

DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO. QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE

Subject: PHARMACEUTICS (Theory)**Full Mark -80****Time -3 hrs****1. Long type questions (answer any six)**

[6x5=30]

- i. Define Immunity. Write down the details about small pox vaccine. (1+4=5)
- ii. Define tablet. Write down the details about excipients used in tablet preparation with suitable examples. (1+4=5)
- iii. Discuss different methods for identification of types of emulsion. (5)
- iv. Define Q.A & Q.C. Write briefly about cGMP. (2+3)
- v. Write down the principles, construction, working and application of Ball Mill with labelled diagram. (1+1+1+1+1=5)
- vi. Write down different quality control tests for tablets. (5)
- vii. Write down different methods used in formulation of parenteral preparations. (5)

2. Short type questions (answer any ten)

[10x3=30]

- i. Write the ideal properties of filter aids. Give two examples of filter aid.
- ii. Write a short note on homogenisation.
- iii. Write a short note on Soxhlet extraction.
- iv. Write a short note on sterilization.
- v. Differentiate between flocculated and deflocculated suspension.
- vi. Write notes on factor affecting size reduction.
- vii. Define diffusible solid & indiffusible solid.
- viii. Write down the difference between liniments and lotions
- ix. Write short note on fusion method of preparation of suppositories.
- x. Differentiate between calibration and validation.
- xi. Write a short note on effervescent granules.

3. Objective type Questions, Answer all from both sections, Each carries One mark (20x1)**(A) DEFINE THE FOLLOWING**

- i) Impact ii) Co-solvent. iii) Colloidal suspension. iv) enteric coated tablet v) Microencapsulation
 vi) Clarification vii) Lyophilisation viii) Sieve number ix) Mottling x) Opsonin.
 xi) Pharmacopoeia xii) Elixir xiii) Tablets xiv) Poultice xv) Extraction

(B) ANSWER THE FOLLOWING.

- i. Give two major differences between emulsion and suspension.
- ii. Differentiate between 'purified water' and 'water for injection'.
- iii. Write advantages of evaporating pan.
- iv. Give two examples of wetting agent.
- v. What is prodrug.

D. Pharm Part - I

E. R. 1991

2022(I)

DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO. QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE

Subject: BIO-CHEMISTRY & CLINICAL PATHOLOGY (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. A) **Define the following terms:** (10X1)

a) Conjugated Proteins	b) Kwashiorkor	c) Isoenzymes	d) Hypernatremia
e) Molisch's test	f) Osteomalacia	g) lymphocytosis	h) Oligopeptide
i) Agranulocytosis	j) Saponification value		

 B) **Define & differentiate the following term.** (5X2)
 - i) Iodine and acid value
 - ii) Glycogenolysis and gluconeogenesis
 - iii) Hodgkin's & Non-Hodgkin's lymphoma
 - iv) Reducing sugar and non-reducing sugar
 - v) Anabolism and catabolism
2. a) Write chemical properties of Fat & Oils.
 b) Describe about the beta oxidation of fatty acids. [5 + 5+5]
 c) Write a note on diseases due to disorder of fat metabolism
3. Define and classify vitamins. Give an account of sources, chemistry, physiological function and deficiency diseases of the following. [3+(3x4)=15]
 a) Vitamin B₁ b) Vitamin B₁₂ c) Vitamin C d) Vitamin D₃
4. a) Define and classify proteins.
 b) What are the biological functions of proteins? [6+6+3=15]
 c) Describe any one qualitative test for protein.
5. Describe TCA cycle and calculate total number of ATPs formed in it. Write about abnormalities of carbohydrate metabolism. [8+4+3=15]
6. What is enzyme inhibition? Explain types of inhibition with examples. Describe factors affecting the enzyme activity. [4+7+4=15]
7. **Write short notes on (Any three):** [5X3=15]
 - a) Megaloblastic Anaemia
 - b) Urea Cycle
 - c) Role of Blood Platelets in health & diseases
 - d) Michaelis-Menten equation
 - e) Describe the difference between T & B lymphocytes

DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO. QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE

DRUG STORE & BUSINESS MANAGEMENT (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. **A) Define the following terms:(Answer all) (20x1)**

i) ABC Analysis	ii) Acid test Ratio	iii) Bank	iv) Balance Sheet
v) Buffer Stock	vi) Contra entry	vii) Cash Credit	viii) Cheque
ix) Codification	x) Debenture	xi) Entrepôt	xii) Fixed capital
xiii) Lead Time	xiv) Master budget	xv) Nominal Partner	
- B) Define the following abbreviations:(Answer all)**

a) EOQ	b) FIFO	c) GAAP	d) LIFO	e) ROI
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2. Write short notes on following questions. (Any THREE) (5 x 3)

a) Advertisement	b) Recruitment	c) Triple column Cash book	d) VED analysis
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3. a) Write down the salient features of "Sole Proprietorship of Business" (7)
 b) Describe the advantages & disadvantages of this form of organisation. (4+4)
4. What do you mean by pharmaceutical Management? What are the levels of management. (2+4)
 Write a note on functions of management. (9)
5. a) Define the term Retailer. Describe the services performed by Retailer (7.5)
 b) Define the term Wholesaler, Describe the services performed by Wholesaler (7.5)
6. Write short notes on following questions. (Any THREE) (5 x 3)

a) functions of Commercial Bank	b) Trial balance
c) Functions & Objectives of Inventory Control	d) Difference between Journal & Ledger
7. Journalise the following transactions and post them into concerned ledger (15)
 - i) On July 01, Mr. X started his business with a capital Rs.50,000/-
 - ii) Purchase goods for cash Rs.10,000/-
 - iii) Bought furniture for cash Rs. 6,000/-
 - iv) Cash deposited in bank Rs. 5,000/-
 - v) Good sold for cash Rs.20,000/-
 - vi) Paid salaries expenses Rs.6,000/-
 - vii) Paid house rent Rs.1,000/-
 - viii) Purchased goods from Mr. Y on credit Rs.15,000/-
 - ix) Paid advertisement expenses Rs.500/-

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HOSPITAL & CLINICAL PHARMACY (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. **A) Define the followings:** (1 x 20)

i) Drug information Bulletin	ii) Drug dependence	iii) Hospital formulary
iv) Surgical equipment	v) High efficiency particulate air	vi) Inventory control
vii) Sterilization	viii) Antidote	ix) Idiosyncrasy
		x) Bed Side Pharmacy

B) Define the following abbreviations:

a) MRI	b) EEG	c) ECG	d) ICCU	e) CHF
f) TLC	g) DIC	h) BMR	i) ESR	j) OTC
2.
 - a) Explain in detail drug distribution system on out patients (5)
 - b) Discuss the Location & Layout of outpatients dispensing along with figure (5)
 - c) Discuss about the layout of sterile product area (5)
3. Answer any THREE (5X3)
 - a) Write briefly the factors affecting bioavailability.
 - b) Pharmacokinetic drug Interactions
 - c) Write down the Symptoms & treatment of Arsenic Poisoning
 - d) Role of pharmacist in Health care System
4. Write Pathophysiology & Manifestation of (ANY THREE) (5 x 3)

i) Hepatitis	ii) Diabetes	iii) Peptic ulcer	iv) Epilepsy
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5. Write short notes on ANY THREE (5x3)
 - i) Drug Induced Diseases
 - ii) Role of PTC in drug safety
 - iii) Factors contributing non compliance
 - iv) Medical complications & treatment of addictive drug alcohol
6. Answer any THREE (5x3)
 - a) Describe the objectives and functions Hospital Pharmacy.
 - b) Write the advantages & disadvantages of drug distribution System for in patients
 - c) Describe the functions of District Headquarter Hospital.
 - d) Write different application of computer in Hospital Pharmacy.
7.
 - a) What do you mean by physiological parameters ? (5 + 10)
 - b) Write the normal value and significance of any five parameters you know.

**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO.
QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE****HEALTH EDUCATION & COMMUNITY PHARMACY (Theory)****Full Mark -80****Time -3 hrs***(Answer any five questions including question No. 1)*

1. **A) Define the following:** (1 x 20)
i) Health ii) Acute myocardial infarction iii) Three D'S disease
iv) Disinfection v) Nosocomial Infection vi) Universal antidote
vii) Prokaryotic viii) Safe period ix) Epidemiological Triad
x) Demography
- B) Define the following Abbreviations**
a) WHO b) PEM c) IUCD d) NMEP
e) DEC f) CHD g) ORS h) OTC
i) IDDM j) FSH
2. Write the objectives and principles of First Aid. Discuss in details the first aid for Snakebite, Burns & Poisoning (3+4+4+4)
3. Write short notes on any three of the following. (3 x 5)
i) Water pollution ii) Cardiopulmonary Resuscitations (CPR)
iii) Sanitary Well iv) Methods of Sewage treatment
4. Define Food. Classify it according to chemical constituent, origin, function & nutritive value. Describe the function of carbohydrate, Protein & fats. (2+8+5)
5. What is Communicable disease? How COVID 19 is related to communicable diseases? Write the causative agent, mode of transmission & prevention of Influenzas, Chicken pox Typhoid & Rabies. [1+2+(3x4)]
6. Write short notes on any three of the following. (3 x 5)
i) Disinfection of Sputum ii) Hardness of water
iii) Immunity iv) Ziehl-Neelsen Method
7. Define Epidemiology. Write down the scope, uses & analytical methods of Epidemiology (2+4+4+5)

D. Pharm Part - I

E. R. 2020

2022(I)

**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO.
QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

HUMAN ANATOMY & PHYSIOLOGY (Theory)

Full Mark -80**Time -3 hrs**

1. Answer any 6 out of 7. (5 x 6)
- Define & classify tissue. Write a note on Nervous Tissue.
 - Write down the function of Blood. Discuss about the mechanism of Clotting and write down the Clotting factors.
 - Describe the parts of Respiratory System & discuss the mechanism of respiration.
 - Draw a neat labelled diagram of EYE & write about the physiology of vision.
 - Draw a neat & labelled diagram of female reproductive system. Write a short note on menstrual cycle.
 - Give the location of adrenal gland. Write the function of the hormones secreted by cortex part of adrenal gland.
 - Define joint. Give the classification of joint with suitable example.
2. Answer any 10 out of 11. (10 x 3)
- Write a note on flow of blood through heart.
 - Write about the function of cerebellum & cerebrum
 - Write a note on structure & function of kidney.
 - Write down the Physiology of Urine formation.
 - Write a note on circulation of Lymph.
 - Write a note on mechanism of Hearing.
 - Explain the role of Renin Angiotensin System in regulation of blood pressure.
 - Give a brief description on human tooth with suitable diagram.
 - Write a note on physiology of pain.
 - Explain the process of Spermatogenesis
 - Pancreas is known as both endocrine and exocrine gland. Justify your answer.
3. A) **Answer the followings.** (20 x 1)
- What is Osteomyelitis?
 - Mention the parts of nephron.
 - Enlist two functions of spleen.
 - Write about the function of valve.
 - Name the structures involved in urinary system.
 - Enlist the function of CSF.
 - Write the function of oxytocin.
 - Difference between Tendon & Ligament
 - Write the universal donor & universal recipient Blood group.
 - Mention any two functions of liver.
- B) Define the followings**
- | | | | |
|-------------------|---------------------------|----------------------|---------------------|
| i) Endocytosis. | ii) Thrombocytopenia | iii) Atherosclerosis | iv) Erythropoiesis. |
| v) Cardiac output | vi) Rheumatoid arthritis. | vii) Thrombopoiesis | viii) Haematuria |
| ix) Deglutition | x) Endocrine gland | | |

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HUMAN ANATOMY & PHYSIOLOGY (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. **A) Define the followings:** **(20x1)**

a) Thrombocytopenia	b) Anaemia	c) Deglutition	d) Vital capacity
e) Oedema	f) Glaucoma	g) Tidal Volume	h) Synapse
i) Cardiac output	j) ESR		

B) Answer the followings

i) Write the function of Mitochondria.	ii) Write the function of lymph.
iii) Name different Blood Groups with Rh typing	iv) What is Glomerular Filtration rate?
v) Hormones secreted from Post. Pituitary.	

C) Differentiate between

a) Anterior & Posterior	b) Mitosis & Meiosis	c) Medial & Lateral	d) Ventral & Dorsal
e) ECG & EEG			
2. With a neat labelled diagram, describe the different parts of respiratory system. (7+8)
Briefly write down the physiology of respiration.
3. Classify nervous system. Draw a neat Labelled diagram of Brain (L.S). Write briefly function of different parts of brain. (3+4+8)
4. Define and classify joints. Write different movement of joint. Briefly discuss about Synovial joint. (3+5+7)
5. Write short note on the followings. (Any three) (5 x 3)

a) Erythropoiesis	b) Blood coagulation
c) Spermatogenesis	d) Physiology of pain.
6. Write short note on the followings. (Any three) (5 x 3)

i) Spinal Cord	ii) Liver
iii) Pituitary gland	iv) Neuromuscular junction
7. Draw neat & clean labelled diagram (Any Three) (5 x 3)

a) Male reproductive system.	b) Blood flow through heart.
c) Human Eye	d) Digestive system

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PHARMACEUTICAL JURISPRUDENCE (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

1. (A) **Define the followings (ALL):** (1 x 10)

i) Schedule T	ii) Loan Licence	iii) Denatured Alcohol	iv) CLAA
v) Poppy Straw	vi) Free Reserve	vii) Landed Cost	viii) Coca Derivative
ix) Narcotic Drug	x) Misbranded Drugs		

 (B) **Answer the followings (ALL)** (10x1)
 - i) Name & place of the Laboratory where Oral Polio vaccine is tested.
 - ii) Write the penalties where no punishment is defined in breach of Medicinal & Toilet (ED) Act.
 - iii) Define R-W Coefficient.
 - iv) Write the penalties for obstructing a drug inspector while discharging his/her duties.
 - v) Write the ex officio members of PCI .
 - vi) What is Ceiling price?
 - vii) Differentiate between the Advertisement of drugs & ordinary consumer goods
 - viii) Differentiate between bonded & non bonded laboratory.
 - ix) Differentiate between Prohibited & Exempted Advertisements.
 - x) Differentiate between wholesale & retail sale.
2. Write short notes on (ANY THREE): (5x3)

a) Education Regulations	b) Formula for calculation of retail price of drug calculation
c) Customs collector	d) What are the recommendations of Drugs Enquiry Committee ?
3. a) Define Advertisement. (2)

b) What kind of advertisements are exempted under drugs & Magic remedies Act? (4)

c) Discuss about exemption from duty on Medicinal Preparations supplied from Bonded laboratory. (4)

d) Qualification & functions of Drug Inspector (5)
4. a) Define the Objective of The D & C Act. Discuss about the qualification of Licensing Authority. (5)

b) Write the Functions of DTAB. Discuss the Nominated members & Elected members of DTAB. (10)
5. a) Define ethics? (2+8+5)

b) Describe briefly the essential features of code of ethics framed by PCI.

c) What is the purpose of this code?
6. Write short notes on (ANY THREE): (5x3)

a) Government analysts	b) Scope of pharmaceutical legislation in India
c) Function of PCI under Pharmacy Act	d) State pharmacy Council
7. a) Discuss on provision for import, possession & sales of poison according to poison act. (7.5x2)

b) Discuss the offences and punishments laid down on contravention of NDPS act ,1985?

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PHARMACEUTICAL CHEMISTRY

Full Mark -80

Time -3 hrs

[6x05=30]

1. Answer any six .

- Define Acid-Base Indicators & describe in details about the indicator theory with suitable Examples?
- Describe the principles involved, procedure & application of Mohr's Method?
- Mention the chemical structure, chemical name, uses and brand names of followings –
 - Glibenclamide
 - Chloroquine Phosphate.
- What is quality control? Describe the importance of quality control?
- Write the detail about chemistry of aluminium hydroxide gel?
- Classify anti-neoplastic agents with suitable examples. Write the structure, chemical name, popular brand name of Cyclophosphamide and Fluorouracil.
- Classify nonsteroidal anti-inflammatory agents (NSAIDs). Write the structure, chemical name and popular brand name of i) Ibuprofen ii) Paracetamol

2. Answer any ten questions.

[10x03=30]

- Write a short note on Mouth Washes?
- Define Dental Fluorosis and Briefly discuss the role of Fluorides as an anti-caries agent?
- Define Haematinics, mention some official compounds and discuss the role of ferrous fumarate as an ideal compound?
- Define Sedative & Hypnotics. Mention the Chemical Structure & Chemical Name of Diazepam and Phenobarbital
- Write about the uses, storage & incompatibility of light kaolin?
- Write the structure of Metformin, Verapamil and Alprazolam?
- How raw materials contribute impurities to the finished product. Explain.
- What are the advantages of BaSO₄ reagent over BaCl₂ in the limit test for sulphate.
- Write the principle of limit test for chloride.
- Write a note on DOT therapy in tuberculosis.
- What are anti-hypertensive agents? Write the structure and chemical name of Propranolol.

3. Answer all questions in the following sections. Each carries ONE mark [20x1=20]

A) Define the followings:

- Normality
- Conjugate Acid and Conjugate Base with Suitable Examples
- Hemosiderosis
- Oxidant and Reductant with examples
- Cathartics
- Astringent
- Complexometric Titration
- Impurity
- Self indicator with example
- Antidepressant

B) Write the chemical formula & Uses of followings

- Dapsone
- Magaldrate
- Potassium Permanganate
- Bleaching powder
- Green Vitriol

C) Write down the structure & numbering.

- Purine
- Phenothiazine
- Imidazole
- Pyrimidine
- Indole

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Subject: PHARMACEUTICAL CHEMISTRY- I (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

- Q1. (A) Write the chemical formula & uses of the following. [5X2]
 (i) Alum (ii) Bleaching Powder (iii) Epsom Salt (iv) Caustic Soda (v) Green Vitriol
- (B) Define the following terms: [5X2]
 (i) Astringent & Deodorant (ii) Molarity & Normality (iii) Electrolytes & ORS
 (iv) Bacteriostatic & Bactericidal (v) Hygroscopic & Deliquescent
- Q2. Short notes on (Any Three) [5x3]
 i) Cyanide Poisoning ii) Stages of General Anaesthesia iii) Radioisotopes iv) Primary Standard
- Q3. Write short notes on (Any Three) [5x3]
 (i) Dental Products (ii) Geiger-Muller counter (iii) Saline cathartics
 (iv) Combination of Antacids
- Q4. (a) Give Properties, Uses & Storage condition of the following compounds: [2x3.5]
 (i) Hydrogen peroxide (ii) Sodium thiosulphate
- (b) Write short notes on Anticaries Agent. [4]
- (c) Explain only the principle of limit test for Iron [4]
- Q5. (a) Define Antidote. Classify them with examples. Write Physical & Chemical properties & uses of Sodium Thiosulphate [1+2+4^{1/2}]
 (b) What are antioxidants? Write Physical & Chemical character & uses of Sodium Bisulphite, [7^{1/2}]
- Q6. (a) Define limit test. Write down the principle, procedure & apparatus used in the limit test for Arsenic: [7^{1/2}]
 (b) Enumerate the method of preparation, physical & chemical properties & uses of Iodine. Briefly describe about different preparations of Iodine. [4^{1/2}+3]
- Q7. (a) Explain Bronsted-Lowry & Lewi's Acid – Base Theory. [3+3]
 (b) What do you mean by Buffer Solutions & Buffer Capacity & Write a note on application of Buffers in Pharmacy. [5]
 (c) Describe about tests for purity. [4]

D. Pharm Part - II

E. R. 1991

2022(I)

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE****Subject: PHARMACEUTICAL CHEMISTRY- II (Theory)****Full Mark -80****Time -3 hrs***(Answer any five questions including question No. 1)*

- Q1. A) Write the structure of the heterocyclic ring with numbering & give suitable example [10x1]
a) Pyrrolidine b) Aziridine c) Quinoline d) Acridine e) Pyrazine
f) Pyridine g) Pyrimidine h) Coumarin i) Indole j) Piperidine
- B) Write the chemical structure & use of the following medicinal agents [10x1]
a) Aspirin b) Procaine c) Phenformin d) Propranolol e) PAS
f) Proflavine g) Chlorocresol h) Isoniazid i) Isoprenaline j) Chlorpropamide
- Q2. Write short notes on any three. [5x3]
(i) Steroidal drugs ii) Local anaesthetics
(iii) Antiseptics and Disinfectants (iv) Anthelmintic Drugs
- Q3. A) Define antibiotics? Classify β -lactam antibiotics with suitable examples. [2+3]
B) Write the structure, nomenclature, popular brand name, and uses of [5x2]
a) Ampicillin b) Benzyl Penicillin
- Q4. A) Define and classify antihistaminic drugs? [2+3]
B) Write the chemical structure, nomenclature, popular brand name & uses of following: [5x2]
(i) Diphenhydramine (ii) Chlorpheniramine
- Q5. Write the structure, chemical name, and uses of following medicinal agents [5x3]
(a) A non-opioid analgesic. (b) A tricyclic antidepressant. (c) A non-heterocyclic antihistamine.
(d) A pyrimidine containing sedative and hypnotic e) A sulfone containing anti-leprotic drug.
- Q6. A) Define anticholinergic drugs? Classify them with suitable example. [1+2]
B) Write the structure, nomenclature, popular brand name and uses of the following: [4x3]
(i) Atropine ii) Propantheline iii) Biperiden
- Q7. Write short notes on any three. [5x10]
a) Diagnostic agents b) Anticoagulants c) Stages of Anaesthesia d) Analeptics

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Subject: PHARMACEUTICS-II (Theory)

Full Mark -80

Time -3 hrs

(Answer any five questions including question No. 1)

Q1. (A) Define the following terms:

[2x5]

- i) Tachyphylaxis (ii) Posology (iii) Displacement value (iv) Subscription (v) Tablet triturate

(B) Translate the following Latin terms into English.

[1x6]

- (i) Signa (ii) Unguentum (iii) Capiendus (iv) Post Cibo (v) Cochlear minimum (vi) Omni Mane

(C) Answer the followings

[2x2]

- (i) Differentiate between suppositories and pessaries.

- (ii) Calculate the dose for a 9 months old infant when the adult dose of a drug is 150mg.

Q2. Write notes on:

[7.5x2=15]

- (a) Therapeutic incompatibility

- (b) Sources of errors in Prescription

Q3. What are mixtures? Classify different types of mixtures. Describe the methods of dispensing of mixture containing.

[2+3+10]

- (a) Indiffusible solids (b) Precipitate forming liquids.

Q4. Define the term Eye Drop. Describe in brief the formulations of Eye Drop. What are the various adjuvants used in preparation of Eye Drop?

[2+9+4]

Q5. Define prescription. Describe the parts of a prescription with clean labelled diagram.

[2+10+3]

Q6. Define the term 'parenteral products'. Discuss in brief the various tests required to be performed for evaluation of parenteral preparations.

[2+13]

Q7. Write notes on (Any Three):

[5x3]

- (a) Stability of suspension.

- (b) Facial cosmetics.

- (c) Alkaloidal incompatibility.

- (d) Formulation of Shampoo

D. Pharm Part - I

ER 1991

2022(I)

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Subject: PHARMACEUTICS- I (Theory)**Full Mark -80****Time -3 hrs***(Answer any five questions including question No. 1)***Q1. (A) Define following.****[5x2=10]**

- i) Isotonic solution ii) Sublimation iii) Capping iv) Meta filter x) Pasteurization.

(B) Differentiate the followings**[5x2=10]**

- a) Exotoxin and Endotoxin
b) Double maceration and Triple maceration
c) Hard gelatine capsule and soft gelatine capsule
d) Syrups and Elixirs
e) Emulsion & suspension

Q2. What do you mean by extraction? Describe briefly the process of simple maceration for organized & unorganized drugs used in the preparation of tincture. **[2+13=15]**

Q3. Define sterilization. Why the moist heat sterilization is more effective than dry heat method? Write in details about moist heat sterilization method. **[2+3+10=15]**

Q4. Define size reduction. Write down the different factors affecting the size reduction. Write short note on Hammer Mill **[2+13=15]**

Q5. Define vaccines & toxoids. Describe the types of immunity. Write down method of preparation of two bacterial vaccines. **[2+4+9=15]**

Q6. Explain the help of a neat diagram the theory, construction, working and application of the followings: **[5x3=15]**

- (i) Filling of aerosol
(ii) Colloidal mill
(iii) Simple distillation

Q7. What are different types of containers commonly used in Pharmacy? Write in brief about glass container. **[5+10=15]**

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PHARMACOGNOSY (Theory)

Full Mark -80

Time -3 hrs

PART-A**Q1. Long answer type questions (Answer 6 out of 7)**

[6 x 5 = 30]

- (i) Write about quantitative microscopical evaluation.
- (ii) Define surgical dressings. Write notes on Cotton.
- (iii) Write a note on Ergot.
- (iv) Write in detail about Soxhlet extraction method.
- (v) Write details about the Phytochemical test used for glycosides and alkaloids.
- (vi) Explain adulteration of crude drugs with suitable examples.
- (vii) What do you mean by herbal formulation? Classify it with example. Give notes on Classical Ayurvedic formulations.

PART-B**Q2. Short answer type questions (Answer 10 out of 11)**

[10 x 3 = 30]

- (i) Write a short note on Umbelliferous fruits.
- (ii) Define antioxidants with examples.
- (iii) Write the biological source, chemical constituents & uses of Neem.
- (iv) Explain about the biological role of Omega-3 fatty acid.
- (v) Write details on scope of Pharmacognosy.
- (vi) Write the Biological source and chemical constituents of Gokhru and Punarnava.
- (vii) Write down methods of preparation of Lehyra.
- (viii) Define stomatal number and stomatal index.
- (ix) Differentiate between pale catechu and black catechu.
- (x) Differentiate between Organised and Unorganised drugs?
- (xi) Write the biological source, chemical constituents & commercial preparations of Sandal Wood Oil

PART-C**Q3: Objective type (Answer all from all the sections). Each carries ONE mark** [20 x 1 = 20]**A) Define the followings:**

- a) Tannins 2. Oleogumresin. 3. Palisade ratio. 4. Cosmeceuticals. 5. Crude Drugs

B) Write down the biological source of

- | | | | | |
|-----------|-----------------|---------------|----------|--------------|
| a. Squill | b. Guggul | c. Ispaghula | d. Senna | e. Rauwolfia |
| f. Myrrh | g. Ashwagandha. | h. castor oil | i. Aloe | j. Artemisia |

C) Answer the following

- a) What are the chemical constituents of Fennel.?
- b) What is gutica?
- c) What is chemical test for tropane alkaloids?
- d) Write basic principle of unani system of Medicine.
- e) What is Chemotaxonomy?

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PHARMACOGNOSY-I (Theory)**Full Mark -80****Time -3 hrs***(Answer any five questions including question No. 1)***Q1. A) Write down the chemical constituents of following crude drugs [10x1]**

- | | | | | |
|--------------|---------------|------------|----------------|----------------|
| a) Guggul | b) Nux-vomica | c) Amla | d) Linseed oil | e) Ipecacuanha |
| f) Digitalis | g) Dioscorea | h) Aconite | i) Neem | j) Cannabis |

B) Write the important uses of the following crude drugs: [10x1]

- | | | | | |
|------------|---------------|--------------------|----------------|-----------|
| (i) Vasaka | (ii) Vinca | (iii) Black Pepper | (iv) Arjuna | (v) Honey |
| (vi) Clove | (vii) Curcuma | (viii) Tulsi | (ix) Colchicum | (x) Agar |

Q2. Answer any three: - [5x3]

- | | |
|--|------------------------------|
| (a) Morphological classification of crude drugs. | (b) Regenerated fibre |
| (c) Classification of terpenoids | (d) Classification of resins |

Q3. Define Glycoside. Name five drugs acting on the nervous system. Write the biological sources, chemical constituents, uses along with gross anatomical study of Datura [2+3+10]**Q4. Answer any three: - [5x3]**

- | | |
|--|---------------------------------|
| (a) Source, preparation, identification & uses of Silk | (b) Lycopodium spare method |
| (c) Classification of Pharmaceutical Aids. | (d) Anatomical studies of Clove |

Q5. Write notes on (any three): [5x3]

- | | |
|---------------------------|---|
| (a) Gold beater skin test | (b) Collection and preparation of Opium |
| (c) Borntrager test | (d) Keller-Kiliani test |

Q6. Write the biological source, Chemical constituents and uses of the following crude drug (Any three) [5x3]

- | | |
|-------------------|---------------------|
| (a) Black catechu | (b) Shark Liver Oil |
| (c) Cinchona | (d) Ashwagandha |

Q7. (i) Differentiate between raw cotton & absorbable cotton. [2+6+7]

(ii) Write the biological source, chemical constituents and uses along with gross anatomical studies of Fennel.

(iii) Define Resin with suitable examples. Write the Official source, chemical constituents, along with collection & preparation of Senna.

D. Pharm Part - II

E. R. 1991

2022(I)

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Subject: PHARMACOLOGY & TOXICOLOGY (Theory)**Full Mark -80****Time -3 hrs***(Answer any five questions including question No. 1)*

1. A) Define the following terms: (20X1)
a) Haematinics b) Myasthenia gravis c) Neuroleptics d) Glaucoma
e) Uricosuric agent f) Hypertensive crisis g) Teratogenic Effect h) Anaemia
i) Broad spectrum antibiotics j) Zollinger Ellison Syndrome

B) Define the followings:
i) Receptor ii) Antagonists iii) Tolerance iv) Therapeutic Index
v) Potentiation vi) Bio-availability vii) Enzyme induction viii) Tachyphylaxis
ix) Sequential pill x) Biological Lag
2. Define Diuretics, Classify them. Describe the mechanism of action, pharmacological actions, adverse effects & uses of Loop diuretics. (2+3+10)
3. Define and classify local anaesthetics. Explain the mechanism of action, pharmacological action, adverse effect and uses of local anaesthetics. (2+3+3+3+2+2)
4. a) Classify drugs used in Angina Pectoris. Give mode of action and adverse effect of Vasodilators. 6
b) Write short note on 5-Hydroxytryptamine. 5
c) Define autacoids and explain triple response. (1 + 3)
5. Write short notes on any three: (5X3)
a) Calcium channel blockers b) MAO inhibitors c) Oral hypolipemic agents
d) Antitussive and expectorants e) Stages of general anaesthesia
6. Define and classify opioid analgesics. Discuss the pharmacological action, uses and adverse effect of Morphine. (2+3+5+2+3)
7. Define and classify antidepressant drugs. Discuss the mechanism of action, pharmacological action, adverse effect of Tricyclic antidepressant. (2+4+3+3+3)

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SOCIAL PHARMACY (Theory)**Full Mark -80****Time -3 Hrs.**

1. **Answer any 6 out of 7** **(6 x 5)**
 - a) What is SARS & its mode of transmission, Symptoms & treatment, Role of Pharmacist in prevention of the disease.
 - b) Write about the primary causes of air pollution. Describe the solid waste disposal process in brief
 - c) Discuss about RCH Programme and its major interventions in Phase-1.
 - d) Describe briefly on drug abuse & misuse.
 - e) Write the sources, functions & deficiency diseases due to fat soluble vitamin.
 - f) Describe briefly about causative agent, epidemiology, clinical presentation & prevention of poliomyelitis.
 - g) Write a detail note on role of pharmacist in Disaster management.
2. **Answer any 10 out of 11** **(10x3)**
 - a) Define social pharmacy. Explain briefly about the role of pharmacist in India's ongoing National Health Programme.
 - b) Define Pharmacoeconomics & explain its importance
 - c) Define the term "balanced diet" & give an overview of micronutrients.
 - d) Discuss about the Environmental pollution due to pharmaceuticals.
 - e) What is Artificial ripening, its effects, advantages and disadvantages.
 - f) Write a short note on sewage treatments.
 - g) What are the different stages of the demography cycle?
 - h) Write the causative agent, epidemiology & clinical presentation of Malaria.
 - i) Write down the function of Mid-day meal programme
 - j) What are the STDs. Focus on its epidemiological Factors
 - k) What are genetically modified foods? Describe the negative effects of it.
3. **A) Differentiate the followings** **(20x1)**
 - i) Immunity and immunization ii) Macronutrients and Micronutrient iii) Epidemic & Pandemic iv) Marasmus & Kwashiorkor v) Multibacillary & Paucibacillary Leprosy

B) Answer the followings:

 - i) Write down the beneficial Effects of Fibre.
 - ii) Modes of Transmission of HIV/AIDS.
 - iii) Formulations of Mala-D Tabs.
 - iv) Write down the clinical presentation of Tuberculosis.
 - v) What is Health Maintenance Organisation.

C) Define the following:

 - i) Crude death rate ii) Epidemiology iii) Weaning iv) Incubation period
 - v) Water Pollution vi) Nosocomial infection vii) Nutraceuticals viii) Antisera
 - ix) Psychosocial pharmacy x) Health according to WHO