

**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO.  
QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE  
ANSWER THE QUESTIONS SERIALY AND CONTINUOUSLY**

**Subject: PHARMACEUTICAL JURISPRUDENCE (Theory)**

**Full Mark -80**

**Time -3 Hrs.**

*(Answer any five questions including question No. 1)*

1. **Define the following** (1x20)

|                   |                       |                       |
|-------------------|-----------------------|-----------------------|
| a) Alcohol        | b) Bonded Manufactory | c) Ceiling price      |
| d) Consumer       | e) Cosmetic           | f) Chemist & druggist |
| g) Dealer         | h) Ethics             | i) Free Reserve       |
| j) Govt. Analyst  | k) Schedule H         | l) Illicit traffic    |
| m) Magic remedies | n) Poison             | o) Repacking licence  |
| p) RMP            | q) Schedule-O         | r) Spurious drugs     |
| s) Schedule-G     | t) Third party        |                       |
  
2. a) Discuss in detail about illicit traffic according to NDPS Act Ordinance 1988. (7.5)  
 b) Write down a note on Constitution & functions of Joint State Pharmacy Council (7.5)
  
3. a) Describe the various aspects & provisions for termination of Pregnancies according to Medical Termination of Pregnancy Act. ( 8 )  
 b) Write the difference between Bonded & Non Bonded Laboratory (7)
  
4. a) How PCI is constituted? (7)  
 b) What are the functions of the PCI under Pharmacy Act 1948? (8)
  
5. a) What do you understand by Registered Pharmacist? (5)  
 b) What qualification is required by a person for first & subsequent Registration? (5)  
 b) Discuss the ethics that pharmacist should observe in relation to his profession. (5)
  
6. a) Define the Wholesale and Retail sale ? (3)  
 B) Discuss the conditions for the retail and wholesale of Drug. (7)  
 c) Formula for calculation of retail price drug calculation. (5)
  
7. **Write short note on ANY THREE** (3x5)
  - a) Restricted licences.
  - b) Recommendation of Drug Enquiry Committee.
  - c) Exempted Advertisement.
  - d) Education Regulations.
  - e) Functions of Drug Inspector

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

**Answer the question serially and continuously**

**Subject: SOCIAL PHARMACY (Theory)**

**Full Mark -80**

**Time -3 hrs**

**1. Answer any six questions:**

**(6 x 5)**

- Briefly describe about water soluble vitamins.
- Describe about National AIDS Control Programme.
- Give an account of nutritive & calorific values of various food supplements.
- Describe various methods of family planning.
- Write the organization and function of directorate general of health services.
- Define Health according to WHO. Enumerate the determinants of health.
- Write about the public and private healthcare systems in India.

**2. Answer any ten questions:**

**(10 x 3)**

- Describe the ill effects of junk foods.
- Define the term incubation period & write the epidemiology of whooping cough.
- What is EPI & define its objectives?
- Write the function of community health centres (CHCs).
- Write a note on "Fortification of food".
- Define the food poisoning and their harmful effects on the health.
- Write the causative agents, epidemiology & clinical features of Filariasis.
- Write the Scope of microbiology.
- Define & classify intrauterine contraceptive devices (IUCD) with example.
- Enumerate the strategies for elimination of leprosy from India.
- What are the beneficial effects of breast feeding for baby?

**3. (A) Differentiate the followings :**

**(20 x 1)**

- |                            |                                |
|----------------------------|--------------------------------|
| a) Mortality and morbidity | b) Drug addiction & drug abuse |
| c) Aerobic & Anaerobic     | d) SARS and MERS               |
| e) Vaccine and Toxoids.    |                                |

**(B) Define the following:**

- |                   |                         |                         |
|-------------------|-------------------------|-------------------------|
| a) Immunoglobulin | b) Noise Pollution      | c) Occupational disease |
| d) Detoxification | e) Colostrum            | f) Epidemiology         |
| g) Marasmus       | h) Goitre               | i) FSSAI                |
| j) Syphilis       | k) Mission Indradhanush | l) e-cigarettes         |
| m) Swine flu      | n) Macronutrients       | o) Weaning              |

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

**Answer the questions serially and continuously**

**Subject: HUMAN EDUCATION & COMMUNITY PHARMACY (Theory)**

**Full Mark -80**

**Time -3 Hrs.**

*(Answer any five questions including question No. 1)*

1. **A) Define the followings:** **(1x10)**

|                                 |                             |                       |
|---------------------------------|-----------------------------|-----------------------|
| i) Megaloblastic anaemia        | ii) Chlorine demand         | iii) Pandemic         |
| iv) Fracture                    | v) sewage                   | vi) First aid         |
| vii) Burns                      | viii) Immunization Schedule | ix) Iodine deficiency |
| x) Acute myocardial infraction. |                             |                       |
  
- B) Define the following abbreviations** **(1x10)**

|         |          |              |         |        |
|---------|----------|--------------|---------|--------|
| i) MMR  | ii) ATS  | iii) MDT     | iv) ESR | v) BCG |
| vi) IHD | vii) HBV | viii) UNICEF | ix) MTP | x) OPV |
  
2. (a) Briefly discuss various staining technique for bacteria, mentioning merits and demerits of each. **(9+6)**  
 (b) Draw a neat diagram of a typical bacterial cell.
  
3. What are vitamins? Classify the vitamins with suitable examples. Write the source, Deficiency and daily requirements of fat soluble vitamins. **(1+2+12)**
  
4. Define Epidemiology. Write down the scope, uses and analytical method of Epidemiology. **(2+4+4+5)**
  
5. What is family planning? Classify different methods of family planning. Discuss about barrier contraceptives. **(2+5+8)**
  
6. (a) What is Immunity?. **(2)**  
 (b) Define Active & Passive Immunity. **(4)**  
 (c) Write the disinfection procedure of faeces & urine, sputum, linen, instruments & dead body. **(9)**
  
7. **Write notes on followings: (ANY THREE)** **(3 x 5)**
  - (a) Mode of transmission & prevention measures of Tuberculosis.
  - (b) Solid waste disposal & control.
  - (c) Balanced diet.
  - (d) Sanitary well

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

**Answer the question serially and continuously**

**Subject: DRUG STORE & BUSINESS MANAGEMENT (Theory)**

**Full Mark -80**

**Time -3 hrs**

*(Answer any five questions including question No. 1)*

1. **Define the followings:** **(1x20)**

|                    |                    |                         |
|--------------------|--------------------|-------------------------|
| a) Safety Stock    | b) Bincard         | c) Partnership Deed     |
| d) Petty Cash Book | e) Overdraft       | f) Accounting           |
| g) Assets          | h) Bad Debts       | i) Commerce             |
| j) Import trade    | k) Free samples    | l) Mail order business  |
| m) Scrap           | n) Industrial Bank | o) Working capital      |
| p) Trade credit    | q) Private company | r) Co-operative society |
| s) Insurance       | t) Window display  |                         |
  
2. What is recruitment? What are different methods of recruitment of a Pharmacist? **(3+4+8)**  
Write the various steps involved in the section of a person as Pharmacist.
  
3. **Differentiate between the following (Any three)** **(5x3)**

|                                       |                                    |
|---------------------------------------|------------------------------------|
| a) Liquidity ratios & Solvency ratios | b) Trial balance and balance sheet |
| c) Journal & Ledger                   | d) Advertisement & sales promotion |
  
4. a) Define Book-keeping. What are the advantages of double entry book keeping? **(2+5)**  
b) Explain various media & methods for advertising **(8)**
  
5. **Write short notes on the following (Any Three)** **(5x3)**

|                        |                     |                   |
|------------------------|---------------------|-------------------|
| a) Joint Stock Company | b) Salesmanship     | c) Window Display |
| d) ABC Analysis        | e) Accounting Error |                   |
  
6. a) Define the term inventory. **(2)**  
b) What are the various forms in which inventories exist? **(5)**  
c) What are the needs & objectives of an effective inventory management? **(8)**
  
7. Journalise the following transactions and post them into concerned ledger. **(15)**
  - a) Pramod invest Rs.50, 000/- in cash
  - b) He buys machine of Rs.20, 000/- on credit from Mr.Saroj
  - c) He buys goods of Rs.10, 000/- on credit from Mr Suresh
  - d) He buys a building for Rs.80, 000/- on credit from Mr Ram
  - e) He pays Rs.8, 000/- to Mr Saroj
  - f) He pays Rs.3, 000/- to Mr Ram
  - g) He pays Rs.7, 000/- to Mr Suresh
  - h) The interest paid on cash Rs.500/-
  - i) The cash received from sale of goods Rs.9,500/-

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D. Pharm Part - I

E. R. 1991

2022(II)

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

**Answer the questions serially and continuously**

**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:** (1x20)
- |                               |                       |                              |
|-------------------------------|-----------------------|------------------------------|
| i) Ketone bodies              | ii) Bilirubin         | iii) Triglycerides           |
| iv) Positive nitrogen balance | v) Polydipsia         | vi) Electron transport chain |
| vii) Hyper vitaminosis D      | viii) Obesity         | ix) Atherosclerosis          |
| x) Lipoprotein                | xi) Tetany            | xii) Polycythaemia           |
| xiii) ESR                     | xiv) Thrombocytopenia | xv) Macromolecules           |
| xvi) Rancidity                | xvii) Alkaptonuria    | xviii) HDL                   |
| xix) SGPT                     | xx) AST               |                              |
2. Define Glycolysis & describe the steps involved in Embden Meyerhof Pathway with its energy calculation. (1+9+5)
3. What are the normal & abnormal constituents of urine? Enumerate the abnormal constituents of urine with their clinical significance. (5+10)
4. Describe the role of minerals (any five) in our life process. (5x3)
5. a) Define & classify Carbohydrate. Describe different chemical reactions of Monosaccharide. (1+4+5)  
b) Briefly describe different Qualitative tests for Carbohydrates. (5)
6. Define enzymes. Write down classification, properties and specificity of enzymes with suitable examples. (2+4+4+5)
7. **Write short notes any THREE of the following:** (5x3)
- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| i) Urea Cycle                        | ii) Sickle Cell Anaemia             |
| iii) Biological functions of Protein | iv) $\beta$ oxidation of Fatty acid |
| v) Functions of blood                |                                     |

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE  
ANSWER THE QUESTIONS SERIALLY AND CONTINUOUSLY**

**Subject: HOSPITAL & CLINICAL PHARMACY (Theory)**

**Full Mark -80**

**Time -3 Hrs.**

*(Answer any five questions including question No. 1)*

1. **(A) Define the following terms:** **(10x1)**

|                       |                      |
|-----------------------|----------------------|
| a) Anaphylaxis        | b) Ryle's Tube       |
| c) Vial               | d) Drug interaction  |
| e) In-patient         | f) Bioequivalence    |
| g) Surgical equipment | h) Clinical Pharmacy |
| i) Satellite Pharmacy | j) Sterilization     |

**(B) Define the following abbreviations:** **(10x1)**

|         |         |        |        |         |
|---------|---------|--------|--------|---------|
| a) CHC  | b) DIB  | c) DDS | d) HFS | e) HEPA |
| f) GABA | g) ADME | h) MRI | i) LVP | j) IDDM |
2.
  - a) Define and classify hospital. **(3+2)**
  - b) Briefly describe the functions of a modern hospital. **(5)**
  - c) Write the location & layout of outpatient dispensing along with figure. **(5)**
3.
  - a) Define hospital formulary. **(3)**
  - b) Describe the functions and objectives of hospital pharmacy. **(6)**
  - c) Write a note on Drug Distribution Centre. **(6)**
4.
  - a) Factors affecting bioavailability. **(5)**
  - b) Role of PTC in drug safety. **(5)**
  - c) Write a note on Teratogenicity. **(5)**
5.
  - a) Write the symptoms and treatment of Arsenic poisoning. **(5)**
  - b) Write the manifestation & pathophysiology of CHF. **(5)**
  - c) Pathophysiology & manifestation of Type II Diabetes mellitus. **(5)**
6.
  - a) Define Clinical Pharmacy **(3)**
  - b) Discuss the role of Pharmacist in a health care team. **(6)**
  - c) Discuss the role of computer in Pharmacy. **(6)**
7. **Write notes on (Any three)** **(5x3)**
  - a) Patient Counselling
  - b) Drug & Food interaction.
  - c) Bed side Pharmacy.
  - d) Pathophysiology & manifestation of Cerebral Malaria.
  - e) Pathophysiology & manifestation of Pulmonary Tuberculosis.

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ANSWER THE QUESTION SERIALLY AND CONTINUOUSLY**

**Subject: PHARMACEUTICS (Theory)**

**Full Mark -80**

**Time -3 hrs**

*(Answer any five questions including question No. 1)*

- 1. Long type question (answer any six) (6 x 5)**
- a) Define drying. Explain details about freeze dryer with neat and clean diagram.
  - b) Discuss the advantages and disadvantages of plastic as packaging materials
  - c) Explain principle, construction and working condition of cyclone separator.
  - d) What is Toxoid ? Write the general methods of preparation of Toxoids.
  - e) What is extraction? Write down the details about soxhlation
  - f) Explain details about continuous hot percolation method with neat and clean diagram.
  - g) Classify the novel drug delivery systems (NDDS) with examples. Write the advantages of novel drug delivery systems.
- 2. Short type question (answer any ten) (10 x 3)**
- a) Define preservatives. Mention various types of preservatives used in pharmaceutical preparations.
  - b) Write short note on Sustained release tablets.
  - c) Define of the followings :  
i) Creams      ii) Vaccines      iii) Emulsion
  - d) Write any three polymers used for film and enteric coated tablets.
  - e) Write different excipients used for processing of capsule with examples.
  - f) Give advantages, disadvantages and applications of sterilization by ionizing radiation.
  - g) Define lamination problem with its remedy.
  - h) What are the differences between syrup and elixir?
  - i) Write details about extra pharmacopoeia.
  - j) Write & explain Darcy's law.
  - k) Write notes on Erythrocytes as a drug carrier.
- 3. (A) Answer the followings. (Answer All) (20 x 1)**
- i) Give one major differences between disintegration and dissolution.
  - ii) Give one difference between compressed tablet and moulded tablet.
  - iii) Write about sterilization of plastic containers.
  - iv) Classify acquired immunity
  - v) Write disadvantages of Glass
- (B) Define the followings:**
- |              |                        |                    |                   |
|--------------|------------------------|--------------------|-------------------|
| i) Capsule   | ii) Pharmaceutical aid | iii) Hygroscopic   | iv) Antitoxin     |
| v) Autoclave | vi) Nano emulsion      | vii) Nasal drop    | viii) Trituration |
| ix) Mixing   | x) Exsiccation         | xi) Plasticiser    | xii) Creaming     |
| xiii) Paste  | xiv) Vulcanising Agent | xv) Sintered Glass |                   |

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ANSWER THE QUESTION SERIALLY AND CONTINUOUSLY**

**Subject: PHARMACEUTICS-I (Theory)**

**Full Mark -80**

**Time -3 hrs**

*(Answer any five questions including question No. 1)*

1. **A) Define the followings:** **(1 x 8)**  
 i) Mottling    ii) Marc    iii) Gargle    iv) Menstrum    v) Implants    vi) Enemas  
 vii) Prodrug    viii) Filter Aids
  
- (B) Differentiate between the following** **(1 x 10)**  
 i) Dusting power and insufflations    ii) Conduction & Convection  
 iii) Bacteriostatic & Bactericidal    iv) Spray drying & Freeze drying  
 v) Syrup & Elixir    vi) Toxoid & Vaccine  
 vii) Maceration & infusion    viii) Aristas & Asavas  
 ix) Lotion & Liniment    x) Distillation & Evaporation
  
- (C) Find the volume of 80% alcohol required to prepare 600ml of 50% alcohol?** **(2)**
  
2. Define distillation. What are the types of distillation. Give a detail on fractional distillation **(3+3+9)**
  
3. Define Homogenization. Discuss the principle, construction, function of two equipments you have studied which are used in Homogenization. **(1+6+8)**
  
4. Write notes on: **(5 x 3)**  
 (a) Human normal immunoglobulin    (b) Rabies vaccine    (c) Tuberculin Test
  
5. Explain in detail: **(7<sup>1</sup>/<sub>2</sub> x 2)**  
 (a) Factors affecting size reduction    (b) Factors affecting rate of filtration
  
6. a) Define aerosols with its advantages and disadvantages. **(5+6+4)**  
 b) Explain various parts of aerosol container with diagram  
 c) Write down the process of filling of aerosol products.
  
7. Define Extraction? What are different processes of extraction? Describe in detail about continuous hot percolation method **(2+3+10)**

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**Answer the questions serially and continuously**

**Subject: PHARMACHEMISTRY (Theory)**

**Full Mark -80**

**Time -3 hrs**

1. **Answer any six questions:** (6 x 5)
- Define and classify anti-malarial agents. Write down the structure, chemical name, and popular brand names of Chloroquine.
  - Define impurities and describe the various sources of impurity .
  - Define and classify diuretics. Write down the structure, chemical name and popular brand names of Furosemide .
  - Define and classify Antacids .Discuss why the combination of antacids is so popular Now-a-days
  - Write in detail about the basic principle of Complexometric titration ? Illustrate with examples.
  - Classify NonSteroidal Anti-inflammatory Drugs(NSAIDs) with suitable example, Write the structure , chemical name & Popular brand names of IBUPROFEN & ASPIRIN
  - Classify sympathomimetic agents with examples. Write the structure, chemical name and uses of (a) Dopamine (b) Naphazoline.
2. **Answer any ten questions:** (10 x 3)
- Write the Principle involved in Limit test for Arsenic.
  - Write down the Advantages & Limitations of Lewis theory of acids and bases.
  - Distinguish between Accuracy & Precision .
  - Mention the structure, IUPAC name & popular brand name of INH & Pretomanid.
  - Define cholinergic drugs. Mention the structure of Acetyl choline & Neostigmine?
  - Define Antibiotics. Write the structure, use & popular brand name of Amoxycillin.
  - What do you mean by Anticonvulsants? Write the structure, use & brand name of Valproic acid .
  - Write three medicinal agents with structure, each containing three heterocyclic ring.
  - Write down the Storage condition & uses of nitrous oxide.
  - Write down the stages of anaesthesia.
  - Classify antineoplastic agents with suitable example.
3. **(A) Write down the structure and uses of the following compounds** (1 x 10)
- |                 |                   |                     |                 |
|-----------------|-------------------|---------------------|-----------------|
| i) Paracetamol  | ii) Pheniramine   | iii) Phenobarbitone | iv) Haloperidol |
| v) Dapsone      | vi) Sulfacetamide | vii) Acyclovir      | viii) Phenytoin |
| ix) Propranolol | x) Chlorpromazine |                     |                 |
- (B) Write down the structure, numbering and name of one drug each for the following heterocyclic rings.** (1 x 5)
- Isoquinoline
  - Pteridine
  - Piperazine
  - Thiophene
  - Pyridazine
- (C) Define the following :**
- Molarity
  - Precipitation
  - Significant figure
  - Gross error
  - Conjugate base
- \*\*\*\*\*

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**Answer the questions serially and continuously**

**Subject: PHARMACHEMISTRY-I (Theory)**

**Full Mark -80**

**Time -3 hrs**

**(Answer any five questions including question No.1)**

1. **A) Write the chemical formula of the followings: (1x10)**  
 a) Butter of Zinc      b) Slaked Lime      c) Soap stone      d) Spirit of Salt  
 e) Quick Silver      f) Muriatic Acid      g) Tartar Emetic      h) Rochelle salt  
 i) Baking Soda      j) Sodium borate
  
- B) Define the following terms: (1 x 10)**  
 i) Protective      ii) Deliquescent      iii) Antioxidant  
 iv) Expectorants      v) Acidosis      vi) Purgatives      vii) Antidote  
 viii) Monograph      ix) Anticaries agent      x) Replacement therapy
  
2. (2+13)  
 What do you mean by term quality control of drugs? Briefly discuss on various methods adopted for controlling the quality of drugs
  
3. a) Explain G.M. counter with a neat labelled diagram. (5)  
 b) Write a note on radio opaque substance. (5)  
 c) Short note on biological effects of radiation. (5)
  
4. What do you mean by Topical Agent? Classify them with suitable example. Write the chemical formula, synonyms & uses of any three important antimicrobial agent [2+4+(3x3)]
  
5. Explain about Arrhenius theory, Bronsted lowry theory, and Lewis theory with Limitations. Write the preparation & uses of HCL. (4+4+4+3)
  
6. Answer all: (5x3)  
 a) Give the principle involved in limit test for Arsenic  
 b) Draw & label the figure of arsenic apparatus  
 c) Give the principle involved in limit test for Iron  
 d) Give the principle involved in limit test for chloride  
 e) Write the different sources of impurities
  
7. Write short notes on (Any Three) (3 x 5)  
 a) ORS      b) Pharmaceutical gases as inhalants.  
 c) Application of Buffer      d) Test for purity

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**Answer the questions serially and continuously**

**Subject: PHARMACOGNOSY (Theory)**

**Full Mark -80**

**Time -3 hrs.**

**(Answer any five questions including question No.1)**

1. (A) **Write the biological source of the following crude drugs:** **(10x1=10)**

|               |                |                      |                  |
|---------------|----------------|----------------------|------------------|
| i. Cinnamon   | ii. Tragacanth | iii. Nut-meg         | iv. Crow-fig     |
| v. Mentha Oil | vi. Ephedra    | vii. Shark liver oil | viii. Castor oil |
| ix. Punarnava | x) Rhubarb     |                      |                  |
  
- (B) **Write the important uses of following crude drugs:** **(10x1=10)**

|          |                |               |                      |
|----------|----------------|---------------|----------------------|
| i)Guggul | ii)Digitalis   | iii)Coriander | iv)Gymnema sylvestre |
| v)Opium  | vi)Pterocarpus | vii)Myrrh     | viii)Colchium        |
| ix)Senna | x)Vinca        |               |                      |
  
2. **Write short notes on (any three)** **(3x5=15)**
  - i. Define deterioration. Write about on method of adulteration of crude drug.
  - ii. Taxonomical & Chemical classification of crude drug.
  - iii. History and scope of Pharmacognosy
  - iv. Classification of Glycosides.
  
3. **Answer any THREE** **(3x5=15)**
  - i. Define fibre. Classify it with suitable examples. Write about the preparation of silk.
  - ii. Physical method of Evaluation.
  - iii. Lycopodium spore method.
  - iv. Cultivation & collection of rouwolfia.
  
4. Define alkaloid. Write the biological source, chemical constituents, identification test along with life cycle of Ergot. **(1+2+2+2+8)**
  
5. **Answer any FIVE** **(5x3=15)**
  - i. Mayer's test & Dragendorff's test
  - ii. Goldbeater's skin test
  - iii. KellerKillani test
  - iv. Liebermann burchard test
  - v. Shinoda test
  - vi. Modified Borntrager's test
  
6. Write the **synonym, Biological source, Chemical constituent & uses** of the following crude drugs. **(5x3=15)**
  - i. Ginger
  - ii. Beeswax
  - iii. Liquorice
  - iv. Benzoin
  - v. Gum Acacia
  
7. **Answer all five questions** **(5x3=15)**
  - i. Differentiate between organised & unorganised drug.
  - ii. Differentiate between raw cotton & absorbable cotton.
  - iii. Cultivation & collection of Senna.
  - iv. Classification of Resin
  - v. Different types of Tannin.

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**Answer the questions serially and continuously**

**Subject: PHARMACOGNOSY-I (Theory)**

**Full Mark -80**

**Time -3 hrs**

1. **Long answer type (Answer any Six)** (6x5=30)
- Describe chemical classification of crude drug with suitable examples.
  - Write down biological source, chemical constituents, marketed preparation, therapeutic & cosmetic uses of olive oil.
  - Write down the methods of preparation of asava formulation.
  - Describe in detail about the pharmacognostic study of wool.
  - Define the term Nutraceuticals & classify it. Write note on Spirulina.
  - Discuss about the role of medicinal & aromatic plants in national economy & their export potential.
  - Write down the method of preparation of Bhasma in Ayurvedic formulation.
2. **Short answers type questions (Answer 10 out of 11)** (10x3=30)
- Write short notes on Carminative & G.I. regulators.
  - Write brief note on Pharmaceutical Aids.
  - Write short notes on Phytosomes.
  - Discuss about the herbal cosmetics.
  - What are the basic principles involve in the Ayurveda?
  - Write about the chemical test for anthraquinone glycoside.
  - What is refractive index ?
  - Define astringents & write down the biological source of Black catechu.
  - Write details in scope of Pharmacognosy.
  - Write down the basic principles of Siddha system of medicine.
  - What are prebiotics & probiotics?
3. **Objective type (Answer all from all the sections). Each carries One mark** (20x1=20)
- A. Define the followings:**
- a. Unani      b. Resin      c. Regenerated fibre      d. Dosha in Ayurveda      e. Lehya
- B. Write down the biological source of**
- a. Ipecac      b. Ishapghol      c. Fennel      d. Punarnava      e. Arjuna  
f. Colchicum      g. Cinchona      h. Shatavari      i. Papaya      j. Datura
- C. Answer the following**
- What is the basis of morphological classification of Plant Kingdom.
  - Define adulteration of crude drugs.
  - What is composition of Kapha as per Ayurveda?
  - What is enflourage?
  - What is therapeutic use of Gymnema?

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**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO.  
QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE  
ANSWER THE QUESTIONS SERIALY AND CONTINUOUSLY**

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

- 1. Define the following terms: (1 x 20)**
- |                       |                            |                      |                    |
|-----------------------|----------------------------|----------------------|--------------------|
| i) Agonist            | ii) Therapeutic Index      | iii) Receptor        | iv) Antimetabolite |
| v) Haemolysis         | vi) Teratogenic effect     | vii) Toxicology      | viii) Tolerance    |
| ix) Prodrug           | x) Chemotherapy            | xi) Plasma half-life | xii) Pinocytosis   |
| xiii) Super infection | xiv) Facilitated diffusion | xv) Drug dependence  | xvi) Affinity      |
| xvii) Anaphylaxis     | xviii) Pharmacokinetic     | xix) Autacoid        | xx) Synergism      |
2. Define chemotherapeutic agents with suitable example. Differentiate between bacteriostatic and bactericidal drugs. Give a detail note on Penicillin. **(3+4+8)**
3. a) Classify routes of administration of drugs. Write a note on Oral & Parenteral route with their advantages & disadvantages. **(4+6)**  
b) Write a note on factors affecting absorption of drugs. **(5)**
4. Define Anti-muscarinic drug. Classify them with suitable examples. Describe in detail about mechanism of action, pharmacological action and uses of atropine. **(3+4+8)**
5. a) Pharmacological actions, uses & adverse drug reactions of furosemide. **(5)**  
b) Pharmacological action, uses & adverse drug reactions of chlorpromazine. **(5)**  
c) Pharmacological actions, uses & adverse drug reactions of Calcium channel Blocker **(5)**
6. **Write short note on any three: (3 x 5)**
- Proton Pump Inhibitors
  - Anti Leprotic Drugs
  - Oral Hypoglycaemic Drug
  - First Line Antitubercular Drugs
  - Drug Treatment of bronchial Asthma
7. **Write short note on any three: (3 x 5)**
- Chloroquine
  - Metronidazole
  - Valproic Acid
  - Salbutamol
  - Griseofulvin

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE  
ANSWER THE QUESTIONS SERIALLY AND CONTINUOUSLY**

**Subject: HUMAN ANATOMY & PHYSIOLOGY (Theory)**

**Full Mark -80**

**Time -3 hrs**

1. **Answer any six out of seven** (6 x 5)
- Draw a neat labelled diagram of male reproductive system. Write a short note on composition of semen.
  - Define endocrine gland. Briefly discuss about the hormone secreted from the pituitary gland.
  - Draw a neat & labelled diagram of urinary system and describe briefly about the formation of urine.
  - Define digestion. Describe different parts of digestive system with their function.
  - Write down different constituents of blood .Discuss about the function of WBC.
  - Draw a neat labelled diagram of skin and it's functions.
  - Classify nervous system. Briefly discuss about different parts of brain.
2. **Answer any ten out of eleven** (10x3)
- Write a note on Mitosis.
  - Draw a neat labelled diagram of Cell.
  - Write a short note on physiology of smell.
  - Write a note on RBC.
  - Write a note on Blood Pressure.
  - Discuss about Muscular Tissue
  - Discuss about different parts of tongue.
  - Differentiate between sympathetic and parasympathetic nervous system.
  - Differentiate between smooth and skeletal muscle.
  - Write down functions of antidiuretic hormone (ADH).
  - Describe role of different hormone(s) in pregnancy.
3. **Briefly write down the function of the followings in one or two sentence:**  
**ANSWER ALL** (20x1)
- |                     |                      |                   |
|---------------------|----------------------|-------------------|
| a) Ptyalin          | b) Lysosome          | c) Apocrine gland |
| d) Renin            | e) Pharynx           | f) Acrosome       |
| g) FSH              | h) Oxytocin          | i) Tendons        |
| j) Platelets        | k) Tympanic membrane | l) Centrosome     |
| m) Golgi bodies     | n) Calcitonin        | o) Thromboplastin |
| p) ESR              | q) Thymus gland      | r) ECG            |
| s) Sino-atrial node | t) Pepsin            |                   |

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D. Pharm Part - I

E. R. 1991

2022(II)

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

**Answer the question serially and continuously**

**Subject: HUMAN ANATOMY & PHYSIOLOGY (Theory)**

**Full Mark -80**

**Time -3 hrs**

*(Answer any five questions including question No. 1)*

1. **(A) Define the followings:** (1 x 10)  
i) Pacemaker                      ii) Cardiac cycle                      iii) Vital Capacity                      iv) Suicidal bag  
v) Spermatogenesis                      vi) Neuron                      vii) Nephron                      viii) Cranial Nerves  
ix) Erythroblastosis fetalis                      x) Appendicular skeleton
- (B) Write down functions of the following:** (1 x 10)  
i) Skin                      ii) Connective Tissue                      iii) WBC                      iv) Testosterone  
v) Cerebrum                      vi) Pituitary Gland                      vii) Adrenal Gland                      viii) Lymph  
ix) Platelet                      x) Pancreas
2. Enumerate the different parts of female genital organ with neat labelled diagram. Write in details about the menstrual cycle. (5+5+5)
3. Define Excretion. Draw a neat diagram of urinary tract. Write the mechanism of urine function. (2+5+8)
4. Define Blood. Write the composition & function of Blood. Discuss in detail about the clotting factors present in blood. (2+5+8)
5. Define tissues. Classify different types of tissues. Add a note on epithelial tissue. (2+6+7)
6. Draw a neat labelled diagram of the digestive system and briefly explain the physiology of digestion. Write down the various functions of LIVER (5+5+5)
7. **Write short notes on any three of the following.** (3 x 5)  
a) Mechanism of respiration.  
b) Spleen  
c) Hypothalamus  
d) Hormone secreted from anterior pituitary gland  
e) Cardiac Cycle

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

**Answer the question serially and continuously**

**Subject: PHARMACEUTICS-II (Theory)**

**Full Mark -80**

**Time -3 hrs**

*(Answer any five questions including question No. 1)*

1. **(A) Define the following terms:** **(15 x 1)**

|                          |                       |                       |                   |
|--------------------------|-----------------------|-----------------------|-------------------|
| i) Simple syrup          | ii) Isotonic solution | iii) Eutectic mixture | iv) Inscription   |
| v) Douches               | vi) Opacifying agent  | vii) Dentifrice       | viii) HEPA        |
| ix) Antagonism           | x) Irrigation         | xi) Poultices         | xii) Idiosyncrasy |
| xiii) Displacement value | xiv) Tablet Triturate | xv) Shaving media     |                   |
- (B) Translate the following Latin terms into English** **(5 x 1)**

|               |                      |                |               |                |
|---------------|----------------------|----------------|---------------|----------------|
| i) capeiendus | ii) cochlear minimum | iii) omni mane | iv) unguentum | v) si opus sit |
|---------------|----------------------|----------------|---------------|----------------|
2. Define Prescription, Describe the different parts of an ideal prescription with a neat & labelled diagram **(2+10+3)**
3.
  - a) Explain the term Ointment base . **(2)**
  - b) Classify & Explain details about different types of Ointment base. **(3+5)**
  - c) Write notes on “facial cosmetics”. **(5)**
4.
  - a) Explain the term posology. **(2)**
  - b) Discuss various factors that affect the dose of a drug. **(7)**
  - c) Write the Dilling formula. **(4)**
  - d) Calculate the dose for 6months old infant when the adult dose of a drug is 100mg.(2)
5.
  - a) Define Emulsion. **(1)**
  - b) What are different types of emulsions? **(2)**
  - c) Briefly discuss various methods used for preparation of emulsion **(6)**
  - d) Explain about various identification test for an emulsion **(6)**
6.
  - a) Write notes on therapeutic incompatibility. **(5)**
  - b) What are different types of incompatibility? **(3)**
  - c) Describe in brief about the physical incompatibility with examples. **(7)**
7. **Differentiate between(Answer All)** **(3 x 5)**
  - a) Pastes & Jellies
  - b) Hard contact lens & Soft contact lens
  - c) Enteral & Parenteral preparation
  - d) Suppositories & Pessaries
  - e) Flocculated & Non flocculated Suspension

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QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MALPRACTICE**

**Answer the questions serially and continuously**

**Subject: PHARMACHEMISTRY-II (Theory)**

**Full Mark -80**

**Time -3 hrs**

*(Answer any five questions including question No. 1)*

1. **a) Give the structures of the following heterocyclic rings with numbering. (10x1)**  
& Write down name of one drug for each heterocyclic rings.  
 i) Pyrrole    ii) Piperazine    iii) Thiazole    iv) Azepine    v) Imidazoline  
 vi) Phenazine    vii) Acridine    viii) Quinolines    ix) Coumarin    x) Furan  
**b) Write the Chemical structure & uses of following compounds (5x1)**  
 i) Metronidazole    ii) Propranolol    iii) Phenformin    iv) PAS    v) Ethylnitrite
2. **Write short notes on any THREE: (3x5)**  
 i) Steroidal Drugs  
 ii) Local Anaesthetics  
 iii) Classify  $\beta$  lactam Antibiotics with suitable example  
 iv) High ceiling Diuretics
3. **Write short notes on the following agents (any THREE). (3x5)**  
 i) Sedative & Hypnotic drugs    ii) Oral Hypoglycaemic Agents  
 iii) Antimalarial Drug    iv) Cardiac Glycosides
4. What do you mean by Sulphonamides? Classify them by giving suitable examples. [2+4+(3x3)]  
 Mention chemical structure, chemical name and uses of the following drugs:  
 i) Sulfadiazine    ii) Sulfacetamide    iii) Sulphamethoxazole
5. Define and classify Analgesics. Write the structure, nomenclature and brand names of the following drugs: [1+5+(3x3)]  
 i) Indomethacin    ii) Aspirin    iii) Phenylbutazone
6. What are anticholinergic drugs? Classify them with suitable examples. [1+2+(4x3)]  
 Write the structure nomenclature, popular brand name and uses of the following.  
 i) Atropine    ii) Propantheline    iii) Biperiden
7. **Write short notes on any THREE (3x5)**  
 a) Anticoagulant  
 b) Anti neoplastic drugs  
 c) Anti-Fungal agents  
 d) Anthelmintic Drugs  
 e) Antitubercular Drugs

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