Loop diuretics are also called as



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- (a) Potassium sparing diuretics
 - (b) High ceiling diuretics
 - (c) Osmotic diuretics
 - (d) None of the above
8. Aspirin is used as
- (a) Antiplatelet agent
 - (b) COX inhibitor
 - (c) Both a & b
 - (d) None of the above
9. Cetrizine is a
- (a) 5HT antagoist
 - (b) 5HT agonist
 - (c) Histamine antagonist
 - (d) None of the above
10. Products of lipoxygenase pathways are
- (a) Prostaglandins
 - (b) Thromboxane's
 - (c) Leukotrienes
 - (d) Histamine

QII Long Answers (Answer any 1 out of 2)

10

1. Define congestive cardiac failure. Explain the pharmacological actions, mechanism of action, adverse effects and therapeutic uses of digitalis glycosides.
2. What do you mean by the terms diuretics? Classify different diuretics and explain the pharmacology of thiazide diuretics.

QIII Short Answers (Answer any 2 out of 3)

10

1. Enlist drugs used in the treatment of hypertension.
2. Explain therapeutic use and mode of action of heparin.
3. Classify different autocooids and their role.



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First Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: Pharmacology II

Day & Date: 22/10/2020

Class: TY

Semester: V

Time: 10:30-01:30PM

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
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QIII Short Answers (Answer any 2 out of 3)

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First Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: Pharmacology II

Day & Date: 22/10/2020

Class: TY

Semester: V

Time: 10:30-01:30PM

Max. Marks: 30

*Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
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QI Multiple Choice Questions (MCQs)

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- (a) Prostaglandins
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 - (d) Histamine

QII Long Answers (Answer any 1 out of 2)

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2. What do you mean by the terms diuretics? Classify different diuretics and explain the pharmacology of thiazide diuretics.

QIII Short Answers (Answer any 2 out of 3)

10

1. Enlist drugs used in the treatment of hypertension.
2. Explain therapeutic use and mode of action of heparin.
3. Classify different autocooids and their role.



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First Sessional Theory Examination-(Odd Sem) 2023-2024

Subject :	Pharmacology-II (BP503T)	Day & Date :	Wednesday, 1/11/23	
Class :	Third Year B. Pharmacy	Semester :	IV	Write Your Seat No. Here <input type="text"/>
Time :	10:30 am – 12:00 pm	Max. Marks :	30	

Instructions:	1. All questions are compulsory	2. Draw a well labeled diagram wherever necessary
	3. Right hand side number indicates full marks	4. Do not write/tick on the question paper

Q. I	Objective Type Questions (5 x 2 = 10 M) (Answer all the questions)	10 M
1.	Describe the mechanism of action of statins. (LL1, CO1)	
2.	Describe the interaction of nitrates with sildenafil. (LL1, CO1)	
3.	a. Name any two anticoagulant drugs. (LL1, CO1)	
	b. Describe the mechanism of analgesic action of NSAIDs. (LL1, CO2)	
4.	Justify the combination therapy of potassium-sparing diuretics with loop diuretics. (LL5, CO2)	
5.	Classify the antiarrhythmic drugs. (LL2, CO2)	
Q. II	Long Answers Question (Answer any 1 out of 2)	10 M
1.	Classify antianginal drugs. Explain the mechanism of action, side effects and therapeutic uses of nitrates. (LL5, CO1)	
2.	Classify drugs used in CHF. Explain in detail the pharmacology of digoxin. (LL5, CO1)	
Q. III	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Classify antihypertensive drugs. Explain the mechanism of action of ACE inhibitors. (LL5, CO2)	
2.	Explain the mechanism of action and uses of antiplatelet drugs. (LL5, CO2)	
3.	Explain the mechanism of action of drugs used in chronic gout. (LL5, CO2)	



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Institute of Pharmacy, Dhule

Survey No. 499/1, Plot No.3, Behind Gurudwara, Mumbai Agra Highway

First Sessional Theory Examination 2019-2020

Subject: Pharmaceutical Jurisprudence (BP505T)

Day & Date: Tuesday, 01/10/2019

Class: T. Y. B. Pharm

Semester: Vth

Time: 10.30 am to 12.00 pm

Max. Marks: 30 Marks

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 Marks

1. Coca leaf obtain from genus.....
 - a. Cannabis
 - b. Erythroxyton
 - c. Papavarum
 - d. Fabaceae
2. which of the fallowing drug comes under NDPS Act 1985
 - a. Paracetamol
 - b. Amphetamine
 - c. Acetazolamide
 - d. Isoniazid
3. Chapter II of NDPS Act highlights on
 - a. Authority and officers.
 - b. National fund for NDPS
 - c. Prohibition, control and regulations
 - d. Offences and penalties
4. Life period of drugs indicate schedule
 - a. B
 - b. C
 - c. P
 - d. F
5. Issue of licenses and implementation of act perform by
 - a. Licensing Authority
 - b. Drug Inspector
 - c. Custom Collector
 - d. None of Above
6. If formulation containing colour which is not prescribed are consider as ...
 - a. Misbranded drug
 - b. Spurious drug
 - c. Adulterated drug
 - d. All of the above
7. The P.C.I was constituted in-
 - a. 1948
 - b. 1989
 - c. 1949
 - d. 1950
8. Ex-Offico member of central council is –
 - a. Officer incharge of Drug control administrative
 - b. Chief Medical officer
 - c. Govt. Analyst of each state
 - d. the controller of India
9. Offences of Pharmacy act are-
 - a. falsely claiming to be a registered pharmacist.
 - b. failure to surrender certificate of registration.
 - c. Dispensed by unregistered person.
 - d. All of above.
10. The use of Indian hemp plant requires specific license under which of the following act-
 - a. Medicinal & Toilet Preparations Act
 - b. Drugs & Magic Remedies Act
 - c. Drugs and Cosmetic Act
 - d. NDPS Act

QII Long Answers (Answer any 1 out of 2)

10 Marks

1. Write a brief note on objectives, manufacturing of medicinal and toilet preparations with their offences and penalties
2. Write the objectives, constitutions and various functions of PCI

QIII Short Answers (Answer any 2 out of 3)

10 Marks

1. What are the duties of a drug inspector?
2. Describe in details Offences and Penalties under NDPS act 1985
3. Elaborate Sale of Drugs – Wholesale, Retail sale and Restricted license.



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**First Sessional Theory Examination 2020-2021
(Odd SEM)**

Subject & Subject Code: Pharmaceutical Jurisprudence (BP505T)

Day & Date: Saturday 24/10/2020

Class: T.Y. B. Pharmacy

Semester: V

Time: 10:30 AM to 12:00 PM

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- All are the objective of Drug and Cosmetics Act 1940 and their rule 1945 except
A) To regulate import, manufacture, distribution and sale of drug and cosmetics through licenses
B) To establish DTAB and DCC
C) To have regular inspection of licensed premises by the drug inspector
D) To study of laws and fundamental principles, regulating the profession of pharmacy in India.
- Methamphetamine drug sold as a cocaine is the example of
A) Misbranded Drug B) Spurious drug C) Adulterated Drug D) None of the above
- The following drug marketed under the generic name only except_____
A) Piperazine and its salt B) Aspirin and its salt C) Chlorpromazine D) Hydantoin
- Standard for Cosmetics
A) Schedule J B) Schedule S C) Schedule C D) Schedule V
- Schedule FF
A) Standard for umbilical tapes B) Biological and Standard product
C) Standard for Ophthalmic preparation D) Standard for Disinfectant fluids.
- Drug Inspector is appointed under the section_____ of D & C act.
A) 19 B) 42 C) 33 D) 30
- All are the administrative bodies under the D & C act 1940, except
A) DTAB B) DCC C) Licensing Authority D) PCI
- Specify the form number required for licence for retail sale of schedule C and C1 drug
A) 22 B) 21 C) 19 D) 18
- The members of the D.T.A.B. hold the office for a period of_____
A) 03 B) 04 C) 05 D) 06
- DCC stand for
A) Drug Consultative Committee B) Dose Consultative Committee
C) Drug Corporation Committee D) Drug Composition Count

QII Long Answers (Answer any 1 out of 2)

10

- Explain in detail the procedure for import of drugs
- Explain export of medicinal and toilet preparation.

QIII Short Answers (Answer any 2 out of 3)

10

- Give the composition of pharmacy council of India
- Write a short note on Government Analyst
- Write a short note on Sale of Drugs



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**First Sessional Theory Examination 2020-2021
(Odd SEM)**

Subject & Subject Code: Pharmaceutical Jurisprudence (BP505T)

Day & Date: Saturday 24/10/2020

Class: T.Y. B. Pharmacy

Semester: V

Time: 10:30 AM to 12:00 PM

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- All are the objective of Drug and Cosmetics Act 1940 and their rule 1945 except
A) To regulate import, manufacture, distribution and sale of drug and cosmetics through licenses
B) To establish DTAB and DCC
C) To have regular inspection of licensed premises by the drug inspector
D) To study of laws and fundamental principles, regulating the profession of pharmacy in India.
- Methamphetamine drug sold as a cocaine is the example of
A) Misbranded Drug B) Spurious drug C) Adulterated Drug D) None of the above
- The following drug marketed under the generic name only except_____
A) Piperazine and its salt B) Aspirin and its salt C) Chlorpromazine D) Hydantoin
- Standard for Cosmetics
A) Schedule J B) Schedule S C) Schedule C D) Schedule V
- Schedule FF
A) Standard for umbilical tapes B) Biological and Standard product
C) Standard for Ophthalmic preparation D) Standard for Disinfectant fluids.
- Drug Inspector is appointed under the section_____ of D & C act.
A) 19 B) 42 C) 33 D) 30
- All are the administrative bodies under the D & C act 1940, except
A) DTAB B) DCC C) Licensing Authority D) PCI
- Specify the form number required for licence for retail sale of schedule C and C1 drug
A) 22 B) 21 C) 19 D) 18
- The members of the D.T.A.B. hold the office for a period of_____
A) 03 B) 04 C) 05 D) 06
- DCC stand for
A) Drug Consultative Committee B) Dose Consultative Committee
C) Drug Corporation Committee D) Drug Composition Count

QII Long Answers (Answer any 1 out of 2)

10

- Explain in detail the procedure for import of drugs
- Explain export of medicinal and toilet preparation.

QIII Short Answers (Answer any 2 out of 3)

10

- Give the composition of pharmacy council of India
- Write a short note on Government Analyst
- Write a short note on Sale of Drugs



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First Sessional Theory Examination-(ODD SEM) 2022-2023

Subject :	Pharmaceutical Jurisprudence (BP505T)	Day & Date :	SAT, 12/11/2022	
Class :	Third Year B. Pharmacy	Semester :	V	Write Your Seat No. Here
Time :	10:30 am – 12:00 pm	Max. Marks :	30	<input type="text"/>
Instructions:	1. All questions are compulsory 3. Right hand side number indicates full marks		2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper	

QI Multiple Choice Questions (MCQs)		10 M
1.	How many doses are permitted to import for personal use A) 500 doses B) 300 doses C) 200 doses D) 100 doses	
2.	The standard for mechanical contraceptive comes under _____ as per D & C act. A) Schedule D B) Schedule R C) Schedule S D) Schedule V	
3.	Chairman of DTAB is... A) Drug controller of India B) Director, central drug laboratory C) President, PCI D) Director, General of Health Sciences	
4.	The penalty for Manufacture of any spurious drugs A) Fine up to Rs.5000 and 1-3year imprisonment B) Fine up to Rs. 1000 and 12 months imprisonment C) Fine up to 1000and 6 months' imprisonment D) Fine up to Rs. 2000 and 6 months imprisonment	
5.	Central Drug Laboratory is located at _____ A) Izatnagar B) Kolkata C) Kasuli D) Lucknow	
6.	A person is called "Registered Pharmacist" if he is A) Holding at least diploma in pharmacy B) Having sufficient experience in the pharmacy profession C) Having his name entered in the register of pharmacist of the state D) None of the above	
7.	Which body is empowered to make Education Regulations prescribing minimum standards of education required for qualification as a pharmacist? A) Pharmacy Council of India B) State Pharmacy Council C) University Grant Commission D) All India Council of Technical Education	
8.	Following which is not an ex-officio member of the state pharmacy council. A) Director, Central Drug Laboratory B) Chief Administrative Medical Officer of State C) Government Analyst D) Officer In-charge of Drug Control Organization	
9.	An offence in which person falsely claiming to be a registered pharmacist A) Fine up to Rs. 500.00 B) Fine up to Rs. 1000 and 12 months' imprisonment C) 6 months imprisonment D) Fine up to Rs. 2000 and 6 months imprisonment	
10.	Central register of Pharmacist is maintained by _____. A) Pharmacy Council of India B) AICTE C) State Council D) UGC	

QII	Long Answers Question (Answer any 1 out of 2)	10 M
1.	Explain in detail the provisions for the Import of drugs under the Drug and Cosmetics Act 1940.	
2.	Describe in detail the standards for Patent or Proprietary Medicines (Schedule V).	
QIII	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Write the objectives, constitutions and various functions of PCI	
2.	Write a short note on Drug Technical Advisory Board (DTAB).	
3.	What is a registered pharmacist? Explain the process of registration of pharmacists.	



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First Sessional Theory Examination-(ODD SEM) 2023-2024

Subject	: Pharmaceutical Jurisprudence (BP505T)	Day & Date	: Friday, 03/11/2023	
Class	: Third Year B. Pharmacy	Semester	: V	Write Your Seat No. Here
Time	: 10:30 am – 12:00 pm	Max. Marks	: 30	<input type="text"/>
Instructions:	1. All questions are compulsory 3. Right hand side number indicates full marks		2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper	

QI Objective types questions		10 M
1.	Write a legal definition of Schedule J and Schedule O as per D & C Act 1940 and Rule 1945. (LL1, CO1)	
2.	What do you mean by repacking licence? (LL2, CO1)	
3.	Define: a) Adulterated drug b) Denatured spirit (LL2, CO1, CO2)	
4.	Enlist the general labelling requirements as per D & C Act. (LL2, CO2)	
5.	Differentiate between manufacture In-bond and outside bond. (LL2, CO2)	

Q II Long Answers Question (Answer any 1 out of 2)		10 M
1.	Explain in detail about the procedure for the Import of drugs under the Drug and Cosmetics Act 1940. (LL2, CO1)	
2.	Discuss the manufacture of drugs for testing, examination and analysis and write a note on the loan license. (LL2, CO1)	

Q III Short Answers Question (Answer any 2 out of 3)		10 M
1.	Write the objectives and various functions of PCI. (LL1, CO2)	
2.	Write a short note on the Drug Technical Advisory Board (DTAB). (LL1, CO2)	
3.	What are the qualifications and duties of a Drug inspector? (LL2, CO2)	



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First Sessional Theory Examination-(ODD SEM) 2023-2024

Subject	: Pharmaceutical Jurisprudence (BP505T)	Day & Date	: Friday, 03/11/2023	
Class	: Third Year B. Pharmacy	Semester	: V	Write Your Seat No. Here
Time	: 10:30 am – 12:00 pm	Max. Marks	: 30	<input type="text"/>
Instructions:	1. All questions are compulsory 3. Right hand side number indicates full marks		2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper	

QI Objective types questions		10 M
1.	Write a legal definition of Schedule J and Schedule O as per D & C Act 1940 and Rule 1945. (LL1, CO1)	
2.	What do you mean by repacking licence? (LL2, CO1)	
3.	Define: a) Adulterated drug b) Denatured spirit (LL2, CO1, CO2)	
4.	Enlist the general labelling requirements as per D & C Act. (LL2, CO2)	
5.	Differentiate between manufacture In-bond and outside bond. (LL2, CO2)	

Q II	Long Answers Question (Answer any 1 out of 2)	10 M
1.	Explain in detail about the procedure for the Import of drugs under the Drug and Cosmetics Act 1940. (LL2, CO1)	
2.	Discuss the manufacture of drugs for testing, examination and analysis and write a note on the loan license. (LL2, CO1)	

Q III	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Write the objectives and various functions of PCI. (LL1, CO2)	
2.	Write a short note on the Drug Technical Advisory Board (DTAB). (LL1, CO2)	
3.	What are the qualifications and duties of a Drug inspector? (LL2, CO2)	



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Second Sessional Theory Examination 2019-2020

Subject: Pharmacognosy & Phytochemistry-II (BP504T)

Day & Date: Sunday, 10/11/19

Class: T.Y.B.Pharmacy

Semester: V

Time: 10: 30 am to 12: 00 pm

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1 The Rf value of the standard Diosgenin is

- a) 0.37 b) 0.35 c) 0.38 d) 0.36

2. The ration of strong ammonia solution: methanol for atropine is

- a) 1.4:100 b) 1.5:100 c) 97:3 d) 70:30

3. Fermentation cum acid hydrolysis method of production use for:

- a) Atropine b) Sennoside c) Diosgenin d) Digoxin

4. Successive extraction is also known as:

- a) Super critical fluid extraction b) Froth floating technique
c) Maceration d) Soxhlet extraction

5. Froth floating technique employed for extraction of:

- a) mineral ores b) fatty acids c) Alkaloids d) Glycosides

6. Which factor affects rate of extraction?

- a) Viscosity b) Thickness d) sample e) pH

7. Esterification is necessary for the following chromatography

- a) HPLC b) HPTLC c) GC d) TLC

8 Which type of column use for separation of flavonoids in HPLC?

- a) Vydac 101 SC b) Permaphae AAX c) Partisil 10 d) μ Bondapak C-18

9. Retention time is calculated in the following type of chromatography

- a) HPLC b) GC c) HPTLC d) TLC

10 Which of the following mobile phase use for separation of podophyllotoxin

- a) Ethyl acetate: methanol b) Chloroform: methanol
c) Toluene: Ethyl acetate d) Ethyl acetate: Formic acid: Acetic acid

QII Long Answers (Answer any 1 out of 2)

10

1. Describe in detail Industrial Production, Estimation and Utilization of the following phytoconstituents: a) Vincristine and Vinblastine b) Atropine c) Diosgenine d) Taxol
2. Explain in brief modern methods of extraction.

QIII Short Answers (Answer any 2 out of 3)

10

1. Write in detail Isolation and identification of curcumin and caffeine
2. Explain in detail applications of chromatography in the study of phytochemistry
3. Elaborate applications of spectroscopy in field of phytochemical research



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Second Sessional Theory Examination-(ODD SEM) 2022-2023

Subject :	Industrial Pharmacy-I (BP502T)	Day & Date :	TUE, 03/01/2023	
Class :	Third Year B. Pharmacy	Semester :	V	Write Your Seat No. Here <input type="text"/>
Time :	02:30 pm – 04:00 pm	Max. Marks :	30	

Instructions:	1. All questions are compulsory	2. Draw a well labeled diagram wherever necessary
	3. Right hand side number indicates full marks	4. Do not write/tick on the question paper

QI Multiple Choice Questions (MCQs) 10 M

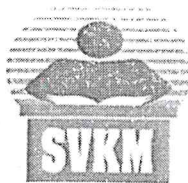
- Which of the following is considered as solvent-free method in Pelletization? (LL2, CO3)
A. Extrusion- spheronization B. Hot-melt extrusion C. aqueous-based direct pelletization D. None of these
- Rounding off of rod-shaped particles into spherical particles is referred as..... (LL1, CO3)
A. Extrusion B. Wet massing C. Spheronization D. None of these
- Pyrogen test is said to be passed if the rise in temperature of individual rabbits does not exceed °C as per IP (LL4, CO3)
A. 0.5 B. 0.6 C. 0.8 D. 0.4
- Low molecular weight lipophilic drugs can be absorbed through..... route. (LL2, CO3)
A. Transcorneal B. scleral C. conjunctival route D. None of these
- Following are commonly used excipients in the preparation of eye ointments except.... (LL1, CO3)
A. Liquid paraffin B. White soft paraffin C. Yellow soft paraffin D. Wool fat
- What is the mechanism involved in the formulation of vanishing creams? (LL3, CO4)
A. Neutralization B. In-situ soap formation C. salt formation D. none of these
- Which type of aerosol container can only tolerate pressure less than 18 psig?.....(LL3, CO4)
A. Aluminium B. Tinplated steel C. Uncoated glass D. Plastic
- Which type of test is used to distinguish type I glass container from Type II and III glass containers? (LL3, CO4)
A. Glass grain test B. Surface glass test C. Surface itching test D. Spectral transmission test
- Which of the polymeric material in plastic containers is not autoclavable? (LL3, CO4)
A. Polypropylene B. High density polyethylene C. Low density polyethylene D. Polyamide
- The density of an aerosol system can be accurately determined by ----- . (LL2, CO4)
A. Pycnometer B. Karl Fischer method C. IR spectroscopy D. Pressure gauge

QII Long Answers Question (Answer any 1 out of 2) 10 M

- Explain in detail about the formulation of large Volume Parenterals. Extend the note on lyophilized products. (LL3, CO3)
- Illustrate in detail about the production process, facilities and controls in parenteral product manufacturing. (LL3, CO3)

QIII Short Answers Question (Answer any 2 out of 3) 10 M

- Illustrate about the types of aerosol systems. (LL3, CO4)
- Explain in detail about the evaluation tests of rubber closures. (LL4, CO4)
- Explain in detail about the formulation of hair dyes. (LL2, CO4)



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Second Sessional Theory Examination 2019-2020

Subject: Industrial Pharmacy-I (BP502T)

Day & Date: Thu, 07/11/19

Class: Third Year B. Pharm

Semester: V

Time: 10.30 – 12.00 pm

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. The viscosity required for ophthalmic product is
a. 25-45 centipoise b. 15-25 centipoise c. 15-25 millipoise d. 25-45 millipoise
2. Benzalkonium chloride is used as preservative in eye drop against *pseudomonas aeruginosa* in combination with
a. Butylated Hydroxy Toluene b. DMSO c. EDTA d. Chlorbutanol
3. Official Limit for Powdered attack test on Type I glass container is
a. ≤ 1 ml b. ≤ 0.5 ml c. ≤ 8.5 ml d. ≤ 15 ml
4. The vulcanizing agent used in fabrication of rubber closure for parenteral product is
a. Zinc oxide b. Sulfur c. Carbon black d. Mercaptobenzthiazole
5. Plastic Polymer used as container for IV Saline Solution is
a. Hydroxy Propyl Methyl Cellulose b. Polycarbonate
c. High density Polyethylene d. Poly Vinyl Chloride
6. Total Solid Content of Water for Injection as per USP is not more than
a. 10 ppm b. 01 ppm c. 10 ppb d. 01 ppb
7. Antioxidant used to block oxidative chain reaction in parenteral product
a. Ascorbic acid b. Butylated Hydroxy Toluene c. EDTA d. Benzoic acid
8. Total vapour pressure of mixture of propellant can be calculated according to
a. Raoults law b. Ficks First law c. Daltons law d. Gibbs law
9. Propellant used in aerosol for oral and inhalation purpose is
a. Dimethyl ether b. Nitrous oxide c. n-Butane d. Hydrofluorocarbon
10. Cold cream formulation is based which mechanism
a. Neutralization b. Saponification c. Radical formation d. Polymerization

Q.II Long Answers (Answer any 1 out of 2)

10

1. Define Parenteral dosage form and describe in detail about formulation of parenteral product.
2. Explain in details about evaluation of Aerosol dosage form.

Q.III Short Answers (Answer any 2 out of 3)

10

1. Describe in brief about Vanishing cream.
2. Illustrate in brief about Glass container or Rubber closure.
3. Write a note on sterility test or pyrogen test.



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Second Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: Industrial Pharmacy-I (BP 502T)

Day & Date: Friday, 11/12/2020

Class: Third Year B. Pharm

Semester: V

Time: 10.30 am- 12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- Specific gravity is the weight of the mixture (W) per.....
a. 14 minims, b. 16.23 minims, c. 20 minims, d. 26.23 minims
- In aerosols drug is in the propellant.
a. Dissolved, b. Emulsified, c. Suspended, d. All of the above
- Following are the components of lipsticks except....
a. Waxes, b. oils, c. nitro-amino dyes, d. bromo mixtures
- In which system propellants are emulsified?
a. Aquasol, b. foam, c. solution system, d. all of the above
- LAL test is used to detect/identify the endotoxins of.....
a. Gram positive bacteria, b. Gram negative bacteria, c. both A and B, d. none of these
- Which of the following materials are used as abrasives in the preparation of toothpaste?
a. Sodium metaphosphate, b. tricalcium phosphate, c. Calcium carbonate, d. all of the above.
- Poor bioavailability of ophthalmic products is due to...
a. Blinking, b. reflex lacrimation, c. nasolacrimal drainage, d. all of the above.
- The maximum volume for oval shaped soft gelatin capsules convenient for oral use in humans is...
a. 16 minim, b. 9 minim, c. 20 minim, d. 25 minim
- Powdered glass test is used to determine leaching from following types of glass types except....
a. Type I, b. Type II, c. Type III, d. Type IV



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10. The front of the eye is filled with.....

- a. Vitreous humor, b. Aqueous fluid, c. both a and b, d. none of these.

QII Long Answers (Answer any 1 out of 2)

10

1. Enlist and Explain in detail about various components involved in aerosol system.
2. Explain the additives used in parenteral manufacturing. Add a note on formulation of small volume parenterals.

QIII Short Answers (Answer any 2 out of 3)

10

1. Discuss in detail the extrusion-spheronization process for pellet manufacturing.
2. Explain the formulation and preparation of hair dyes.
3. Explain about the evaluation of ophthalmic preparations.



Mapping of Course Outcome with Second Sessional Exam

Course Outcome	Question	Marks
CO 5023: Analyze In-processing problems, perform IPQC testing on Tablets & Capsule and discuss palletization technique (Level 4)	Q.1 – 1,8	07
	Q 3 – 1	
CO 5024: Formulate, evaluate and explain method of preparation for Parenteral and Ophthalmic dosage form (Level 3)	Q 1 – 5,7,9,10	19
	Q 2 - 2	
	Q 3 - 3	
CO 5025: Select propellant and other additives for design of Aerosol and Cosmaceutical products (Level 3 & 4)	Q.1 – 2,3,4,6	19
	Q 2 - 1	
	Q 3 - 2	



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**Second Sessional Theory Examination 2020-2021
(ODD SEM)**

Subject & Subject Code: Industrial Pharmacy-I (BP 502T)

Day & Date: Tuesday 14/12/2021

Class: Third Year B. Pharm

Time: 10.30 AM to 12.00 PM

Semester: V

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- In Pelletization, the formation of rod-shaped particles is referred as.....
a. Spheronization, c. Wet Massing, c. extrusion, d. None of these.
- Ringer's injection is an example of....
a. Small volume parenteral, b. Large volume parenterals, c. both a and b, d. none of these.
- Which one of these is not a pelletization process?
a. Spray drying/congelation; b. Powder layering; c. Fluidised granulation; d. Extrusion-spheronization
- The back of the eye is filled with_____ humor.
a. Aqueous; b. Vitreous; c. Both; d. None of the above
- ISO Class 5 is a room in which the particle count in the air is not more than.... per cubic foot of 0.5 μ m and larger in size.
a. 1000; b. 10000; c. 100, d. 10
- Which is not child resistant technology
a. Push and turn down; b. Squeeze the sides and turn; c. Turn clockwise; d. Push down the tab and turn
- Which type of aerosol container can only tolerate pressure less than 25 psig?
a. Tinplated steel; b. Aluminium; c. stainless steel; d. Coated glass
- Beeswax borax are the main ingredients used in the preparation of-
a. Cold creams; b. Shampoo; c. Vanishing creams; d. Sunscreen preparations
- Following are the functionality tests applicable for rubber closures except-
a. Fragmentation; b. Penetrability, c. Self-seal ability; d. Collapsibility
- Abrasives and polishing agents are utilized in the preparation of-
a. Sunscreen preparations; b. toothpastes; c. hair dyes; d. lipsticks

QII Long Answers Question (Answer any 1 out of 2)

10

- Describe in detail about the formulation of Small Volume Parenterals. Explain the Pyrogen Test / Sterility Test for Parenterals.
- Discuss the formulation considerations of ophthalmic preparations. Explain about preparation of eye drops.

QIII Short Answers Question (Answer any 2 out of 3)

10

- Explain about the Propellants and Valve system in aerosols.
- Discuss about the evaluation of glass **OR** Plastic packaging.
- Illustrate in brief about formulation of Lipsticks.

----- **ALL THE BEST!** -----



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Second Sessional Theory Examination 2020-2021
(Odd SEM)

Subject & Subject Code: MC-II (BP 501T)

Day & Date: Tue 10/12/2020

Class: T.Y.B. Pharm

Semester: V

Time: 10:30am-12:00pm

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

Q I Multiple Choice Questions (MCQs)

10

- In congestive cardiac failure, digitalis glycosides are used because it increases
 - The heart rate
 - The force of myocardial contraction
 - The venous pressure
 - The cardiac filling pressure
- Anti-inflammatory effect of glucocorticoids is caused by
 - Reducing the prostaglandin and leukotriene which results from inhibition of phospholipase A
 - Reducing macrophages migration into the site of inflammation
 - Decreasing capillary permeability
 - All of the above
- of Sildenafil is used for the treatment Pulmonary Arterial Hypertension (PAH)
 - Round white tablet
 - Blue Oval tablet
 - Compressed tablet
 - Molded tablet
- Which of the Following is not coumarin derivative
 - Warfarin
 - Dicumarol
 - Vitamin K
 - Acenocumarol
- Following are thyroid drugs except
 - Thyroxine Sodium
 - Propylthiouracil
 - Levothyroxine
 - Thyroglobulin
- Bicyclic ring containing local anesthetics is
 - Butamben
 - Procaine
 - Lidocaine
 - Cocaine
- Which one of the following local anesthetics causes methemoglobinemia?
 - Prilocaine
 - Procaine
 - Lidocaine
 - Ropivacaine
- Following is a long acting insulin
 - Insulin Glargine
 - Insulin Lispro
 - Insulin Lente
 - Insulin Glulisine
- Which of the following is not aryl sulphonyl containing OHG
 - Metformin
 - Glimepiride
 - Glipizide
 - Both b and c
- Which of the Following is non-steroidal Estrogen
 - Diethylstilbestrol
 - Mifepristone
 - Norgestrel
 - None of the above

Q II Long Answers (Answer any 1 out of 2)

10

- What are steroids? Write the nomenclature and Stereochemistry of steroids
- What is Diabetes Mellitus? Classify oral hypoglycemic agents with suitable structures from each class. Write the SAR of Sulphonyl Urea.



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Q III Short Answers (Answer any 2 out of 3)

10

1. What is anticoagulants? Write a Structure Activity Relationship of Warfarin
2. Write a note on Norgestrel and Mifepristone as an Oral Contraceptive Drugs.
3. Write the classification and SAR of Ester containing Local Anesthetic Drugs with structures.



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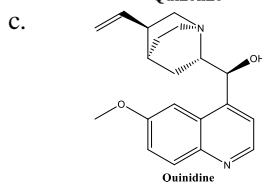
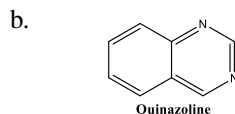
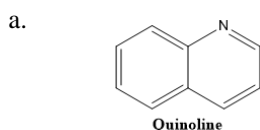
Second Sessional Theory Examination 2021-2022 (Odd Semester)

Subject : Medicinal Chemistry-II (BP501T) **Day & Date** : Monday & 13/12/2021
Class : Third Y. B. Pharmacy **Semester** : V
Time : 10:30am - 12:00 pm hrs **Max. Marks** : 30

Instructions: 1. All questions are compulsory.
2. Draw a well labelled diagram wherever necessary
3. Right hand side number indicates full marks

Q.1 Multiple Choice Questions [10]

- i Lovastatin is obtained from which of following microorganism
- a. *Aspergillus niger* and *Monascus ruber* b. *Aspergillus terreus* and *Monascus ruber*
c. *Penicillium citrinium* and *Monascus ruber* d. *Penicillium citrinium* and *Aspergillus terreus*
- ii The basic ring present in atorvastatin is
- a. Indole b. Pyrrole
c. Naphthalene d. None of the above
- iii Drug that inhibits absorption of Glucose in GIT is
- a. Pioglitazone b. Repaglinide
c. Tolbutamide d. Metformin
- iv Insulin is produced from preproinsulin which contains -----
- a. 110 amino acids b. 86 amino acids
c. 35 amino acids d. 125 amino acid
- v Meglitinide is also called
- a. Glitazones b. Insulin secretagogues
c. D-Phenylalanine analogue d. AMPK Activators
- vi Dibucaine contains -----basic nucleus



d. None of the above

- vii Parafoollicular Cells of Thyroid gland secretes
- a. T3 b. T4
c. Calcitonin d. All of the above
- viii Which of the Following is non-steroidal Estrogen
- a. Diethylstilbestrol b. Mifepristone
c. Ethinyl Estradiol d. Norgestrel
- ix Which one of the following local anaesthetics causes methemoglobinemia
- a. Prilocaine b. Procaine
c. Lidocaine d. Ropivacaine
- x 17-β-hydroxyl androst-4-ene-3-one is IUPAC of
- a. Oestradiol b. Estriol
c. Cortisone d. Testosterone

Q.2. Answer the following short questions (*any one*) [10]

- a Classify steroids and highlight the SAR of Anti-inflammatory Synthetic Steroids with examples
b Write Structure activity relationship of local anesthetic with ester group and outline the synthesis of Dibucaine

Q.3. Answer in detail of following (*any two*) [10]

- a Justify Mifepristone and Levonorgestrel as Oral contraceptives
b Classify antidiabetic drugs with suitable structures from each class. highlight SAR of Sulphonyl urea
c Outline the synthesis & IUPAC of
a. Warfarin b. Tolbutamide



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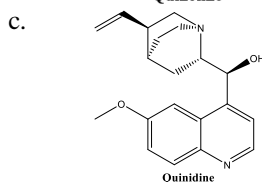
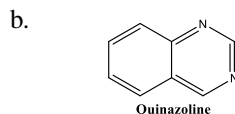
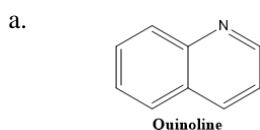
Second Sessional Theory Examination 2021-2022 (Odd Semester)

Subject : Medicinal Chemistry-II (BP501T) Day & Date : Monday & 13/12/2021
Class : Third Y. B. Pharmacy Semester : V
Time : 10:30am - 12:00 pm hrs Max. Marks : 30

*Instructions: 1. All questions are compulsory.
2. Draw a well labelled diagram wherever necessary
3. Right hand side number indicates full marks*

Q.1 Multiple Choice Questions [10]

- i Lovastatin is obtained from which of following microorganism
- a. *Aspergillus niger* and *Monascus ruber* b. *Aspergillus terreus* and *Monascus ruber*
c. *Penicillium citrinium* and *Monascus ruber* d. *Penicillium citrinium* and *Aspergillus terreus*
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- iii Drug that inhibits absorption of Glucose in GIT is
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c. Tolbutamide d. Metformin
- iv Insulin is produced from preproinsulin which contains -----
- a. 110 amino acids b. 86 amino acids
c. 35 amino acids d. 125 amino acid
- v Meglitinide is also called
- a. Glitazones b. Insulin secretagogues
c. D-Phenylalanine analogue d. AMPK Activators
- vi Dibucaine contains -----basic nucleus



d. None of the above

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- a. T3 b. T4
c. Calcitonin d. All of the above
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Q.2. Answer the following short questions (*any one*) [10]

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b Write Structure activity relationship of local anesthetic with ester group and outline the synthesis of Dibucaine

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a. Warfarin b. Tolbutamide



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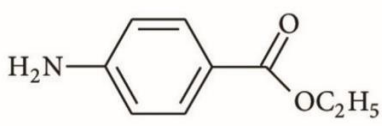
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Second Sessional Theory Examination-(ODD SEM) 2022-2023

Subject	Medicinal Chemistry-II (BP501T)	Day & Date	Mon, 02/01/2023
Class	Third Year B. Pharmacy	Semester	V
Time	02:30 pm – 04:00 pm	Max. Marks	30

Write Your Seat No. Here

Instructions	1. All questions are compulsory 3. Right hand side number indicates full marks	2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper
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QI Multiple Choice Questions (MCQs)		10 M
1.	Which of the following vitamin is used by liver to produce clotting factors II, VII, IX, and X? (LL1, CO3)	
	A) Vitamin A B) Vitamin D C) Vitamin E D) Vitamin K	
2.	The sugar moiety present in Digoxin is(LL2, CO3)	
	A) Digitoxose B) Glucose C) Mannose D) Arabinose	
3.	Inhibitors of Na/K ATPase, used in management of CHF is (LL2, CO3)	
	A) Amrinone B) dobutamine C) digoxin D) minoxidil	
4.	What do all steroids have in common? (LL2, CO3)	
	A) They contain four rings of carbon atoms B) They contain at least one fatty acid group C) They are manufactured by the liver D) They are water-soluble	
5.	Which of the following form is the active form of thyroid hormone? (LL1, CO3)	
	A) T3 B) T4 C) rT3 D) none of the above	
6.	What is the first-line drug for patients with type 2 diabetes and obesity? (LL3, CO4)	
	A) Acarbose B) Metformin C) Sulphonylureas D) Insulin above	
7.	Sulfonylurea hypoglycemic agents act through which of receptor? (LL2, CO4)	
	A) Potassium Channel B) Calcium Channel C) B-Adrenergic Receptors D) Muscarinic Receptors	
8.	Insulin Receptors consists of? (LL3, CO4)	
	A) 1 Alpha & 2 Beta subunits B) 2 Alpha & 2 Beta subunits C) 2 Alpha & 1 Beta subunits D) 2 Alpha & 3 Beta subunits	
9.	Amide-type local anesthetic is ... (LL3, CO4)	
	A) Lidocaine B) Tetracaine C) Benzocaine D) Butamben	
10.	Identify the structure (LL3, CO4)	
		
	A) Procaine B) Butamben C) Benzocaine D) Benoxinate	

QII	Long Answers Question (Answer any 1 out of 2)	10 M
1.	Explain the SAR of local anesthetic agents. Give the synthetic route of Dibucaine. (LL3, CO4)	
2.	Classify the oral hypoglycemic agents with examples. Explain the MOA of Biguanides and thiazolidinediones. (LL3, CO4)	
QIII	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Explain the MOA of warfarin and give its synthetic route. (LL3, CO3)	
2.	What are steroid hormones. Write a note on oral contraceptive agents. (LL3, CO3)	
3.	What is hyperthyroidism. Write a note on antithyroid drugs. (LL3, CO3)	

Prepared by

Verified by

Approved by

Mr. Mahendra Khairnar

Dr. Girija Bhavar

Dr. Raghu Prasad



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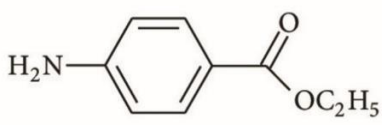
Second Sessional Theory Examination-(ODD SEM) 2022-2023

Subject	Medicinal Chemistry-II (BP501T)	Day & Date	Mon, 02/01/2023
Class	Third Year B. Pharmacy	Semester	V
Time	02:30 pm – 04:00 pm	Max. Marks	30

Write Your Seat No. Here

Instructions	1. All questions are compulsory 3. Right hand side number indicates full marks	2. Draw a well labeled diagram wherever necessary 4. Do not write/tick on the question paper
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QI Multiple Choice Questions (MCQs) 10 M

1.	Which of the following vitamin is used by liver to produce clotting factors II, VII, IX, and X? (LL1, CO3)	
	A) Vitamin A B) Vitamin D C) Vitamin E D) Vitamin K	
2.	The sugar moiety present in Digoxin is(LL2, CO3)	
	A) Digitoxose B) Glucose C) Mannose D) Arabinose	
3.	Inhibitors of Na/K ATPase, used in management of CHF is (LL2, CO3)	
	A) Amrinone B) dobutamine C) digoxin D) minoxidil	
4.	What do all steroids have in common? (LL2, CO3)	
	A) They contain four rings of carbon atoms B) They contain at least one fatty acid group C) They are manufactured by the liver D) They are water-soluble	
5.	Which of the following form is the active form of thyroid hormone? (LL1, CO3)	
	A) T3 B) T4 C) rT3 D) none of the above	
6.	What is the first-line drug for patients with type 2 diabetes and obesity? (LL3, CO4)	
	A) Acarbose B) Metformin C) Sulphonylureas D) Insulin above	
7.	Sulfonylurea hypoglycemic agents act through which of receptor? (LL2, CO4)	
	A) Potassium Channel B) Calcium Channel C) B-Adrenergic Receptors D) Muscarinic Receptors	
8.	Insulin Receptors consists of? (LL3, CO4)	
	A) 1 Alpha & 2 Beta subunits B) 2 Alpha & 2 Beta subunits C) 2 Alpha & 1 Beta subunits D) 2 Alpha & 3 Beta subunits	
9.	Amide-type local anesthetic is ... (LL3, CO4)	
	A) Lidocaine B) Tetracaine C) Benzocaine D) Butamben	
10.	Identify the structure (LL3, CO4)	
		
	A) Procaine B) Butamben C) Benzocaine D) Benoxinate	

QII	Long Answers Question (Answer any 1 out of 2)	10 M
1.	Explain the SAR of local anesthetic agents. Give the synthetic route of Dibucaine. (LL3, CO4)	
2.	Classify the oral hypoglycemic agents with examples. Explain the MOA of Biguanides and thiazolidinediones. (LL3, CO4)	
QIII	Short Answers Question (Answer any 2 out of 3)	10 M
1.	Explain the MOA of warfarin and give its synthetic route. (LL3, CO3)	
2.	What are steroid hormones. Write a note on oral contraceptive agents. (LL3, CO3)	
3.	What is hyperthyroidism. Write a note on antithyroid drugs. (LL3, CO3)	

Prepared by

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Approved by

Mr. Mahendra Khairnar

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**Second Sessional Theory Examination 2020-2021
(Odd SEM)**

Subject & Subject Code: Pharmacognosy & Phytochemistry-II (BP504T)

Day & Date: Monday, 14/12/2020

Class: T.Y. B. Pharmacy

Time: 10: 30 am to 12:00 noon

Semester: V

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs) 10

- _____ melting point of Curcumin.
a) 183 °C b) 185 °C c) 187 °C d) 189 °C
- Mobile phase for determination of Reserpine _____
a) Methanol: Water b) Chloroform: Water: Formic acid
c) Cyclohexane: Chloroform d) Ethyl acetate: Chloroform: Water
- _____ is the precursor for steroid synthesis
a) Digitalis b) Artemesin c) Disocorea d) Taxol
- Benzene: Methanol mobile phase used for the separation of _____
a) Digoxin b) Caffeine c) Atropine d) Forskolin
- Ultrasound extractor involves the use of frequency ranges: _____
a) 20 to 2000 kHz b) 20 to 1000 kHz c) 10 to 2000 kHz d) 10 to 1000 kHz
- Solvent Free product is obtained in _____ extractor
a) Soxhlet b) Craig counter current c) Microwave d) Super critical Fluid
- _____ method is use for Separation of proteins
a) TLC b) Electrophoresis c) Column d) HPLC
- Which method of chromatography used for separation of volatile and fixed oil components?
a) HPLC b) HPTLC c) Column d) GC
- The ration of distance travel by solute /distance travel by solvent refers to:
a) R_f value b) R_t value c) R_m value d) R_c value
- Thermal conductivity detector are used in _____
a) HPLC b) HPTLC c) GC d) TLC

QII Long Answers Question (Answer any 1 out of 2) 10

- Describe the applications of Chromatography and Spectroscopy in Phytochemical Analysis.
- Describe Industrial production, Estimation and Utilization of Atropine, Artemesin and Disogenin

QIII Short Answers Question (Answer any 2 out of 3) 10

- Write a note on Craig-Counter Current extraction.
- Explain principle and applications of Electrophoresis in Phytochemical research
- Write a note on Isolation and identification of Quinine and Reserpine



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Second Sessional Theory Examination 2021-2022. (Odd SEM)

Subject & Subject Code: Pharmacognosy and Phytochemistry-II BP504T

Day & Date: Thursday, 16/12/2021

Class: T. Y. B. Pharm.

Time: 10.30am to 12.00pm

Semester: V

Max. Marks: 30

Instructions

- All questions are compulsory.
- Draw well labeled diagrams or infographics, wherever necessary.
- Right hand side number indicates full marks.

Q1 Attempt following multiple choice questions: (10x1=10)

1] What are two varieties of plants used to isolate Taxol?

- i) *Taxus brevifolia* & *Taxus baccata* ii) *Taxus vera* & *Taxus baccata* iii) *Taxus brevifolia* & *Taxus vera* iv) None

2] Microwaves are electromagnetic radiations with wavelength ranging from 1m to 10mm and frequency from

- i) 30 MHz & 500 GHz ii) 400MHz & 500 GHz iii) 0.3MHz & 50 GHz iv) 300MHz & 300 GHz

3] Digoxin is obtained from

- i) Lanatoside A ii) Lanatoside B iii) Lanatoside C iv) Lanatoside D

4] Analytical & preparative techniques are associated with

- i) TLC ii) Electrophoresis iii) NMR spectroscopy iv) Supercritical Fluid

5] Which of the following is not an example of resin?

- i) Turmeric ii) Ginger iii) Podophyllotoxin iv) None of these

6] Murexide test is use to confirm the presence of

- i) Vincristine ii) Ergotamine iii) Caffeine iv) Atropine

7] Adsorbent layer thickness in HPTLC is around

- i) 10-20 μm ii) 100-150 μm iii) 50-60 μm iv) 30-40 μm

8] Critical temperature and critical pressure (respectively) for CO₂ is

- i) 31°C & 74 atm ii) 31°C & 150 atm iii) 10°C & 74 atm v) None of these

9] Which of the following plant is used to get the drug to treat organophosphorus poisoning?

- i) *Curcuma longa* ii) *Vinca rosea* iii) *Atropa belladonna* iv) ii & iii

10] Cavitation phenomenon is associated with which of the following modern methods of extraction?

- i) Percolation ii) Soxhlet extraction iii) Ultrasonication assisted extraction iv) Maceration

Q2 Answer the following short answer questions: (Any two) (2x5=10)

- A. Explain isolation, identification & analysis of atropine & citral.
B. Write a brief note on applications of TLC, UV-visible spectroscopy in phytochemistry, with suitable examples.
C. How podophyllotoxin & menthol are isolated & analyzed.

Q3. Answer the following long questions in detail: (Any one) (1x10)

- a. Generate scheme for industrial production and estimation of Taxol & sennoside. Also reflect various uses of taxol, disogenin & atropine.
b. Organize various modern methods of extraction; analyze and create a detail on supercritical fluid extraction and microwave assisted extraction with their applications and instrument set up.



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Second Sessional Theory Examination-(ODD SEM) 2022-2023

Subject : (BP504T)Pharmacognosy & Phytochemistry II	Day & Date : Thursday, 5/1/2023	
Class : Third Year B. Pharmacy	Semester : V	<i>Write Your Seat No. Here</i>
Time : 2:30 pm to 4:00 pm	Max. Marks : 30	

Instructions: 1. All questions are compulsory
2. Draw a well-labeled diagram wherever necessary
3. Right-hand side number indicates full marks
4. Do not write/tick on the question paper

Q. I: Multiple Choice Questions (MCQs)	10 M
1. Lawsone is an example of	(CO3, LL1)
A. Naphthoquinone B. Anthraquinone C. Lignan D. None of these	
2. Microwaves are electromagnetic radiations with wavelength ranging from 1m to 10mm and frequency from	(CO3, LL1)
A. 30 MHz & 500 GHz B. ii)400MHz & 500 GHz C. iii)0.3MHz & 50 GHz D. iv) 300MHz & 300 GHz	
3. Glycyrrhetic acid is obtained from	(CO3, LL1)
A. Liquorice B. Digitalis C. Forskolin D. None of these	
4. Which of the following is an anticancer agent?	(CO3, LL1)
A. Vinca B. Taxol C. Podophyllum D. All of these	
5. Quinine is obtained from	(CO3, LL1)
A. <i>Cinchona succirubra</i> B. <i>C. calisaya</i> C. <i>C. ledgering</i> D. All of these	
6. Normal & reverse phase concept is associated with	(CO4, LL1)
A. Chromatography B. Electrophoresis C. Spectroscopy D. Supercritical Fluid Extraction	
7. Chromatography is used for of phytoconstituents (CO4, LL1)	
A. Identification B. Separation C. both i & ii D. None of these	
8. Critical temperature and critical pressure (respectively) for CO ₂ is (CO4, LL1)	
A. 31°C & 74 atm B. 31°C & 150 atm C. 10°C & 74 atm D. None of these	
9. TLC and HPTLC same? (CO4, LL1)	
A. Yes B. No	
10. NMR, IR, UV methods are examples of (CO4, LL1)	
A. Spectroscopy B. Electrophoresis C. Gravimetric methods D. None of these	

Q. II: Long Answers Questions (Answer any 1 out of 2)	10 M
1. Generate scheme for industrial production and estimation of diosgenin.	(CO3, LL5)
2. Construct steps in isolation, analysis and identification of quinine.	(CO3, LL5)

Q. III: Short Answers Questions (Answer any 2 out of 3)	10 M
1. Write a brief note on basics and applications of TLC in phytochemistry with suitable examples.	(CO4, LL3)
2. Enlist various modern methods of extraction. Explain supercritical fluid extraction or microwave-assisted extraction.	(CO4, LL3)
3. Explain spectroscopy and its applications in phytochemistry.	(CO4, LL3)



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**Second Sessional Theory Examination 2021-2022
(ODD SEM)**

Subject & Subject Code: PHARMACOLOGY-II, BP503T

Day & Date: Wednesday, 15.12.2021

Class: T. Y. B. Pharm.

Time: 10:30 am-12.00 noon

Semester: V

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Right hand side number indicates full marks

QI. Multiple Choice Questions (MCQs)

10

- Which is the example of quantal bioassay?
a. Digitalis b. Oxytocin c. ACTH d. ADH
- Betahistine is used in the management of:
a. Meni re's disease b. Gastric ulcer c. Huntington's disease d. Asthma
- Which vasodilatory-inflammatory autacoid contributes in short-term effects of ACEIs on blood pressure?
a. Serotonin b. Bradykinin c. Histamine d. Angiotensin
- Which autacoid transmit pain signal from peripheral sensory nerve in the spinal cord and inhibited by Morphine?
a. Thromboxane b. Serotonin c. Prostaglandin E2 d. Substance P
- Which drug acts as a leukotriene receptor antagonist to relieve asthma?
a. Salbutamol b. Terbutaline c. Montelukast d. Cetirizine
- Which drug inhibits ATP sensitive K⁺ channel in beta cell membrane?
a. Repaglinide b. Acarbose c. Dapagliflozin d. Metformin
- Which drug is used in the treatment of PCOS?
a. Metformin b. Estrogen c. Progesterone d. All of the above
- Which glucocorticoid is preferred in cerebral edema due to its inability to cause fluid retention
a. Betamethasone b. Dexamethasone c. Prednisolone d. (a) and (b) e. (a) and (c)
- Which drug is used for the induction of ovulation?
a. Clomiphene b. Menotropins (FSH&LH) c. Choriogonadotropin α (HCG) d. All of the above
- Which drug is used to suppress LH surge from pituitary so that a controlled ovarian hyperstimulation can be induced by menotropins (FSH+LH) injection, to harvest precisely timed mature ovum?
a. Clomiphene b. Nafarelin c. Choriogonadotropin α d. Estrogen

QII. Long Answers (Answer any 1 out of 2)

10

- Classify oral hypoglycemic drugs. Explain mechanism of action, therapeutic uses and adverse effects of metformin.
- Explain therapeutic uses and adverse effects of estrogens. Write the mechanism of action of hormonal contraceptives and emergency contraceptives.

QIII. Short Answers (Answer any 2 out of 3)

10

- Explain therapeutic uses and side effects of H1 antihistamines.
- Define bioassay. Explain its principle and applications.
- Predict the target organ and effect assayed for the following agents:

Drug	Target organ	Effect assayed
Oxytocin		
Serotonin		
Digitalis		
d-Tubocurarine		
ACTH		



Second Sessional Theory Examination 2019-2020

Subject: Pharmacology - II

Day & Date: 08.11.2019, Friday

Class: T. Y. B. Pharm

Semester: V

Time: 10.30 am to 12.00 noon

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs) 10

1. Triple response of histamine include-

- a. Red spot b. Wheal c. Flare d. All of above

2. Sumatriptan is-

- a. 5HT_{1A} agonist b. 5HT_{1B} agonist c. 5HT_{2A} agonist d. 5HT₂ Bagonist

3. NSAIDs inhibit -

- a. Lipoxygenase b. Arachidonic Acid Reductase
c. Cyclo-oxygenase d. Prostaglandin Reductase

4. Thyroid gland secretes all hormones except -

- a. Thyroxin b. Prolactin c. Tri-iodothyronine d. Calcitonin

5. T3 is used in -

- a. Thyrotoxicosis b. Myxedema crisis c. Thyroid cancer d. All of above

6. Chemically insulin is -

- a. Glycoprotein b. Octapeptide c. Polypeptide d. Decapeptide

7. Antidiabetic drug used in type I diabetes is -

- a. Sulphonylureas b. Biguanides c. Insulin d. All of above

8. Plasma calcium level regulated by all except -

- a. ACTH b. Parathormone c. Calcitonin d. Calcitriol

9. Active form of Vitamin D is -

- a. D1 b. Calciferol c. Cholicaleiferol d. All of above

10. Plasma half-life of insulin is -

- a. 10 min b. 2 hr c. 6 hr d. 10 hr

QII Long Answers (Answer any 1 out of 2) 10

1. Classify NSAIDs. Write pharmacology of Aspirin.
2. Enlist hormones secreted by pituitary gland along with their function.

QIII Short Answers (Answer any 2 out of 3) 10

1. Discuss in brief hormones regulated for calcium balance.
2. Pharmacotherapy of Rheumatoid Arthritis.
3. Write the mechanism of actions and physiological actions of insulin.



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Second Sessional Examination: 2020-2021

Subject: Pharmacology - II

Day & Date: 12-12-2020 (Saturday)

Class: T.Y. B. Pharm

Semester: V

Time: 10.30 AM to 12.00 NOON

Max. Marks: 30

- Instructions:*
1. All questions are compulsory
 2. Draw a well labeled diagram wherever necessary
 3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Which of the following antienzymes is a xanthine oxidase inhibitor? (CO3)
 - a) Physostigmine
 - b) Allopurinol
 - c) Aminocaproic acid
 - d) Acetazolamide

2. Which of the following hormones is not secreted by thyroid? (CO4)
 - a) Thyroxine
 - b) Triiodothyronine
 - c) Calcitonin
 - d) Oxytocin

3. The parathyroid hormone increases serum calcium and decreases serum phosphate. This consideration is: (CO4)
 - a) True
 - b) False

4. Sildenafil is also called? (CO5)
 - a) PDE-1 inhibitor
 - b) PDE-2 inhibitor
 - c) PDE-3 inhibitor
 - d) PDE-5 inhibitor

5. The following substances are considered to be referred to as eicosanoids: (CO3)
 - a) Prostaglandins
 - b) Leukotrienes
 - c) Thromboxane's
 - d) All of the above

6. Insulin is a polypeptide hence: (CO4)
- a) It is resistant to destruction by gastric juice
 - b) It is destroyed by gastric juice
 - c) It is not a polypeptide
 - d) It is metabolized immediately by cellular enzymes
7. Which of the following NSAIDs is an indole derivative? (CO3)
- a) Ibuprofen
 - b) Indomethacin
 - c) Mefenamic acid
 - d) Diclofenac
8. The corticoids are? (CO4)
- a) 20 carbon compounds
 - b) 21 carbon compounds
 - c) 22 carbon compounds
 - d) 19 carbon compounds
9. Tamoxifen is: (CO5)
- a) Antiprogestin
 - b) Antiandrogen
 - c) Antiestrogen
 - d) Androgen
10. Quantal bioassay is also called? (CO5)
- a) Direct end point bioassay
 - b) Matching bioassay
 - c) Graded dose response bioassay
 - d) Bracketing bioassay

QII Long Answers (Answer any 1 out of 2)

10

1. Write synthesis and pathological involvement of insulin. Give classification of antidiabetic drugs. (CO4)
2. Write applications, principles and types of bioassay. Write bioassay of oxytocin. (CO5)

QIII Short Answers (Answer any 2 out of 3)

10

1. Classify NSAIDs and their pharmacology. (CO3)
2. Explain in brief about oral contraceptives. (CO5)
3. Classify antithyroid drugs along with mechanism. (CO4)



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Second Sessional Theory Examination-(ODD SEM) 2022-2023

Subject : Pharmacology-II (BP503T)	Day & Date : Wed, 04/01/2023	
Class : Third Year B. Pharmacy	Semester : V	Write Your Seat No. Here <input type="text"/>
Time : 02:30 pm – 04:00 pm	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
3. Right-hand side number indicates full marks 4. Do not write/tick on the question paper

Q. I: Multiple Choice Questions (MCQs)

10 M

- Which organ is used for the bioassay of oxytocin?
A. Uterus B. Heart C. Liver D. Spleen
- Blood glucose level is evaluated in the bioassay of which agent?
A. Adrenaline B. Acetylcholine C. ACTH D. Insulin
- Cardiac arrest is evaluated in the bioassay of which agent?
A. ADH B. Serotonin C. Digitalis D. Histamine
- Which effect is evaluated in the bioassay of histamine?
A. Head drop B. Contraction of ileum C. Hypoglycemia D. Cardiac arrest
- Ondansetron produces antiemetic effect by blocking which serotonergic receptor?
A. 5HT1 B. 5HT2 C. 5HT3 D. 5HT4
- Following are the estrogen dependent cancers EXCEPT:
A. Lung cancer B. Breast cancer C. Uterine cancer D. Ovarian cancer
- Risk of prostate cancer in the professional bodybuilders is associated with the treatment of:
A. Growth hormone B. Anabolic steroids C. Insulin D. Progesterone
- Development of which organ is stimulated by thyroid hormones instead of growth hormone?
A. Heart B. Skeletal muscles C. Bones D. Brain
- Which agent acts on the intracellular receptors?
A. Prolactin B. Insulin C. Corticosteroids D. Growth hormone
- Which hypothalamic hormone produces inhibitory effect on a pituitary?
A. Somatostatin B. CRH C. GnRH D. TRH

Q. II: Long Answers Questions (Answer any 1 out of 2)

10 M

- Classify H1 antihistaminic drugs. Explain their mechanism of action, uses and side effects.
- Classify oral hypoglycemic drugs. Explain mechanism of action, uses and side effects of metformin.

Q. III: Short Answers Questions (Answer any 2 out of 3)

10 M

- Write a note on oral contraceptives.
- Explain the action of insulin on blood glucose levels.
- Classify antiestrogens. Justify the use of progesterone in combination with estrogen as a post-menopausal hormone replacement therapy.



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Subject : Pharmacology-II (BP503T)	Day & Date : Wed, 04/01/2023	Write Your Seat No. Here <input type="text"/>
Class : Third Year B. Pharmacy	Semester : V	
Time : 02:30 pm – 04:00 pm	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
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Q. I: Multiple Choice Questions (MCQs)

10 M

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A. Growth hormone B. Anabolic steroids C. Insulin D. Progesterone
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- Which agent acts on the intracellular receptors?
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- Which hypothalamic hormone produces inhibitory effect on a pituitary?
A. Somatostatin B. CRH C. GnRH D. TRH

Q. II: Long Answers Questions (Answer any 1 out of 2)

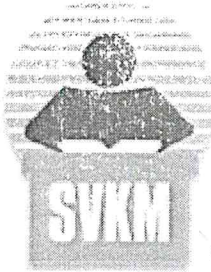
10 M

- Classify H1 antihistaminic drugs. Explain their mechanism of action, uses and side effects.
- Classify oral hypoglycemic drugs. Explain mechanism of action, uses and side effects of metformin.

Q. III: Short Answers Questions (Answer any 2 out of 3)

10 M

- Write a note on oral contraceptives.
- Explain the action of insulin on blood glucose levels.
- Classify antiestrogens. Justify the use of progesterone in combination with estrogen as a post-menopausal hormone replacement therapy.



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Second Sessional Theory Examination 2021-2022
(ODD SEM)

Subject & Subject Code: PHARMACOLOGY-II, BP503T

Day & Date: Wednesday, 15.12.2021

Class: T. Y. B. Pharm.

Time: 10:30 am-12.00 noon

Semester: V

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Right hand side number indicates full marks

QI. Multiple Choice Questions (MCQs)

10

1. Which is the example of quantal bioassay?
a. Digitalis b. Oxytocin c. ACTH d. ADH
2. Betahistine is used in the management of:
a. Menière's disease b. Gastric ulcer c. Huntington's disease d. Asthma
3. Which vasodilatory-inflammatory autacoid contributes in short-term effects of ACEIs on blood pressure?
a. Serotonin b. Bradykinin c. Histamine d. Angiotensin
4. Which autacoid transmit pain signal from peripheral sensory nerve in the spinal cord and inhibited by Morphine?
a. Thromboxane b. Serotonin c. Prostaglandin E2 d. Substance P
5. Which drug acts as a leukotriene receptor antagonist to relieve asthma?
a. Salbutamol b. Terbutaline c. Montelukast d. Cetirizine
6. Which drug inhibits ATP sensitive K⁺ channel in beta cell membrane?
a. Repaglinide b. Acarbose c. Dapagliflozin d. Metformin
7. Which drug is used in the treatment of PCOS?
a. Metformin b. Estrogen c. Progesterone d. All of the above
8. Which glucocorticoid is preferred in cerebral edema due to its inability to cause fluid retention
a. Betamethasone b. Dexamethasone c. Prednisolone d. (a) and (b) e. (a) and (c)
9. Which drug is used for the induction of ovulation?
a. Clomiphene b. Menotropins (FSH&LH) c. Choriogonadotropin α (HCG) d. All of the above
10. Which drug is used to suppress LH surge from pituitary so that a controlled ovarian hyperstimulation can be induced by menotropins (FSH+LH) injection, to harvest precisely timed mature ovum?
a. Clomiphene b. Nafarelin c. Choriogonadotropin α d. Estrogen

QII. Long Answers (Answer any 1 out of 2)

10

1. Classify oral hypoglycemic drugs. Explain mechanism of action, therapeutic uses and adverse effects of metformin.
2. Explain therapeutic uses and adverse effects of estrogens. Write the mechanism of action of hormonal contraceptives and emergency contraceptives.

QIII. Short Answers (Answer any 2 out of 3)

10

1. Explain therapeutic uses and side effects of H1 antihistamines.
2. Define bioassay. Explain its principle and applications.
3. Predict the target organ and effect assayed for the following agents:

Drug	Target organ	Effect assayed
Oxytocin		
Serotonin		
Digitalis		
d-Tubocurarine		
ACTH		

B. Malhate
(Subject-in-charge)



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Second Sessional Theory Examination 2019-2020

Subject: Pharmaceutical Jurisprudence (BP505T) Day & Date: Monday 11/11/2019

Class: T.Y.B. Pharma

Semester: Vth

Time: 01.30 pm to 03.00 pm

Max. Marks: 30

- Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs 10 Marks)

- Head Quarter for the CPCSEA is situated in
a. Mumbai b. Delhi c. Chennai d. Kolkata
- Publications of advertisement is prohibited that refers the use of any drug for the treatment of
a. Cancer b. Plague c. Tuberculosis d. All of Above
- As per MTP act, the pregnancy can be terminated up to week of gestation
a. 7 b. 20 c. 12 d. 10
- The Drug Enquiry committee is also called as committee
a. Hathi b. DPCO c. Chopra d. Mudaliar
- The provisions of DPCO are implemented and enforced by
a. DPEA b: MAPE c. NPPA d. None of above
- A secret production method is considering as
a. Intellectual property b. Code of ethics c. Industry research d. None of Above
- Who has power to fix the ceiling price of scheduled formulations.
a. Rajyasabha b. Loksabha c. State Government d. Central Government
- Medical termination of Pregnancy Act was passed in year
a. 1971 b. 1961 c. 1980 d. 1970
- The science of Moral is called as
a. Morality b. Law c. Act d. Ethics
- CPCSEA established under the Leadership of
a. Menka Gandhi b. R. N. Chopra c. A.L. Mudaliar d. Drug Inspector

QII Long Answers (Answer any 1 out of 2) 10 Marks

- Explain the CPCSEA guidelines and Note on IAEC in brief
- Write an account on the code of pharmaceutical ethics framed by the Pharmacy Council of India.

QIII Short Answers (Answer any 2 out of 3) 10 Marks

- Write the brief note on DPCO
- Explain in detail about classes of prohibited and exempted advertisements.
- Give the objective and explain in detail legal framework for the Medical Termination of Pregnancy under MTP Act.



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**Second Sessional Theory Examination 2020-2021
(Odd SEM)**

Subject & Subject Code: Pharmaceutical Jurisprudence (BP505T)

Day & Date: Saturday 15/12/2020

Class: T.Y. B. Pharmacy

Semester: V

Time: 10:30 AM to 12:00 PM

Max. Marks: 30

Instructions: 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Cure of cancer is an example of the following advertisement
 - A) Prohibited
 - B) Exempted
 - C) Permitted
 - D) Bonafided
2. The Main Function of CPCSEA:
 - A) Registration of establishments conducting animal experimentation or breeding of animal for this purpose
 - B) Permission for conducting experiments involving use of animals
 - C) Recommendation for import of animals for use in experiments
 - D) All of the above
3. The Term 'Phooka' & 'Doom Dev' is associated with
 - A) Narcotic Drugs & Psychotropic Drug Substance Act 1985
 - B) Drug Price Control Order 2013
 - C) Medical termination of pregnancy act
 - D) The prevention of cruelty to animal act
4. MAPE as per DPCO 2013 stand for
 - A) Maximum Allowable Post Manufacturing Expenses
 - B) Minimum Allowable Post Manufacturing Expenses
 - C) Maximum Allowable Price Manufacturing Expenses
 - D) Maximum Allowable Post Manufacturing Excess
5. Magic Remedies include
 - A) Mantra
 - B) Talisman
 - C) Kavacha
 - D) All of the above
6. Patent is granted for _____ from the filing date of the application
 - A) 5 Years
 - B) 10 Years
 - C) 15 Years
 - D) 20Years
7. At the first time in India, a chemist shop was opened in about ----- by Mr. Bathgate
 - A) 1711
 - B) 1946
 - C) 1811
 - D) 1902



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8. In 1931 the Indian government appointed a drug Inquiry committee under the chairmanship of
 - A) Lt. Col. R.N. Chopra
 - B) Prof. T.K. Gajjar
 - C) Acharya prafulla Chandra
 - D) Dr. Ashok Gupta
9. RTI Act 2005 came into force on
 - A) 12 October 2005
 - B) 15 August 2005
 - C) 15 June 2005
 - D) 1 November 2005
10. Places approved for termination of pregnancy may be inspected by
 - A) Drug Inspector
 - B) RMP
 - C) Pharmacist
 - D) Chief Medical Officer

QII Long Answers (Answer any 1 out of 2)

10

1. Describe the Institutional animal ethics committee (IAEC) and Write CPCSEA guidelines for breeding and stocking of animals.
2. What is a Patent? What are inventions according to Patent Act? Write in brief the procedure of obtaining patent

QIII Short Answers (Answer any 2 out of 3)

10

1. Write the Constitution & function of Narcotic & Psychotropic Consultative committee under narcotic and psychotropic substances Act 1985.
2. Describe the role of pharmacist in relation to his Medical Profession.
3. Explain the formula used for the calculation of ceiling price and retail price of a formulation as per Drug Price Control 2013.



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Second Sessional Theory Examination-(ODD SEM) 2022-2023

Subject : Pharmaceutical Jurisprudence (BP505T)	Day & Date : Fri, 06/01/2023	
Class : Third Year B. Pharmacy	Semester : V	Write Your Seat No. Here <input type="text"/>
Time : 02:30 pm – 04:00 pm	Max. Marks : 30	

Instructions: 1. All questions are compulsory 2. Draw a well-labeled diagram wherever necessary
3. Right-hand side number indicates full marks 4. Do not write/tick on the question paper

Q. I: Multiple Choice Questions (MCQs)	10 M
1. _____ is the resin obtained from the cannabis plant (CO3, LL1) A. Ganja B. Hashish C. Charas D. Heroin	
2. According to the Drugs and Magic Remedies act, Magic Remedies Includes: (CO3, LL1) A. Talisman B. Kavachas C. Mantras D. All	
3. According to The Prevention of Cruelty to Animals Act, 1960 Experimentation on animals is carried out for the following purposes except (CO3, LL1) A. New drug Development B. Vaccines Production C. Medical Research D. To have the practice	
4. Punishment for contravention in relation to Ganja (CO3, LL1) A. 2 yrs imprisonment and fifty thousand rupees fine B. 10-20 yrs imprisonment and 1-2 lakh rupees fine C. 5 yrs imprisonment and fifty thousand rupees fine D. 3 yrs imprisonment and fifty thousand rupees fine	
5. Advertisements related to the procurement of miscarriage or prevention of conception in women are _____ by Drugs and Magic Remedies Act (CO3, LL1) A. Exempted B. Prohibited C. Allowed D. None	
6. As per the code of pharmaceutical ethics a registered pharmacist cannot do the following except (CO4, LL1) A. Dispense drugs on humanitarian grounds B. Give first aid treatment in emergencies C. Prescribe remedies in emergencies D. Can practice medicine in emergencies	
7. The Central Information Commission consist of following members except (CO4, LL1) A. The Chief Minister B. The Prime Minister C. Leader of Opposition in Lok Sabha D. Union Cabinet Minister nominate by PM	
8. The time limit (expiry) for the Trademarks is (CO4, LL1) A. 10 Years B. 20 Years C. 10 Years and Renewal D. 20 Years and Renewal	
9. Time limits to get the requested information if application is filed with the PIO (CO4, LL1) A. 40 Days B. 35 Days C. 30 Days D. 35 Days	
10. If a person uses someone's song as background music in his/her music video then it could be an act of (CO4, LL1) A. Identity theft B. Misconduct C. Copyright Infringement D. No infringement	

Q. II: Long Answers Questions (Answer any 1 out of 2)	10 M
1. Explain in details Non-Bonded Manufacturing of Medicinal and Toilet Preparations (CO3, LL5) 2. Give functions of National Pharmaceutical Pricing Authority (NPPA) and Explain salient features of DPCO 2013. (CO3, LL5)	

Q. III: Short Answers Questions (Answer any 2 out of 3)	10 M
1. Explain in detail role of Drug Enquiry Committee in the development of pharmaceutical legislation. (CO4, LL5) 2. Write a short note on Medical Termination of Pregnancy Act 1971. (CO4, LL5) 3. What is IPR? Explain the detailed process of application of Patent in India (CO4, LL5)	



Second Sessional Theory Examination 2019-2020

Subject: Medicinal Chemistry-II (BP501T) **Day & Date:** Wed, 06 Nov. 2019

Class: T.Y.B. Pharm

Semester: V

Time: 10.30 am to 12.30 pm

Max. Marks: 30

- Instructions:** 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

1. Basic Nucleus of Steroid is

- a. Phenanthrene b. 1,2-Cyclopentanophenanthrene
c. 1,2-Cyclobutoperhydrophenanthrene d. 1,2-Cyclopentano anthracene

2. Protein C & S are dependent on which vitamin for synthesis

- a. Vitamin C b. Vitamin B c. Vitamin E d. Vitamin K

3. Effects of digitalis on the heart includes

- a. Increased conduction velocity through AV node
b. Positive chronotropic effect
c. Positive Inotropic Effect
d. Decreased refractory period of the AV node

4. Warfarin contains -----ring

- a. Naphthahydroquinone b. 4-Hydroxycoumarin c. Indandione d. None of the above

5. Following drugs have steroidal Pharmacophore except

- a. Nandrolone b. Oestriol c. Diethylstilbestrol d. Progesterone

6. Following drugs are thyroid drugs except

- a. L-Thyroxine b. L-Thyronine c. Thyroxine Sodium d. Propylthiouracil

7. Following is a long acting insulin

- a. Insulin Glargine b. Insulin Lispro c. Insulin Lente d. Insulin Glulisine

8. ----- of Sildenafil is used for the treatment Pulmonary Arterial Hypertension (PAH)

- a. Round white tablet b. Blue Oval tablet c. Compressed tablet d. Molded tablet

9. Following β Blocker is a methane sulfaniilide containing antiarrhythmic agent

- a. Propranolol b. Sotalol c. Pindolol d. Esmolol

10. Thiazolidinedione's are commonly known as

- a. D-Phenylalanine Derivatives b. Insulin Secretagogues
c. Glitazones d. Glinides

QII Long Answers (Answer any 1 out of 2)

10

1. What is Diabetes Mellitus? Classify oral hypoglycemic agents. Give the structure of at least two compounds of each category and write SAR of Sulfonylureas
2. Write the SAR of glucocorticosteroids with suitable Example

QIII Short Answers (Answer any 2 out of 3)

10

1. What is Hyperlipidemia? write the detailed classification and MoA of anti-hyperlipidemic agents with structures
2. Write a note on Norgestrel and Mifepristone as an Oral Contraceptive Drugs.
3. What is Hypothyroidism? Write a note on Thyroid Drugs and highlight the SAR of L-Thyroxine



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Improvement Sessional Theory Examination 2019-2020

Subject: Industrial Pharmacy-I (BP502T)

Day & Date: Friday 15/11/19

Class: Third Year B. Pharm

Semester: V

Time: 10.30 – 12.00 pm

Max. Marks: 30

- Instructions:* 1. All questions are compulsory
2. Draw a well labeled diagram wherever necessary
3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10

- The optical activity of compound due to Racemization is
a. Zero b. Dextro (+) c. Leavo (-) d. *trans* rotatory
- Benzalkonium chloride is used as preservative in eye drop against *pseudomonas aeruginosa* in combination with
a. Butylated Hydroxy Toluene b. DMSO c. EDTA d. Chlorbutanol
- The formation of compact mass in dry granulation is known as
a. Slug b. Granules c. Pellets d. Beads
- The vulcanizing agent used in fabrication of rubber closure for parentral product is
a. Zinc oxide b. Sulfur c. Carbon black d. Mercaptobenzthiazole
- The size of nozzle in inch for High pressure airless system is
a. 0.9-0.20 b. 20-60 c. 0.020-0.060 d. 0.009-0.020
- Total Solid Content of Water for Injection as per USP is not more than
a. 10 ppm b. 01 ppm c. 10 ppb d. 01 ppb
- Bloom Strength of Gelatin for hygroscopic drug is
a. 150 -180 gm b. 180 - 250 gm c. 150 – 250 mg d. 100 – 150 mg
- Total vapour pressure of mixture of propellant can be calculated according to
a. Raoults law b. Ficks First law c. Daltons law d. Gibbs law
- Propellant used in aerosol for oral and inhalation purpose is
a. Dimethyl ether b. Nitrous oxide c. n-Butane d. Tetrafluroethane
- Ratio of Dry Plasticizer / Dry Gelatin for Hard gelatin capsule is
a. 0.6 b. 0.4 c. 1.2 d. 0.8

Q.II Long Answers (Answer any 1 out of 2)

10

- Define Tablet & Explain in brief about IPQC test for Tablet manufacturing.
- Explain in details about evaluation of Aerosol dosage form.

Q.III Short Answers (Answer any 2 out of 3)

10

- What is significance of polymorphism and solubility in preformulation study.
- Illustrate in brief about Glass container or Rubber closure.
- Describe in brief about principle of Wet granulation.



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Second Sessional Theory Examination 2021-2022

Subject: Pharmaceutical Jurisprudence

Day & Date: Friday, 17 /12/2021

Class: T.Y.B. Pharm

Semester: V

Time: 10.30 am-12.00 pm

Max. Marks: 30

Instructions: 1. All questions are compulsory

2. Draw a well labeled diagram wherever necessary

3. Right hand side number indicates full marks

QI Multiple Choice Questions (MCQs)

10 Marks

- Coca leaf contain more than _____
A) 0.2% cocaine B) 0.1% cocaine C) 0.02% cocaine D) 0.02% cocaine
- The Drug and Magic Remedies Act come into force in the year
A) 1954 B) 1955 C) 1956 D) 1957
- The flowerings and fruiting tops of cannabis plant largely tried as a drug of abuse are called
A) Charas B) Ganja C) Hemp D) Cocaine
- Publication of the advertisement is prohibited that refer to the use of any drug for the treatment of
A) Cancer B) Plaque C) Tuberculosis D) All of the above
- Under the Narcotic Drugs and Psychotropic Drugs Substances Act and rules, the cultivation of opium poppy and the production of opium is supervised by
A) Drug controller of India B) Drug Inspector of India
C) Narcotic Commissioner D) Director General of Health Services
- Termination of pregnancy between 12-20 week consent of _____Registered Medical Practitioner.
A) 1 B) 2 C) 3 D) 4
- The officer designated by the public authorities in all administrative units or offices under it to provide information to the citizens requesting for information under the Act is known as
A) Appellate Authority B) Chief Information Commissioner (CIC)
C) Public Information Officer (PIO) D) Excise commissioner
- What is the fee for getting information under RTI Act
A) Rs.20/- B) Rs.50/- C) Rs.100/- D) Rs.10/-
- drug use to terminate the pregnancy up to 7 week of gestational
A) Mifepristone B) Atenolol C) Isoniazid D) Omeprazole
- The Abortion Study Committee, headed by
A) Dr. M. L. Shroff B) Col. R.N. Chopra C) Mr. Shantilal Shah D) Joseph Bhore

QII. Long Answers (Answer any 1 out of 2)

10 Marks

- Give objective of drug price control order (DPCO) and explain in detail how prices of drugs are calculated & fixed under DPCO.
- Enlist the objectives of Prevention of Cruelty to Animals Act and Explain in detail Experimentation on animals under this Act.

QIII. Short Answers (Answer any 2 out of 3)

10 Marks

- Write the provisions for getting the patents rights quoted in Patents Act.
- Give the code of ethics for pharmacist in relation to his job and trade.
- Illustrate the findings and recommendations of drugs enquiry committee.