

22223

3 Hours / 80 Marks



0805

Seat No.

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- Instructions –*
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any EIGHT of the following:** 16
 - a) Write the importance of dosage form.
 - b) Write the applications of Prodrugs.
 - c) Name the container depending on their utility.
 - d) Explain any one mixing mechanism.
 - e) Write the criteria for selection of filter media.
 - f) Explain digestion process of extraction.
 - g) Differentiate between Dry heat sterilization and Moist heat sterilization
 - h) Name the tablets used to prepare solution.
 - i) Write the approximate capacity of capsule with respect to its number.
 - j) Write the Mantoux tuberculin test.
 - k) Calculate the quantity of dextrose required to prepare 1. Fl.oz of a 10%.
 - l) Define 'containers'. What are the basic materials used in making of container.

2. **Attempt any FOUR of the following:** 12
 - a) Write any six salient features of IVth Edition of I.P.
 - b) Explain construction and working of Silverson mixer homogeniser with a well labelled diagram.
 - c) Calculate the volume of 18%, 15% and 3% cetrimide solution be mixed to get 8% cetrimide solution 200 ml.
 - d) Explain construction and working of cyclone separator with a well labelled diagram.
 - e) Write the principle, construction of Hot air oven with a well labelled diagram.
 - f) Describe the maceration process for concentrated preparation.

3. **Attempt any FOUR of the following:** 12
 - a) Give the classification of dosage form.
 - b) Explain the construction and working with diagram of mill work on the mechanism of cutting.
 - c) Describe the apparatus used for separation of two miscible liquids.
 - d) Illustrate the steps involved in sugar coating.
 - e) Explain the method of preparation of small pox vaccine using animals.
 - f) Explain the factor affecting rate of filtration using Darcy's law.

P.T.O.

**4. Attempt any FOUR of the following:**

12

- a) Define the following terms:
 - i) Syrup
 - ii) Emulsion
 - iii) Gargles
- b) Explain Aerosol container with a well labelled diagram.
- c) Write the significance of size reduction.
- d) Explain Evaporating still with well labelled diagram.
- e) Define filter aid, write the ideal qualities and any two examples of it.
- f) Write the advantages and list the types of modern unit dose packaging.

5. Attempt any FOUR of the following:

12

- a) Define various grades of powder according to I.P.
- b) Explain construction and working of leaf filter with well labelled diagram.
- c) Write the applications of simple distillation.
- d) Describe the method of filling of soft gelatin capsule.
- e) Explain the factors affecting evaporation.
- f) Explain construction and advantages of fluidised bed dryer.

6. Attempt any FOUR of the following:

16

- a) Find the concentration of sodium chloride required to make 50 ml isotonic solution containing 0.5% ephedrine HCl and 1.5% chlorobutal [Note: The F.P. of 1% w/v solution of ephedrine HCl = -0.165°C and the F.P. of 1% w/v solution of -0.138°C]
- b) Compare the process of maceration for organised drug and unorganised drug and draw a well labelled diagram of Soxhlet apparatus.
- c) Define Aseptic techniques, write the source of contamination and name the methods of sterility testing.
- d) Write the excipients used in Formulation of tablet and explain the parts of single punch tablet machine with a well labelled diagram.
- e) Define immunity and explain the types of immunity.
- f) Explain the following equipments used for mixing (Any one)
 - i) Double cone blender
 - ii) Propeller mixer.

22223

3 Hours / 80 Marks



0806

Seat No.

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 - (4) Figures to the right indicate full marks.
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Marks

1. Attempt any FIVE of the following: 20
- a) Define acid and base as per Arrhenius theory and write Advantages and disadvantages of it.
 - b) Define and classify Antacids with examples.
 - c) State the meaning of 'Quality Control'. Give its significance in Pharmacy.
 - d) Define Topical agents and classify with examples.
 - e) Discuss uses and storage condition for
 - i) Oxygen
 - ii) Carbondioxide
 - f) Define Antioxidants with examples. Write selection criteria for inorganic Antioxidants.
 - g) Define and classify Dental Products with examples.
 - h) Write synonym, chemical formula, properties and uses of Muriatic acid.
2. Attempt any FOUR of the following: 12
- a) Define and classify Laxatives with examples.
 - b) Discuss the role of oxygen in biological system.
 - c) Explain Electrolyte replacement therapy. Give official preparations of sodium chloride.
 - d) Give the properties of alpha and beta radiations.
 - e) Mention four official preparations of
 - i) Calcium
 - ii) Iron
 - f) Write principle and reaction involved in limit test for iron.
3. Attempt any THREE of the following: 12
- a) Explain the biological effects of raditions on human body.
 - b) Give the synonym and use of
 - i) Sodium Hydroxide
 - ii) Calcium Hydroxide
 - c) Define Antidote and classify with suitable examples.
 - d) State the precautions to be taken while handling and storage of Radio pharmaceuticals.
 - e) Write properties and uses of
 - i) Kaolin
 - ii) Calamine

P.T.O.

4. Attempt any THREE of the following:

12

- a) State synonym, molecular formula, properties and uses of sodium metabisulphite.
- b) Define Respiratory Stimulants. Given molecular formula, properties and uses of Ammonium carbonate.
- c) Define Expectorants and Classify them. Give uses of potassium iodide.
- d) What are Anticaires agents? Discuss the role of fluoride as anticaries.
- e) Enlist different sources of impurities in pharmaceuticals. Explain any two.

5. Attempt any THREE of the following:

12

- a) Define the terms with examples.
 - i) Achlorhydria
 - ii) Astringent
 - iii) Protectives
 - iv) Emetics
- b) What is 'Shadow meal'? Give its properties, uses and molecular formula.
- c) Define the term 'Radioisotope'. Draw well labelled diagram of G.M. counter and explain construction and working.
- d) Define buffers and classify buffers. Give ideal properties of it.
- e) Draw well labelled diagram of Gutzeit apparatus and explain the principle of limit test for Arsenic.

6. Attempt any THREE of the following:

12

- a) Give any two identification tests for
 - i) Acetates
 - ii) Chlorides
- b) Explain metabolic acidosis and metabolic alkalosis. Give name of compounds used for their treatment.
- c) Explain various applications of Radioisotopes.
- d) What are ORS mixtures? Give its composition recommended by WHO and UNICEF.
- e) Explain the role of iron in human body.

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3 Hours / 80 Marks



0807

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Marks

1. Attempt any EIGHT of the following: **16**

- a) Define Pharmacognosy. Who and when coined the word pharmacognosy.
- b) Explain role of Galen in the history of pharmacognosy.
- c) Which part of the plant is used as crude drug in case of following:
 - i) Pyrethrum
 - ii) Ephedra
 - iii) Gymnema
 - iv) Ajowan
- d) Differentiate between leaf and leaflet.
- e) Name two crude drugs having following family:
 - i) Apocynaceae
 - ii) Zingiberaceae
- f) Explain 'Gold Beater Skin test' for tannins.
- g) Name the crude drug which contains following chemical constituents.
 - i) D-linalool
 - ii) Fenchone
 - iii) Vitamin A
 - iv) Reserpine
- h) Define :
 - i) Antiseptics
 - ii) Disinfectants
- i) Name the crude drug which is used as :
 - i) Carminative
 - ii) Antitussive
 - iii) Laxative
 - iv) Antileprotic
- j) Write Morphological characters of coriander with diagram.

2. Attempt any FOUR of the following: **12**

- a) Define Evaluation of crude drugs. Describe any two physical methods of drug evaluation.
- b) Describe chemical method of classification with its merits and demerits.
- c) Name the crude drug which is used as antimalarial. Write its Biological source and chemical constituents.
- d) Define surgical dressings. Give the ideal requirements of surgical dressings.
- e) Write Biological source, chemical constituents and uses of Nutmeg.
- f) Define volatile oil. Explain methods of isolation of volatile oil.

P.T.O.

**3. Attempt any FOUR of the following:**

- a) Define Diuretics. Give biological source chemical constituents of Gokhru.
- b) Describe method of cultivation, collection and preparation of Rauwolfia for market.
- c) Define following with examples.
 - i) Dried juices
 - ii) Latex
 - iii) Balsam
- d) Define adulteration. Give various methods of adulteration with suitable examples.
- e) Write Biological source and uses of following
 - i) Garlic
 - ii) Black pepper
- f) Explain life cycle of Ergot.

4. Attempt any FOUR of the following:

12

- a) Define following with one example of each :
 - i) Astringents
 - ii) Antirheumatics
- b) Name the crude drug which contain cardiac glycoside. Explain chemical test for it.
- c) Define and classify pharmaceutical aids with examples.
- d) Give Biological source, chemical constituents and uses of vinca.
- e) Define Tannins. Differentiate between hydrolysed tannin and condensed tannin.
- f) Give Biological source of following:
 - i) Digitalis
 - ii) Sandal wood
 - iii) Aconite

5. Attempt any FOUR of the following:

12

- a) Describe method of preparation for cotton fibre.
- b) Define following : (any 3)
 - i) Stomatal No.
 - ii) Stomatal index
 - iii) Veinlet No.
 - iv) Vein termination No.
- c) Draw a well labelled diagram of T.S. of Fennel OR Ginger and describe it.
- d) Give chemical constituents and uses of following:
 - i) Chaulmoogra oil
 - ii) Vasaka
- e) Define and classify Resins and Resin-combination with examples.
- f) Name antidysentric drug. Give its biological source and chemical constituents.

6. Explain chemical tests of following drugs. (any FOUR)

16

- a) Datura
- b) Shark liver oil
- c) Nux vomica
- d) Gelatin
- e) Asafoetida
- f) Turmeric

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0808

Seat No.

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Marks

1. **Attempt any EIGHT of the following:** **16**

- a) Draw the structure of
 - i) Alanine
 - ii) Phenylalanine.
- b) What are lymphocytes? Give their role in health and disease.
- c) Define and classify vitamins.
- d) Give functions of Folic acid.
- e) Define:
 - i) Isoenzymes
 - ii) Constitutive enzymes
- f) Differentiate between fats and oils.
- g) Write the biological functions of protein.
- h) Define essential and non-essential fatty acids with examples.
- i) Draw neat labelled diagram of Animal cell.
- j) What are minerals? Give two biochemical functions of it.
- k) Explain Epimers and Anomers with examples.
- l) Define competitive and non-competitive enzyme inhibition.

2. **Attempt any FOUR of the following:** **12**

- a) Define carbohydrates. Classify carbohydrates with examples.
- b) Give Pharmaceutical and therapeutic significance of enzymes.
- c) Explain the term:
 - i) Gluconeogenesis
 - ii) Glycogenolysis
 - iii) Glycogenesis
- d) Write structure, functions and deficiency symptoms of vitamin E.
- e) What are Phospholipids? Give biological importance and structure of 'Lecithin'.
- f) Explain Acid-Base behaviour of amino acids.

P.T.O.



3. Attempt any **FOUR** of the following: 12
- Discuss the process of Transamination and Oxidative deamination in Protein catabolism.
 - What is Pathological urine? Name abnormal constituents with their significance.
 - Define and classify lipids with examples.
 - What are co-enzymes and name co-enzymes derived from different vitamins?
 - Give structures:
 - D-glucose
 - Sucrose
 - Lactose
 - Define with their significance:
 - Saponification Value
 - Acid Value
4. Attempt any **FOUR** of the following: 12
- Explain 'Lock and key model' of enzymes action and 'Induces fit model' of enzymes action.
 - Write the functions and structure of mitochondria.
 - Explain the following:
 - Pernicious anaemia
 - Scurvy
 - Give difference between reducing and non-reducing sugar.
 - Explain different protein deficiency diseases.
 - Write biochemical role and deficiency diseases of:
 - Zinc
 - Iodine
5. Attempt any **FOUR** of the following: 12
- Define enzymes. Classify them with examples.
 - How will you identify the following constituents in the given sample of urine?
 - Blood
 - Sugar
 - Ketone bodies.
 - Explain Rhodopsin cycle of vision.
 - Give structure and colour reactions of cholesterol.
 - Explain oxidation reactions of Glucose.
 - Give the following reactions of amino acids:
 - Reaction with FDNB
 - Reaction with Dansyl chloride.
6. Attempt any **FOUR** of the following: 16
- Explain the biosynthetic pathway of urea in body.
 - Give structure, physiological functions and deficiency symptoms of:
 - Niacin
 - Thiamine.
 - Explain pathway of glycolysis.
 - What are proteins? Classify them with suitable examples.
 - Explain reactions of beta-oxidation of fatty acid.
 - Explain the reactions of TCA cycle. Discuss energetic of TCA cycle.

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0809

Seat No.

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Marks

1. **Attempt any EIGHT of the following:** **16**
 - a) Define Anatomy and Physiology.
 - b) Enlist the functions of mitochondria.
 - c) Classify the tissues.
 - d) Write any four functions of bones.
 - e) Define and classify joints.
 - f) Name the bones of lower limb.
 - g) Define Stroke Volume and Cardiac output.
 - h) Write the composition of urine.
 - i) Mention the composition of blood.
 - j) Explain the role of calcium in muscle contraction.
 - k) Draw the well labelled diagram of T.S. of Spinal cord.
 - l) Mention the normal values of R.B.C. and W.B.C.'s in male and female.

2. **Attempt any FOUR of the following:** **12**
 - a) Explain physiology of external respiration.
 - b) Enlist any six cranial nerves with their functions.
 - c) Draw well labelled diagram of sagittal section of the eye.
 - d) Explain the formation of urine.
 - e) Define the terms Digestion and mastication. Where do they occur?
 - f) Write the effect of sympathetic nervous system stimulation on...
 - i) Heart
 - ii) Bronchi
 - iii) Eye

3. **Attempt any FOUR of the following:** **12**
 - a) Write the functions of liver.
 - b) Define the term of Hormone. Enlist the endocrine glands.
 - c) Draw a well-labelled diagram of Lymphnode.
 - d) Enlist the functions of testes and ovaries.
 - e) Write the composition and functions of Gastric juice.
 - f) Explain terms:
 - i) Osteoporosis
 - ii) Dwarfism
 - iii) Medial

P.T.O.



4. **Attempt any FOUR of the following:** 12
- a) Explain process of erythropoiesis.
 - b) Draw a well labelled diagram of interior of the heart.
 - c) Enlist the hormones released from anterior pituitary gland with their functions.
 - d) Explain three functions of lymphatic system.
 - e) Explain menstrual cycle.
 - f) Define and give normal values of...
 - i) Blood pressure
 - ii) Vital capacity
 - iii) Cardiac cycle
5. **Attempt any FOUR of the following:** 12
- a) Enlist bones of Axial skeleton.
 - b) Explain ABO system of Blood grouping.
 - c) Explain functions of cerebellum.
 - d) Explain physiology of Hearing.
 - e) Give the functions of Haemoglobin and mitochondria.
 - f) Define the terms:
 - i) CHF
 - ii) Leucocytosis
6. **Attempt any FOUR of the following:** 16
- a) Explain physiology of neuromuscular junction.
 - b) What are auditory ossicles? Write their functions.
 - c) Describe the structure and functions of female reproductive system.
 - d) Explain mechanism blood clotting.
 - e) Explain structure and functions of simple epithelium.
 - f) Describe muscle tone and muscle fatigue.

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0810

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Marks

1. **Attempt any EIGHT of the following:** 16
- a) What is Natural History of Diseases.
 - b) What do the following acronyms stand for –
 - i) WHO
 - ii) BCG
 - iii) MMR
 - iv) CPR
 - c) Define the following terms –
 - i) Microbiology; and
 - ii) Health
 - d) Name any two diseases transmitted by rodents.
 - e) Draw a well-labelled diagram of 'septic tank'.
 - f) Name four different vaccines.
 - g) Describe any one type of immunity.
 - h) Define the following terms –
 - i) Fracture; and
 - ii) Burn and Scald
 - i) What is hypertension?
 - j) State need of staining microorganisms.
 - k) Enlist any four factors affecting fertility.
 - l) Name one each of the following –
 - i) Arthropod borne infection
 - ii) Surface infection
 - iii) Sexually transmitted infection
 - iv) Respiratory tract infection
2. **Attempt any FOUR of the following:** 12
- a) Name various dimensions of 'Health'. Elaborate any one in detail.
 - b) What is disease agent? Classify them with examples.
 - c) Describe different modes of intervention.
 - d) Name a vitamin given in the treatment of the following deficiency disease –
 - i) Rickettes;
 - ii) Beri-beri;
 - iii) Scurvy;
 - iv) Pellagra;
 - v) Keratomalacia
 - vi) Osteomalacia
 - e) Classify minerals with examples. Explain the role of Iodine.
 - f) What is balanced diet? Give its advantages.



3. Attempt any **FOUR** of the following: 12
- Explain physical barrier methods of contraception.
 - Name various behavioral methods of contraception.
 - Describe 'Vasectomy' method.
 - What is 'First Aid Box'? Enlist articles present in first aid box.
 - What is CPR? Explain chest cardiac massage under CPR.
 - What are the general signs and symptoms of fracture? Describe in general management of fracture.
4. Attempt any **FOUR** of the following: 12
- Describe anatomy of bacteria with a well-labelled diagram.
 - Describe procedure and give the importance of Gram's staining method.
 - What is meant by 'Isolation of Pure Culture'? Enlist different methods used for isolation of bacteria.
 - Give details of 'Rapid Sand Filtration' for purification of water.
 - What is air pollution? Discuss its prevention and control.
 - What is excreta? Name different methods of excreta disposal.
5. Attempt any **FOUR** of the following: 12
- Give the mode of transmission of –

i) Chicken pox	ii) Diphtheria
iii) Poliomyelitis	iv) Typhoid
v) Plague	vi) Leprosy
 - Name the causative agent of the following –

i) Influenza	ii) Whooping cough
iii) Cholera	iv) Filariasis
v) Rabies	vi) Gonorrhoea
 - What is 'AIDS'? Explain its prevention.
 - Define –

i) Food Poisoning	ii) Blindness; and
iii) Non-communicable diseases	
 - What are the measures used in prevention and control of cancer?
 - Describe the prevention and control of diabetes mellitus.
6. Attempt any **FOUR** of the following: 16
- Define the following terms –

i) Cold chain;	ii) Epidemic;
iii) Quarantine; and	iv) Vaccine
 - Define the term Immunisation. Write 'National Immunisation Schedule'.
 - Explain in short elements of minor surgery and dressings.
 - What is disinfection? Describe in brief methods of disinfection.
 - Classify bacteria depending on their shape.
 - Draw a well-labelled diagram of Sewage Treatment Plant.

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3 Hours / 80 Marks



0811

Seat No.

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Marks

1. Attempt any **EIGHT** of the following: 16
- a) List the ideal qualities of suspension.
 - b) Calculate the proportion of 16%, 12% and 8% be mixed to get 10% ointment.
 - c) Differentiate between paste and ointments.
 - d) Give the reasons for followings.
 - i) Throat paints are viscous.
 - ii) Mouth wash are dispensed in concentrated form.
 - e) Write the disadvantages of polysaccharide emulsifying agents.
 - f) Calculate the dose for a child with 8 month old and adult dose is 400mg.
 - g) Translate the following Latin terms in English.

i) Cataplasm	ii) Trochiscus
iii) Si opus sit	iv) Ter in die
 - h) Convert the followings term in to metric

i) one ounce	ii) one pound (avoir)
iii) one table spoonful	iv) one drachm
 - i) Write the ideal qualities of depilatories.
 - j) Most of the emulsion appears white or opaque, why?
2. Attempt any **FOUR** of the following: 12
- a) Differentiate between flocculated and deflocculated suspension.
 - b) Define hair Dyes. How they are classified? Give their ideal qualities.
 - c) Explain the incompatibility in following prescription and suggest a suitable remedy.
- Rx
- | | |
|-------------------------|---------|
| Sodii Salicylatis | 3 ii |
| Quininae Sulphatis | gr xii |
| Acidi Sulphurici diluti | m xxx |
| Aquam | ad 3 vi |
- Make a mixture
- d) Explain the oleaginous ointment bases with disadvantages of it.
 - e) Define “ Displacement value of medicament”. Calculate the displacement value of ZnO from the following data:
 - i) Weight of six un-medicated Suppositories - 6g
 - ii) Weight of six suppositories containing 40% of zincoxide - 8.8g
 - f) Describe test for sterility IP for parentral.

P.T.O.



3. **Attempt any FOUR of the following:** 12
- Calculate the volume of alcohol required to prepare 700ml, 65% alcohol using 95%, 70%, 55% and 40%.
 - Explain the types of cachets with its advantages.
 - List the ideal characteristics of ophthalmic products and explain the ophthalmic ointment.
 - Explain - Herapath reaction for Quinine with the remedy and example.
 - Give the advantages of emulsion bases (synthetic bases) over cocoa butter base.
 - Define jellies, list the jelling agents and write the disadvantages of it.
4. **Attempt any FOUR of the following:** 12
- Explain the following factors which affect the dose of drug.
 - Tachyphylaxis
 - Idiosyncrasy
 - Route of administration
 - Explain the sources of error in prescription.
 - Define elixir and write the formulation of it.
 - Explain the method of dispensing of following powders.
 - Explosive powder
 - Volatile powder
 - Hygroscopic and deliquescent
 - Define lipstick and write the formulation of it.
 - State the meaning of creaming and explain the factors affecting creaming.
5. **Attempt any FOUR of the following:** 12
- Differentiate the diffusible and indiffusible mixture and describe the method of preparation of diffusible mixture.
 - Explain adjusted chemical incompatibility with example.
 - Explain the following terms.
 - Foundation cream
 - Cold cream
 - Eye shadow
 - Define dusting powder and differentiate medicated and surgical dusting powders.
 - Define poultice and describe the method of preparation of poultice with example.
 - Explain the formulation of parenteral.
6. **Attempt any FOUR of the following:** 16
- Explain any four tests for identification of emulsion.
 - Describe any four pharmaceutical factors which govern the selection of ointment base.
 - Find the amount of sodium chloride required to make 50ml of isotonic solution - containing 1.5% of ephedrine HCL and 0.5% of chlorobutal.
Given :
 - F.P. of 1% solution of ephedrine HCL = -0.165°C
 - F.P. of 1% solution of chlorobutal = -0.138°C
 - Explain the steps involved in processing of parenteral.
 - How will you dispense the following prescription (mention, calculation, use, method of preparation)
Rx

Olei Eucalypti	m.x.
Olei Theobromatis	4.S.
Fiat pessus, Mitte tales each of 15 grain	
Signa : Unus hora somni utendus. D.V. of E. oil - 1	
 - Describe the methods of evaluation of suspension.

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0812

Seat No.

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- | | Marks |
|---|--------------|
| 1. Attempt any EIGHT of the following: | 16 |
| a) Give structure and method of numbering of (any two) | |
| i) Purine ii) Phenothiazine iii) Piperidine | |
| b) Write structure of following groups (any two) | |
| i) Allyloxy ii) Benzoyl iii) Isopropyl | |
| c) Give popular brand name of (any two) | |
| i) Paracetamol ii) Furo semide iii) Metformin | |
| d) Give the name and structure of drug containing following hetero cycle (any two) | |
| i) Piperazine ii) Benzodiazepine iii) Piperidine | |
| e) Classify antiseptics and disinfectant with suitable examples. | |
| f) Give the structure and uses of coramine. | |
| g) Name the drug used for treatment of (any two) | |
| i) Glaucoma ii) Gout iii) Hypothyroidism | |
| h) Write uses of following : (any two) | |
| i) Evans blue, ii) Congo Red, iii) Iopanoic Acid | |
| i) Write structure with numbering (any two) | |
| i) Isoxazole ii) Isoquinoline iii) Imidazole | |
| j) Define the following terms (any two) | |
| i) Anticoagulants ii) Antiarrhythmic Agents iii) Analgesics | |
| k) Give stability storage condition of (any two) | |
| i) Insulin ii) Halothane iii) Acetylcholine | |
| l) Write Structure and chemical name of (any two) | |
| i) Hydrochlorothiazide ii) Menadione iii) Neo stigmine | |
| 2. Attempt any FOUR of the following: | 12 |
| a) Differentiate between general and local anaesthetics. Write structure and chemical name of Lignocaine. | |
| b) Define and classify Diuretic drugs with examples. Draw the structure of furosemide. | |
| c) Define and classify Antineoplastic drugs with examples. Give properties of Methotrexate. | |
| d) Give structure, chemical name and uses of phenylbutazone. | |
| e) Enlist the uses of any three fat soluble vitamins. | |
| f) Define Hypoglycemic agents. Classify them with examples. Give structure of chlorpropamide. | |
| 3. Attempt any FOUR of the following: | 12 |
| a) What are steroids ? Draw the basic steroidal nucleus with numbering. Give the official preparations and uses of testosterone. | |
| b) What is contrimoxazole. Give its composition, mechanism of antibacterial action and official preparations. | |

P.T.O.



- c) Define and classify Antihistamines with examples. Draw structure of Diphenhydramine.
- d) Classify Tranquillizers. Draw structure of Tranquillizers containing
 - i) Phenothiazine ring
 - ii) Piperidine Ring.
- e) Define and classify Analeptics. Name an analeptic which is a Xanthine derivative. Also write structure and chemical name.
- f) Classify Antibiotics according to chemical structure with example. Draw structure of Ampicillin.

4. Attempt any FOUR of the following: 12

- a) Draw structure with chemical name (any three)
 - i) Penicillin - V
 - ii) Pyrimethamine
 - iii) Sulfaguanidine
 - iv) Ephedrine
- b) Define and classify Hypnotics and sedative. Draw structure of Phenobarbitone.
- c) Give structure, chemical name and uses of Thyroxine.
- d) Define and classify Antitubercular agents with examples. Draw structure of antitubercular containing pyridine nucleus.
- e) Classify Antiseptics and Disinfectants with examples. Write the structure of chlorocresol.
- f) What are cardio vascular agents? Classify it with examples.

5. Attempt any FOUR of the following: 12

- a) Explain anti-inflammatory agent with classification. Give name, structure and properties of indole containing anti-inflammatory agent.
- b) Define and classify Antidepressant. Draw structure and give chemical name of Imipramine.
- c) Classify Antimalarial with suitable examples. Give name, structure of quinoline containing antimalarial agent.
- d) Explain antihypertensive agent with example
- e) Draw the structure of (any three)
 - i) Proflavine
 - ii) Sulfadiazine
 - iii) Ethambutol
 - iv) Metronidazole
- f) Give medicinal uses of (any three)
 - i) Tetracycline
 - ii) Aspirin
 - iii) Propranolol
 - iv) Neostigmine

6. Attempt any FOUR of the following: 16

- a) Define and classify General Anaesthetics with examples. Draw the structure of Diethylether and Halothane.
- b) Write different classification of sulfonamide with example. Give properties, uses and structure of sulfacetamide.
- c) Explain Adrenergic drugs with classification. Give properties, structure and popular brand name of Isoprenaline.
- d) Write structure with chemical name of (any four)
 - i) Dapsone
 - ii) Phenformin
 - iii) D.E.C.
 - iv) Chlorpheniramine
 - v) Aspirin
- e) What are Beta adrenergic blocker ? Classify adrenergic antagonist. Write structure and therapeutic uses of propranolol.
- f) Explain basic chemical structure of penicillins. Enlist different penicillins. Give structure, chemical name and properties of penicillin-G.

22223

3 Hours / 80 Marks



0813

Seat No.

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- Instructions* –
- (1) All Questions are Compulsory.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Define the following terms and give TWO suitable examples of each. 16
 - a) Anticonvulsants
 - b) Haemostatic Agents
 - c) Antithyroid Drugs
 - d) Miotics
 - e) Antineoplastics
 - f) Tranquillizers
 - g) Cholinergic Agents
 - h) Autocoids
 - i) Plasma Expanders
 - j) Antifungal agents

2. Attempt any FOUR of the following: 12
 - a) Describe pharmacological profile of oral contraceptive.
 - b) Explain triple response of histamine and define antihistaminic drugs with example.
 - c) What is preanesthetic medication? What is its purpose and which categories of drugs are employed for it?
 - d) Define drug tolerance. Describe different types of drug tolerance.
 - e) Define diarrhoea. Classify antidiarrheal drugs. Mention their (any 2 classes) mechanism of action.
 - f) Mention different routes of drug administration. Give advantages and disadvantages of Inhalation.

3. Attempt any FOUR of the following: 12
 - a) Drug of choice :-
 - i) Typhoid
 - ii) Cardiac arrhythmia
 - iii) Candidiasis
 - iv) Motion Sickness
 - v) Gout
 - vi) Round worm infection
 - b) Adverse effect :-
 - i) Phenobarbitone
 - ii) Adrenaline
 - iii) Quinine
 - iv) Propranolol
 - v) Ibuprofen
 - vi) Ethambutol
 - c) Name one drug each which produces following effect.
 - i) Hypoglycemia
 - ii) Gray baby syndrome
 - iii) Tinnitus
 - iv) Euphoria
 - v) Photophobia
 - vi) Bone and teeth deformity

P.T.O.



- d) Name the drug contraindicated in following condition.
- | | |
|-----------------|-----------------------|
| i) Peptic Ulcer | ii) Liver damage |
| iii) Insomnia | iv) Myasthenia gravis |
| v) Pregnancy | vi) Glaucoma |
- e) Mention the trade name for following drugs.
- | | |
|------------------|----------------|
| i) Progesterone | ii) Folic acid |
| iii) Paracetamol | iv) Diazepam |
| v) Bisacodyl | vi) Metformin |
- f) Mention preferable route of administration of following drugs.
- | | |
|-----------------------|--------------------|
| i) Insulin | ii) Lignocaine |
| iii) Trinitroglycerin | iv) Cyclopentolate |
| v) Diclofenac | vi) Vitamin K |
- 4. Attempt any FOUR of the following:** **12**
- State the therapeutic uses and side effects of the tetracycline.
 - Mention factors affecting drug absorption. Explain Physiological (any 2) factors.
 - Discuss the symptoms and treatment of belladonna poisoning.
 - What is therapeutic index? Explain what is margin of safety?
 - Define and classify diuretics with examples.
 - What is Diabetes Mellitus? Classify antidiabetic drugs with suitable examples.
- 5. Attempt any FOUR of the following:** **12**
- Classify anticoagulants. Give mechanism of action of Warfarin.
 - What is hypertension? Classify antihypertensives with one example each.
 - Define bronchial asthma. Give its types. Discuss treatment of status asthmaticus.
 - What are gastric antacids? Mention properties of good antacid.
 - Classify NSAIDs with one example each. Give treatment for Salicylate poisoning.
 - Give mechanism of action for. (any two)
- | | |
|-------------------------|--|
| i) Digitalis | ii) Angiotensin converting enzyme inhibitors |
| iii) Local Anaesthetics | |
- 6. Give reason for following statement. (Any EIGHT)** **16**
- Multidrug therapy is effective in the treatment of T.B.
 - Neostigmine is used along with Atropine in myasthenia gravis.
 - Use of purgative is essential with piperazine.
 - Adrenaline is present in emergency kit of physician.
 - Chlorpromazine is called Largactil.
 - Sulphonamides are not much in use now a days.
 - Toxicity of digitalis is increased by Chlorthiazide.
 - Probiotics are sometimes administered with antibiotics.
 - Ephedrine is used as mydriatic in elderly people.
 - Why Carbidopa is given along with Levodopa?

22223

3 Hours / 80 Marks



0814

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
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Marks

1. Attempt any **EIGHT** of the following:

16

- a) Differentiate between the law and ethics.
- b) Give the objective of the Drugs and Magic Remedies Act, 1954.
- c) Discuss offences and penalties of Medical Termination of Pregnancy Act, 1971.
- d) Define 'Poison'. Give two examples of Poisons under Poisons Act, 1919.
- e) List the facilities provided for termination of Pregnancy under MTP Act, 1971.
- f) Define 'Restricted Preparation' and 'Unrestricted Preparation' as per Medicinal and Toilet preparation Act, 1955.
- g) Give two import and recommendation of D.E.C.
- h) State any two measures of combating abuse of narcotic drug and illicit traffic under NDPS Act, 1985.
- i) What does schedule H and G prescribe as per D & C Act, 1940.
- j) Give offences and penalties under Pharmacy Act, 1948.
- k) What are objectives of Drugs (Price Control) order, 1995?
- l) Define the following term:
 - i) 'Minor' as per MTP Act 1971
 - ii) 'Magic Remedies' as per Drugs and Magic Remedies (O.A.) Act 1954.

2. Attempt any **FOUR** of the following:

12

- a) Define the term:
 - i) Bulk drug
 - ii) Formulation
 - ii) Ceiling Pricesas per Drugs (Price Control) order, 1995.
- b) State in brief different operations which are permitted and regulated by the state Government under NDPS Act, 1985
- c) Give functions of central drug laboratory (CDL) under D & C Act, 1940.
- d) Define Education Regulations. What does it prescribe as per Pharmacy Act, 1948?
- e) How 'Veterinary Drugs and Schedule X Drugs' are stores in a Pharmacy Store as per D & C Act 1940?
- f) Give various particulars required to be mentioned in application for obtaining license for manufacture in bond as per Medicinal and Toilet Preparation Act, 1955.

P.T.O.



3. **Attempt any FOUR of the following:** 12
- Give any three conditions of licence for retail sale of schedule C & C 1 drugs under D & C Act, 1940.
 - Explain the role of Pharmacist in healthcare system.
 - Which categories of the advertisement are prohibited to be made as per Drugs and Magic Remedies (O.A.) Act, 1954.
 - Explain how 'Record of Retail Supply of Schedule X Drugs' kept by a Pharmacist under D & C Act, 1940.
 - Differentiate between bonded laboratory and Non-bonded laboratory under Medicinal and Toilet Preparation Act, 1955.
 - Explain the role of Pharmacist in relation to the 'Medical Profession'.
4. **Attempt any FOUR of the following:** 12
- Write nominated and ex-officio members of DTAB as per D & C Act, 1940.
 - Define the term:
 - Cannabis
 - Opium
 - Narcotic drug under NDPS Act, 1985.
 - Give the formula for calculation of retail price of formulation as per DPCO, 1995. Explain each term used in the formula.
 - How Diploma in Pharmacy Institute in India are approved by Central Council as per Pharmacy Act 1948?
 - State the various rules prescribed by state government for possession, possession for sale and for sale of poisonous substances under Poison Act, 1919.
 - What special details are required to be mentioned on the label of "Ophthalmic Preparation" as per Drugs and Cosmetic Act, 1940.
5. **Attempt any FOUR of the following:** 12
- Define "Adulterated Drug and New Drug" as per the Drugs and Cosmetic Act, 1940.
 - How to fix the prices of Bulk Drugs as per DPCO Act, 1995?
 - Write the functions of the 'Pharmacy Council of India' under Pharmacy Act, 1948.
 - Discuss any six offences and penalties of NDPS Act, 1985.
 - Explain the role of Pharmacist in relation to his job.
 - Explain labelling and packing of Ayurvedic (Including Siddha) or Unani Drugs as per D & C Act, 1940.
6. **Attempt any FOUR of the following:** 16
- Write offences and penalties as per medicinal and toilet preparation (Excise Duties) Act, 1955.
 - Differentiate between state Pharmacy Council and Joint State Pharmacy Council under Pharmacy Act, 1948.
 - Give duties of Drug Inspector in relation to manufacture of drugs and cosmetics under D & C Act, 1940.
 - Define the terms as per D & C Act, 1940:
 - Cosmetics
 - Drug Store
 - Pharmacy
 - Loan license
 - What are the bonafied reason for termination of Pregnancies by RMP as per Medical Termination of Pregnancy Act, 1971.
 - What are different forms in which licences are issued for the sell, stock, exhibit for sale as per D & C Act, 1940?

22223

3 Hours / 80 Marks



0815

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any EIGHT of the following:** **16**
 - a) State various forms of Business Organization.
 - b) Define budget. What is budgetary Control?
 - c) Define Bank. Enlist different types of Bank.
 - d) Define the terms:-
 - i) Accounting
 - ii) Safety Stock
 - e) Give the typical layout design for drug store.
 - f) Define trial balance. Write its objectives.
 - g) State any four advantages of double entry book keeping.
 - h) Write four salient features of joint stock company.
 - i) Define the term Economics. State various elements of economics.
 - j) Define scrap. State different types of scrap.
 - k) Define
 - i) Training
 - ii) Recruitment
 - l) Define codification of drug. Enlist different methods of codifications.

2. **Attempt any FOUR of the following:** **12**
 - a) Define aids to trade. Enlist various aids to trade. Explain any two of it.
 - b) Give detailed classification of retailers. Explain itinerant retailers.
 - c) Define market research. Explain various survey method of market research.
 - d) Differentiate between joint stock company and partnership firm.
 - e) Explain mail order business. Write its advantages and disadvantages.
 - f) Define salesmanship. State qualities of a good salesman.

3. **Attempt any FOUR of the following:** **12**
 - a) Differentiate between a trial balance and a balance sheet.
 - b) Write main objectives of financial planning. Explain types of finances required for business.
 - c) Describe evaluations system of the pharmacist.
 - d) Explain VED analysis of inventory control.
 - e) Explain departmental stores. State its advantages and disadvantages.
 - f) State the advantages of co-operative society business.

P.T.O.



4. Attempt any **FOUR** of the following: 12
- a) Write any six functions of wholesalers.
 - b) Explain maximum stock level, minimum stock level and re-order level.
 - c) Write any six functions of bank.
 - d) Define sales promotion. Give various techniques of sales promotion.
 - e) Define Journal? Draw its format and give advantages.
 - f) Give salient features of joint Hindu Family Business.
5. Attempt any **FOUR** of the following: 12
- a) Define the term 'Day-Book'. Explain the various types of Day-Books.
 - b) Enlist different documents required to open a retail drug store.
 - c) State and explain different methods of perpetual system of inventory control.
 - d) Explain the various stages of purchasing procedure.
 - e) Define the term Accounting concept and convention. Enlist various concepts and conventions.
 - f) Define industry. Explain any two kind of manufacturing industry.
6. Attempt any **FOUR** of the following: 16
- a) Explain the term ledger. Give its importance, draw format of ledger.
 - b) Explain different functions of management.
 - c) Define E-O-Q. Mention different methods of E-O-Q.
 - d) Give the meaning of cash book? Describe various types of cash books.
 - e) Explain, objectives and branches of Accounting.
 - f) Write the meaning of window display. Give principle of effective window display.

22223

3 Hours / 80 Marks



0816

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
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 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any EIGHT of the following:** **16**
- a) Define the following terms. (any two)
 - i) Hospital pharmacy
 - ii) Patient compliance
 - iii) Drug dependence
 - b) Translate into english. (any two)
 - i) Cataplasma
 - ii) Hora somni
 - iii) Unus
 - c) Give normal values of (any two)
 - i) Blood cholesterol
 - ii) WBC
 - iii) Haemoglobin
 - d) Enlist the ideal properties of parenteral products.
 - e) Write the different sources of information for DIC.
 - f) What advice must be given to patients while using following drugs. (any two)
 - i) Ampicillin
 - ii) Phenytoin
 - iii) Salicylates
 - g) Write the use of following instruments in hospital. (any two)
 - i) Aneurysm needle
 - ii) Haemostatic forcep
 - iii) Rubber catheters
 - h) Explain the types of outpatients.
 - i) What is difference between sign and symptom of a disease.
 - j) Write the objectives of clinical pharmacy.
 - k) Define floor stock drugs. Explain its types.
 - l) Explain the following (any two)
 - i) Allergic drug reaction
 - ii) CT scanner
 - iii) ECG

P.T.O.



2. **Attempt any FOUR of the following:** 12
- Classify hospitals on non-clinical basis.
 - Write the functions of hospital pharmacy.
 - Explain the drug distribution system in OPD.
 - What is unit dose dispensing. Give its benefits.
 - Explain scope of clinical pharmacy services.
 - Enlist the abilities required for hospital pharmacist. Explain any two of them.
3. **Attempt any FOUR of the following:** 12
- How non-charge floor stock drugs are dispensed in hospital.
 - Explain the administrative patterns in CSSD department.
 - Describe the methods of estimation of demand in hospital.
 - Write the role of pharmacist in patient counselling.
 - Explain the layout of sterile product area.
 - What is legal significance of hospital formulary.
4. **Attempt any FOUR of the following:** 12
- What is purchase procedure in hospital.
 - Write pathophysiology and sign and symptoms of diabetes.
 - Explain drug food interaction with examples.
 - Write the functions of PTC.
 - Define ADR. Give reasons for ADR.
 - Write in detail about bulk concentrates.
5. **Attempt any FOUR of the following:** 12
- Write the symptoms and treatment for opium poisoning.
 - Define surgical dressings. Give any four test for evaluation of absorbent cotton wool I.P.
 - Explain role of computer in maintenance of records.
 - Differentiate between drug addiction and drug habituation.
 - Enlist the factors affecting bioavailability and explain any one pharmaceutical factors.
 - What qualities are required for pharmacist to run DIS.
6. **Attempt any FOUR of the following:** 16
- Who is administrator? Explain his responsibilities in hospital.
 - Explain the following
 - Analeptics
 - Carminatives
 - Sialagogues
 - Expectorant
 - Describe the steps in sterile product preparation.
 - Define drug interaction and explain any two pharmacodynamic mechanisms with examples.
 - Write the pathophysiology and sign and symptoms of tuberculosis or rheumatoid arthritis.
 - Classify antidotes with examples.
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22223

3 Hours / 80 Marks



20111

Seat No.

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- Instructions* –
- (1) All Questions are Compulsory.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
 - (5) In case student has attempted sub-question of Que. No. 3 more than once, only first attempt should be considered for assessment.

1. **Attempt any SIX of the following:**

Marks

30

- a) Write short note on history of pharmacy profession related to pharmacy education and pharmacy practice in India.
- b) Explain the principle, construction and working of cyclone separator with neat labeled diagram.
- c) Enumerate the various tests for quality control of tablets. Describe the disintegration or friability test.
- d) Define capsule. Describe the process of involved in manufacturing of hard gelatin capsule.
- e) Write short note on:
 - i) Elixirs
 - ii) Suspensions.
- f) Write the formulation parameters for parental in detail.
- g) What are toxoids? Discuss the general method for preparation toxoids.

2. **Attempt any TEN of the following:**

30

- a) Write advantages and disadvantages of plastics as a packaging material.
- b) Give classification of powders as per I.P.
- c) Write down the advantage and disadvantage of tablets.
- d) Differentiate between lotions and liniments.
- e) Enlist the various bases used for formulation of ointments.
- f) Classify the method of preparation of effervescent granules.
- g) Write any six characteristics of ophthalmic formulation.
- h) Define the term calibration and validation in brief.
- i) Define cGMP and explain its importance.
- j) Define drug delivery system. Classify various drug delivery systems.
- k) What are the future applications of NDDS ?

P.T.O.



3. Attempt the following:

- a) Who is known as father of pharmacy profession in India ?
- b) Pharmacopoeia contains of
- i) Monograph of drug and substance ii) Standard test
- iii) Description formulae iv) All of the above
- c) The first edition of pharmacopoeia was published in ____.
- d) Name materials used to prepare pharmaceutical containers
- e) ____ glass is glass of highest pharmaceutical grade.
- f) Saccharin is used as a ____ ____ agent.
- g) Name two antimicrobial preservatives.
- h) To increase viscosity of liquid which of following agents are used.
- i) PVP ii) Sodium Carboxy Methyl Cellulose
- iii) Methyl Cellulose iv) All of above
- i) Define sieve number.
- j) Which type of mixture are easily formed
- i) Positive ii) Neutral
- iii) Negative iv) Ampholytic
- k) Write the name of one equation which describes theory of filtration.
- l) Define maceration.
- m) Which of the following is not used as diluent?
- i) Lactose ii) Microcrystalline cellulose
- iii) Calcium Carbonate iv) Poly Vinyl Pyrolidon
- n) Which type of coating is done to disintegrate tablet in intestine ____.
- o) HLB value of SLS is
- i) 10 ii) 12
- iii) 40 iv) None of above
- p) Define suppository is not vegetable oil ?
- q) Write at least two differences between pastes and ointments.
- r) Name two vehicles used in the formulation of ear drops.
- s) Nasal drops should be isotonic with ____% sodium chloride.
- t) Name vaccine used for prevention of tuberculosis.
- _____

22223

3 Hours / 80 Marks



20112

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
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 - (4) Figures to the right indicate full marks.
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Marks

1. Attempt any SIX of the following:

30

- a) Name any 2 of the following:

i) Hematinics	ii) Antacids
iii) Dental Products	iv) Cathartics
v) Antiseptics / Disinfectants	
- b) Define - "Volumetric analysis". List the apparatus needed in volumetric analysis. mention the types of volumetric analysis.
- c) Define the term "epilepsy". Classify Anti-epileptic agents with suitable examples.
- d) Draw chemical structure of Dapsone. Give it chemical name, uses, formulations and storage conditions.
- e) Explain reaction and principle involved in Limit Test of Arsenic and draw neat and labelled sketch of Gutzeit's apparatus.
- f) What are adrenergic drugs? Classify with examples. Draw the structure of Norepinephrine.
- g) Define and classify anti-neoplastic agents. Draw structure of 5 Fluorouracil.

2. Attempt any TEN of the following:

30

- a) Discuss any three different sources of impurities in pharmaceuticals.
- b) Classify Antimalarials. Draw structure of chloroquine phosphate.
- c) Give storage-stability, uses and brand name of drug Penicillin G.
- d) What are para sympathomimetic agents? Draw structure of drug Acetylcholine. Give its storage and stability conditions.
- e) Define and classify sedatives and Hypnotics with examples. Draw the structure of Phenobarbitone.
- f) Give the structure, chemical name and uses of Frusemide.
- g) Define diabetes mellitus. Draw structure of metformin and give its popular brand names.
- h) What are narcotic analgesics? Give its classification with examples.
- i) Give uses for

i) Chlorpromazine	ii) Chloramphenicol
iii) Propranolol	
- j) Classify Antihypertensive agents with suitable examples.
- k) Draw structure for:

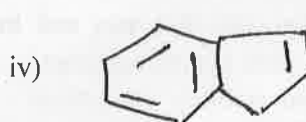
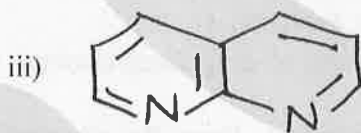
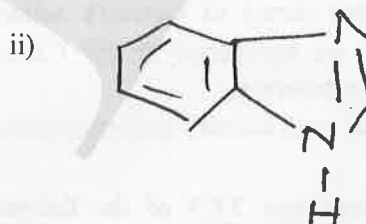
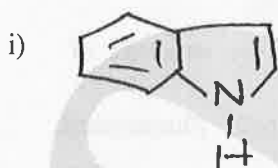
i) β -Lactum antibiotic	ii) Sulfa Drug
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P.T.O.



3. Attempt the following:

- Define antibiotics.
- Write any 2 uses of Azithromycin.
- Draw structure of acetyl group and chloro group.
- Draw structure of Pyridine and give its method of numbering.
- Chemical formula for bleaching powder is _____.
 - $\text{Ca}(\text{clo})_2$
 - $\text{Ca}(\text{clo})_4$
 - CaCo_3
 - Ca_2Co_3
- Prazosin drug is used for _____.
 - Hypertension
 - Brain tumor
 - Diarrhoea
 - Cancer
- Name any 2 indicators used in Acid-base titration.
- The synonym of Calcium Carbonate is _____.
- The precipitating agent used in Limit Test for chloride is _____.
- Define "Redox Titration".
- Draw structure of Atropine sulfate.
- Doxycycline belongs to the structural class of Antibiotics.
 - Penicillins
 - Macrolides
 - Tetracyclines
 - None of these
- IUPAC name of Paracetamol is _____.
 - N - (2, 2- diethyl hydroxy) acetamide
 - N - (4 - hydroxy phenyl) anilide
 - 4 - hydroxy - Acetanilide
 - None of the above.
- Full form of NSAID is _____.
- Structure of Indole ring is _____



- State whether true or false for Antacids are meant for constipation and hypoacidity.
- Define "non-aqueous titration".
- Gravimetric Analysis is a Semi-quantitative method. True or False.
- Give 2 uses of Atenolol.
- Name any 2 Anti-depressant drugs.

22223

3 Hours / 80 Marks



20113

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
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 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
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 - (6) In case student has attempted sub-question of question no. 3 more than once, only first attempt should be considered for assessment.

Marks

1. **Attempt any SIX of the following:** **30**
- a) Why crude drugs are classified? Enlist different methods of classification of crude drugs and discuss morphological method with their merits and demerits.
 - b) State the meaning of adulteration. Explain different methods of adulteration with examples.
 - c) Define laxative with examples and give biological source, chemical constituents and therapeutic uses of aloe.
 - d) What are the pharmaceutical aids? Give biological source and chemical constituents of
 - i) Bees wax
 - ii) Tragacanth
 - e) Enlist different traditional systems of medicine and explain any one.
 - f) Define and give therapeutic applications of
 - i) Probiotics
 - ii) Antioxidants
 - g) Mention commercial preparations and cosmetic uses of
 - i) Olive oil
 - ii) Sandalwood oil
2. **Attempt any TEN of the following:** **30**
- a) Differentiate between organized and unorganized drugs.
 - b) Enumerates various limitations in manufacturing of herbal formulations.
 - c) Discuss the role of medicinal and aromatic plants in national economy.
 - d) Define surgical dressings. State the ideal requirements of surgical dressings.
 - e) State the uses of following drugs.
 - i) Vinca
 - ii) Gokhru
 - iii) Ipecachunha
 - f) Write the method of preparation of Avaleha and Bhasma.
 - g) State biological sources, chemical constituents and uses of Neem.
 - h) What are antihypertensives? Give biological source and chemical constituents of Rauwolfia.
 - i) Define glycosides. Explain chemical tests for cardiac glycosides.
 - j) State the role of moisture content and extractive value in evaluation of crude drug.
 - k) Give contribution of
 - i) Seydler
 - ii) Galen
 - iii) Dioscoride in pharmacognosy

P.T.O.

**3. Attempt ALL of the following:**

- a) Name the drug which consist of 'Quinine' as a chemical constituents.
- Cinchona
 - Tolu balsam
 - Castor oil
 - Arjuna
- b) Balsams consist of _____ and _____ acids.
- c) Mention any one oil used as source of vitamins.
- d) Gym nema is used as _____
- Antimalarial
 - Antitumour
 - Antidiabetics
 - Antitussive
- e) Family of colchicum seed is _____
- Loganaceae
 - Liliaceae
 - Lauraceae
 - Leguminosae
- f) Mention the synonym of
- Ephedra
 - Vasaka
- g) In case of Clove and Black pepper which part of plant used as drug.
- h) State the volatile oil content of fennel fruit.
- i) Determination of stomatal index is _____ type of evaluation.
- j) Name the drug which belongs to following synonym.
- Puncture vine
 - Indian saffron
- k) Give major chemical constituents present in
- Turmeric
 - Vinca
- l) Mayer's reagent consist of _____ solution.
- m) What you mean by Asava?
- n) Define the term 'Gutika'.
- o) Lycopodium spore method is a _____ method of evaluation of crude drug.
- Morphological
 - Microscopic
 - Physical
 - Chemical
- p) Extraction method used for preparation of delicate perfumes.
- Steam distillation
 - Enflurage
 - Eculle
 - Liquid carbon
- q) The pungent principle of ginger is _____.
- r) The Greek physician _____ known as 'Father of Medicine'.
- s) What are herbal cosmetics?
- t) Mention two drugs having family Solanaceae.
- _____

22223

3 Hours / 80 Marks



20114

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
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 - (7) In case student has attempted sub-question of question no. 3 more than once, only first attempt should be considered for assessment.

Marks

1. **Attempt any SIX of the following:** **30**
 - a) Describe the process of blood clotting.
 - b) Explain conducting system of the heart with neat diagram.
 - c) Write the composition and functions of gastric juice. Name the three phases of gastric juice secretion.
 - d) Explain the functions of cerebrum. Name the functional areas of cerebrum with diagram.
 - e) Describe the process of urine formation.
 - f) Write the functions of skin.
 - g) Classify bones. Explain anatomical features of synovial joint with diagram.

2. **Attempt any TEN of the following:** **30**
 - a) Write anatomy and functions of the mitochondria.
 - b) Give an account of simple epithelium.
 - c) Describe the functions of lymphatic system.
 - d) Name the parts of respiratory system. Write applications of a peak flow meter.
 - e) Create a flow diagram that describes the sequence of events that causes contraction of ventricles and ejection of blood flow from heart.
 - f) Write physiology of carbohydrate digestion.
 - g) Differentiate between sympathetic and parasympathetic nervous system.
 - h) Name the three layers of eye. Draw a well labelled vertical section of an eye-ball.
 - i) Name the hormones secreted by pancreas. Explain physiological role of insulin.
 - j) Describe phases of menstrual cycle.
 - k) Enlist the endocrine glands with their location in the body.

P.T.O.

**3. Attempt ALL of the following:**

- a) State the meaning coronal plane.
 - b) Mention the tissue that lines blood vessels.
 - c) List the bones forming ankle joint.
 - d) Define cardiac output.
 - e) State meaning of myopathy.
 - f) Write two functions of CSF.
 - g) Classify tissues.
 - h) Define Tidal Volume.
 - i) List indications of blood transfusion.
 - j) Write normal values of RBC count.
 - k) Which statement is correct?
 - i) The knee is proximal to hip
 - ii) The hip is proximal to knee
 - iii) The shoulder is distal to elbow
 - iv) The knee is distal to ankle
 - l) Sperm maturation occurs in the :
 - i) Seminiferous tubule
 - ii) Epididymis
 - iii) Vas deference
 - iv) Urethra
 - m) The hormone responsible for puberty in females is :
 - i) Prolactin
 - ii) Follicle stimulating hormone
 - iii) Oxytocin
 - iv) All of the above
 - n) The largest bone in the body is :
 - i) Humerous
 - ii) Femur
 - iii) Tibia
 - iv) Sternum
 - o) Classify WBC into its two types.
 - p) The largest blood vessel of body is _____.
 - q) The part of respiratory system mostly affected by COVID-19 is :
 - i) Nasal cavity
 - ii) Alveoli
 - iii) Pharynx
 - iv) Trachea
 - r) What does liver do to help digestion?
 - s) Coughing and sneezing are controlled by which part of brain?
 - t) Name the functional unit of kidney.
-

22223

3 Hours / 80 Marks



20115

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
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 - (6) In case student has attempted sub-question of Question No. 3 more than once, only first attempt should be considered for assessment.

Marks

- 1. Attempt any SIX of the following:** **30**
 - a) Give the definition and Scope of Social Pharmacy. What is the role of pharmacist in public health?
 - b) Define family planning. Write in brief about various types of contraceptive methods.
 - c) Define the term Epidemiology. Enlist and explain different types of Epidemiology.
 - d) i) Discuss various solid waste disposal methods.
ii) What is Sewage?
 - e) i) Describe any one National Health Programme for mother and child.
ii) What is Pradhan Mantri Jan Arogya Yojna (PM-JAY)?
 - f) Describe causative agent, clinical presentation and role of pharmacist in prevention of Tuberculosis.
 - g) Give causative agent and clinical presentation for following infections (any two).
i) Dengue
ii) COVID-19
iii) Typhoid

- 2. Attempt any TEN of the following:** **30**
 - a) Differentiate between Prokaryotic and Eukaryotic Microorganisms.
 - b) What are FIP Development Goals? When was it launched?
 - c) Define Noise. Write about ill effects of Noise pollution on health.
 - d) Write various causes of Pharmaceutical pollution.
 - e) Discuss types and importance of fibres in diet.
 - f) State what is Food Safety. What are neutraceuticals?
 - g) State objectives of National Health Programme for prevention and control of cancer, Cardiovascular diseases, Diabetes and stroke.
 - h) Write note on Gram Staining of Bacteria.
 - i) Write note on Pharmacoeconomics
 - j) State the causative agent and mode of transmission of
i) Malaria
ii) Cholera
 - k) Define: Epidemic, Pandemic and Endemic

P.T.O.

**3. Attempt the following questions**

- a) The International Pharmaceutical Federation (FIP) was founded in year _____.
 - b) Write full form of MDG.
 - c) Health is a state of complete _____, mental and social well being and not merely the absence of disease.
 - d) The National Health Mission was launched in year _____
 - e) Define the term Demography.
 - f) Breastfeeding awareness week is celebrated in month of
 - i) September
 - ii) August
 - iii) January
 - iv) May
 - g) Give two examples of psychotropic substances.
 - h) Write one common cause of air pollution.
 - i) Kwashiorkor develops due to deficiency of _____.
 - j) The practise of adding vitamins and minerals to foods during processing to increase it's nutritional value is known as:
 - i) Fortification of food
 - ii) Food Adulteration
 - iii) Artificial ripening
 - iv) Food Security
 - k) Filariasis is caused by _____ _____.
 - l) Following are examples of Respiratory tract infections, except
 - i) Small pox
 - ii) Amoebiasis
 - iii) Mumps
 - iv) Whooping Cough
 - m) The causative organism for plague is:
 - i) Salmonella typhi
 - ii) Vibrio cholerae
 - iii) Yersinia pestis
 - iv) M. Tuberculosis
 - n) Write full form of MERS
 - o) What do you mean by mortality?
 - p) Write full form of WHO.
 - q) Give one example of any one national health programme focussed on Nutrition.
 - r) First National Health Policy was launched by Government of India in year
 - i) 2013
 - ii) 2002
 - iii) 1983
 - iv) 1985
 - s) In which year National Health programme on Mental Health was launched ?
 - t) What is the measure of quality of life in different disease states?
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22223

3 Hours / 80 Marks



20221

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
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- | | Marks |
|---|--------------|
| <p>1. Attempt any <u>SIX</u> of the following:</p> <ol style="list-style-type: none">a) Define Antihypertensive agents. Classify them. Mention types of Hypertension.b) What are Opioid Analgesics? Give examples. Write pharmacological actions of morphine.c) Define Bioavailability and Biotransformation. Explain various routes of Drug Excretion.d) Define chemotherapy. Give classification of antibiotics based on type of bacteria. Explain drug combination is used in treatment of tuberculosis.e) Define Local Anaesthetics. Give two examples. Write uses of local anaesthetic.f) <ol style="list-style-type: none">i) What are corticosteroids? Give examples.ii) Write note on Thyroid hormones.g) Define Antiemetics. Give two examples, classify antiulcer agents with examples. | 30 |
| <p>2. Attempt any <u>TEN</u> of the following:</p> <ol style="list-style-type: none">a) Describe drugs used in treatment of Atherosclerosis.b) Explain advantages and disadvantages of parenteral route of administration.c) Give one example of each :<ol style="list-style-type: none">i) Thrombolyticii) Anti-plateletiii) Haematinicd) Classify cholinergic (parasympathomimetics) drugs.e) Define Autocoids. Give examples. Explain : physiological role of prostaglandins.f) Define and classify bronchodilators.g) Classify anti-convulsants with examples.h) Define diuretics and give indications for use of diuretics.i) What is insulin used for? What is its route of administration? Mention its adverse effects.j) Define anthelmintics. Give examples. Explain : Anthelmintics are administered with purgativek) Write examples and therapeutic uses of aminoglycoside antibiotics. | 30 |

P.T.O.

**3. Attempt ALL of the following:**

- a) Define cardiotonics.
- b) Give two examples of Nootropic agents.
- c) Give full form of NSAID.
- d) Mention two groups of medicines that come under Biologicals.
- e) Give route of administration for each: Salbutamol and Neostigmine
- f) Chlorzoxazone is used as:
 - i) Antiparkinsonian
 - ii) Antihistaminic
 - iii) Centrally acting muscle relaxant
 - iv) Antibiotic
- g) Give two examples of antidiarrhoeal agents.
- h) Name the antidote for iron poisoning.
- i) What is therapeutic index.
- j) Mention drug of choice in treatment of Belladonna poisoning.
- k) Route of administration of Halothane is _____.
- l) Mention two common side effects of antineoplastic agents.
- m) Give one example of mydriatic.
- n) MAO inhibitors are used as
 - i) Antiintective
 - ii) Antidepressants
 - iii) Antihistaminics
 - iv) Antipyretics
- o) Mention therapeutic use of each :
 - i) Methimazole
 - ii) Metformin
- p) Frusemide is used as :
 - i) Analgesic
 - ii) Adsorbent
 - iii) Antibiotic
 - iv) Diuretic
- q) Triple response is produced by :
 - i) Heparin
 - ii) Heroin
 - iii) Histamine
 - iv) Hydrocortisone
- r) Mention therapeutic use of each :
 - i) Acyclovir
 - ii) Fluconazole
- s) This drug is contraindicated in pregnancy :
 - i) Paracetamol
 - ii) Tetracycline
 - iii) Folic acid
 - iv) Methyldopa
- t) Dale's vasomotor reversal is shown by _____

22223

3 Hours / 80 Marks



20222

Seat No.

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Marks

1. Attempt any SIX of the following:

30

- a) Define prescription. Explain the various steps for proper handling of prescription for dispensing of medicines.
- b) Explain the stages of patient counselling.
- c) Define OTC medication. Discuss the need and role of pharmacist in OTC medication dispensing.
- d) What advice should a pharmacist give for fever and sore throat ?
- e) Discuss the factors for site selection for setting up a retail pharmacy.
- f) Define inventory control. Enlist the methods of inventory control. Explain ABC analysis.
- g) Brief on the process of placing a purchase order.

2. Attempt any TEN of the following:

30

- a) Define SOP. Enlist the benefits of SOP.
- b) Describe the history of community pharmacy in India after the recommendations of drugs enquiry committee.
- c) Enlist the common dispensing errors. What are the strategies to minimise the dispensing errors ?
- d) Define communication. Describe the skills required for patient interview techniques.
- e) Classify communication. Describe written communication skills.
- f) Enlist the patient counselling tips for tuberculosis.
- g) Define medication non-adherence. Give two examples of medication non-adherence and how can it be corrected ?
- h) Give the formula for BMI calculation. Draw the BMI vs weight chart. Enlist the risk diseases associated with obesity.
- i) Discuss the role of pharmacists in promoting the safe practices during self-medication.
- j) Explain the legal requirements to set up a retail pharmacy.
- k) Enlist the types of cash book. Draw their formats.

P.T.O.

**3. Attempt All QUESTIONS of the following:**

- a) The first education regulations were introduced in India in the year _____ and the most recent education regulations in _____.
- b) Write the full form of GPP
- c) The professional responsibilities of a community pharmacist does not include-
- i) Prescription processing
 - ii) Health promotion
 - iii) Patient counselling
 - iv) Prescribing medicines
- d) Write the auxiliary labeling conditions for eye drops.
- e) DASH diet is recommended for _____.
- f) Name the types of barriers in patient counselling in community pharmacy.
- g) Define patient information leaflets.
- h) What is medication adherence ?
- i) An individual is said to be diabetic when the post prandial blood glucose level is _____ mg/dl
- j) Early detection of following condition using health screening technique saves patient's life-
- i) Fever
 - ii) Acne
 - iii) Cancer
 - iv) Arthritis
- k) Define self medication.
- l) _____ bacteria which helps to re-establish gut flora is useful in diarrhoea.
- m) Name any two OTC products used for common cold.
- n) Define audit.
- o) Following are the disadvantages of online pharmacy except-
- i) Easy access to medicines
 - ii) Difficulty in returning unused medicines.
 - iii) No physical assessment.
 - iv) Patient counselling not possible.
- p) State the meaning of 'store in a cold place'.
- q) Management of community pharmacy requires-
- i) Organizing
 - ii) Procuring
 - iii) Legalizing
 - iv) Ordering
- r) A balance sheet shows _____ and liabilities.
- s) Give the full form of FIFO and LIFO.
- t) The short term finance requirements of a business can be fulfilled by-
- i) Shares
 - ii) Debentures
 - iii) Overdraft
 - iv) All of the above

22223

3 Hours / 80 Marks



20223

Seat No.

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- Instructions* –
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 - (4) Figures to the right indicate full marks.
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Marks

1. **Answer any SIX of the following:** **30**
 - a) Discuss TCA cycle along with its energetics.
 - b) What are carbohydrates? Classify them with suitable example.
 - c) What is enzyme Inhibition? Explain competitive and Non-competitive inhibition.
 - d) What is Embden-Meyerhof Pathway? Discuss various stages of the pathway.
 - e) Explain primary and secondary structure of protein.
 - f) Explain routinely performed tests to assess the functions of kidney.
 - g) Discuss in brief about B-oxidation of fatty acids.

2. **Answer any TEN of the following:** **30**
 - a) Write biochemical role, deficiency condition and symptoms of Vitamin C.
 - b) Explain the process of ETC.
 - c) What are abnormalities of red cells? Explain.
 - d) What are lipids? Classify them with suitable examples.
 - e) Discuss the functions, deficiency and recommended dietary requirement of calcium.
 - f) Explain structure and functions of DNA.
 - g) Define dehydration. Explain causes, symptoms and treatment of dehydration.
 - h) Draw the structure of cholesterol and give functions of it.
 - i) Enlist different abnormal constituents of urine.
 - j) Discuss in detail about Lipolysis.
 - k) What is the clinical significance of lipid profile?

3. **Answer all of the following:** **20**
 - a) Draw the structure of glucose.
 - b) Write any two functions of RNA.
 - c) Name any two sulfur containing amino acids.
 - d) Give two Pharmaceutical application of enzymes.
 - e) Write any two functions of lymphocytes.
 - f) The chemical name of vitamin D is _____.

P.T.O.



- g) Define biotechnology.
- h) Co-enzyme form of vitamin riboflavin is _____.
- i) Name the site for protein synthesis in the cell.
- j) Write deficiency diseases of vitamin Thiamin.
- k) The extra cellular fluid comprises _____
- i) Tissue cells
 - ii) Plasma
 - iii) Plasma and interstitial fluid
 - iv) Interstitial fluid
- l) Synthesis of cholesterol and steroid is the function of _____.
- i) Nucleus
 - ii) Golgi apparatus
 - iii) Endoplasmic reticulum
 - iv) Peroxisomes
- m) The nitrogen base found in RNA but not in DNA is _____.
- n) The protein part of holoenzyme is known as
- i) Active site
 - ii) Allosteric site
 - iii) Co-enzyme
 - iv) Apoenzyme
- o) Where does oxidative phosphorylation take place?
- p) Body water is regulated by the hormone _____.
- i) ADH
 - ii) ACTH
 - iii) FSH
 - iv) Epinephrine
- q) Biotechnology has made contribution in which areas _____.
- i) Medicine
 - ii) Industrial
 - iii) Environmental
 - iv) All of these
- r) Give significance of SGPT Test.
- s) Write full form of ECF and ICF.
- t) Rothera's test is for detection of _____ in the urine.
- _____

22223

3 Hours / 80 Marks



20224

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
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Marks

1. Attempt any SIX of the following:

30

- a) Define pharmacotherapeutics and standard treatment guidelines along with advantages of STGS.
- b) Write about etiopathogenesis of angina and its pharmacological management.
- c) Explain etiopathogenesis and pharmacological management of Diabetes.
- d) Explain epilepsy with the types and give the pharmacological management of epilepsy.
- e) Explain in detail about peptic ulcer and its management.
- f) State the etiopathogenesis of hepatitis according to its types.
- g) Give the management of tuberculosis in accordance with DOT therapy.

2. Attempt any TEN of the following:

30

- a) Define hypertension. What lifestyle changes need to be taken in hypertension?
- b) Write etiopathogenesis and clinical manifestation of asthma.
- c) Give the management of parkinsonism.
- d) Explain etiopathogenesis and clinical manifestation of GERD.
- e) Write about management of megaloblastic anemia.
- f) Give pharmacological and non-pharmacological management of malaria.
- g) Write clinical manifestation and etiopathogenesis of osteoarthritis.
- h) Explain in detail about Clinical Manifestation of anxiety.
- i) What is conjunctivitis? Write about its management.
- j) Explain various mechanisms involved in resistance to antimicrobial agent.
- k) Write etiopathogenesis and clinical manifestation of dysmenorrhea.

P.T.O.

**3. Attempt the following:**

- a) Define essential medicines.
- b) Define hypertension.
- c) The condition in which there is inadequate supply of oxygen is called as
 - i) Anemia
 - ii) Ischemia
 - iii) Angina
 - iv) Toxemia
- d) Identify the chronic inflammatory disease related to respiratory system.
 - i) Diabetes Mellitus
 - ii) Cancer
 - iii) Myocardial Infraction
 - iv) Asthma
- e) What is the full form of COPD
- f) Diabetes Mellitus caused during pregnancy is called as diabetes.
- g) Define Parkinson's disease.
- h) What is Alzheimer's disease.
- i) Name 2 drugs used in treatment of inflammatory Bowel diseases.
- j) In which condition gastric content flows back into the esophagus?
 - i) Asthma
 - ii) Peptic ulcer
 - iii) GERD
 - iv) Appendicitis
- k) The most common cause of megaloblastic anemia is Vitamin B9 and deficiency.
- l) Which organism causes gonorrhoea?
- m) What is the most severe stage of HIV infection called?
- n) What is definition of Eczema?
- o) Name the causative organism of scabies.
- p) Auspitz sign refers to
 - i) covid-19
 - ii) Syphilis
 - iii) Gonorrhoea
 - iv) Psoriasis
- q) Name 2 classes of drug used in the therapy of depression.
- r) Claustrophobia fear of
- s) Hyperandrogenism is associated with
 - i) Diabetes Mellitus
 - ii) Polycystic Ovary Syndrome
 - iii) Peptic ulcer
 - iv) Psoriasis
- t) Combined oral contraceptives preparation contain progestin and

22223

3 Hours / 80 Marks



20225

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
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Marks

1. **Attempt any SIX of the following:** **30**
- a) Write a note on “FIP Basel Statement” on the future of hospital pharmacy.
 - b) What is inventory control? Enlist different techniques of inventory control. Explain “Economic Order Quantity” method.
 - c) Discuss in detail about floor stock dispensing system with its advantages and disadvantages.
 - d) Enlist daily activities of clinical pharmacist. Describe interprofessional collaboration including definition, procedure and its benefits.
 - e) Enlist any five haematological tests with its normal values and significance.
 - f) Define poison. Classify poisons with suitable examples.
 - g) What is medication error? Give its types with strategies for prevention of medication error.
2. **Attempt any TEN of the following:** **30**
- a) Define “Good Pharmacy Practices”. Give requirements of good pharmacy practices (GPP).
 - b) Describe the role of pharmacist in preventing antimicrobial resistance.
 - c) Give the various functions of pharmacy and therapeutic committee.
 - d) Explain in detail FIFO and FEFO method with its advantages and disadvantages.
 - e) Explain in short various disposal methods used for pharmaceutical wastes.
 - f) Comment of “Automated Drug Dispensing System”.
 - g) Write a note on total parenteral nutrition including its definition, content and indications for use.
 - h) Define radiopharmaceuticals. Give various methods of disposal of radiopharmaceuticals.
 - i) What is “Electronic Health Record”? Give its benefits.
 - j) What is Pharmaceutical Care? Describe its elements.
 - k) What are LASA Drugs? Give the importance of listing of LASA Drugs.

P.T.O.



3. Attempt the following:

- a) Give the longform of NABH.
 - b) For hospitals with bed strength 300, number of pharmacist requirement is
 - i) 3
 - ii) 10
 - iii) 5
 - iv) 8
 - c) _____ number of copies of purchase order are prepared.
 - d) Define High Risk drugs.
 - e) Which method is not suitable for cytotoxic drug disposal.
 - i) Return to the supplier
 - ii) Waste encapsulation
 - iii) Medium temperature incineration
 - iv) High temperature incineration
 - f) Define Ambulatory patient.
 - g) Define Bulk compounding.
 - h) What does GRP stand for?
 - i) Define clinical pharmacy.
 - j) Give english translation for following Latin terms -
 - i) Pulvis
 - ii) Auristillae
 - k) Dictionaries and encyclopedias are _____ sources of Drug Information.
 - l) _____ are the pastes with a base of Kaolin and Glycerine for external application in warm conditions.
 - m) Lower levels of serum TSH indicates _____.
 - n) Spirometry test is performed to assess the disease associated with which organ?
 - o) Normal blood sugar level is _____ mg%.
 - p) Bilirubin increases in -
 - i) Hemolytic jaundice
 - ii) Cholestatic jaundice
 - iii) Obstructive jaundice
 - iv) All of the above
 - q) Antidote for organophosphorous compound poisoning is -
 - i) BAL
 - ii) Atropine
 - iii) EDTA
 - iv) Physostigmine
 - r) Define anti-natal care.
 - s) Define pharmacovigilance.
 - t) Post marketing surveillance of medicine is the function of -
 - i) DIC
 - ii) ADR monitoring centers
 - iii) National pharmacovigilance centers
 - iv) All of the above
-

22223

3 Hours / 80 Marks



20226

Seat No.

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- Instructions* –
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Marks

1. Attempt any SIX of the following:

30

- a) Give the procedure for preparing First register and What qualifications required for entry for First register as per pharmacy Act. 1948?
- b) Write the qualification for Drug inspector and give the procedure of drug inspector in taking samples.
- c) Define the term under D and C Act. 1940
 - i) Adulterated Drugs
 - ii) Misbranded Drugs.Give the functions of CDL as per D and C Act. 1940.
- d) State in detail provisions "Schedule N" of D and C Rules 1945.
- e) Give the objectives of DPCO, 2013 and define the term under this Act -
 - i) Active Pharmaceutical Ingredients
 - ii) Formulation
 - iii) Maximum Retail price
- f) Give two points of difference in law and ethics. Explain the duties of pharmacist in relation to his trade.
- g) Explain the steps involved in New Drug Development.

2. Attempt any TEN of the following:

30

- a) Explain the general principles of law.
- b) Define Drug and New Drug as per the D and C Act. 1940.
- c) List licences (with form numbers) for sale of drugs under D and C Act. 1940.
- d) Define Repacking of Drugs and state any six conditions for grant of repacking license.
- e) Define 'Illicit traffic' under NDPS Act. 1985.
- f) Give offences and penalties under Drugs and Magic Remedies (O.A.) Act. 1954.
- g) Give provisions for sale and possession of poison under poison Act. 1919.
- h) Write the experience and training of Registered Medical Practitioner (RMP) required for termination of pregnancy as per MTP Act. 1971.
- i) Explain the documentation, license and renewals in pharma manufacturing.
- j) Write the difference between branded and generic drugs (any six)
- k) Explain the procedure for registration of the clinical establishment.

P.T.O.

3. Attempt ALL questions:

- a) List of diseases and ailments which a drug may not claim to prevent or cure is covered under schedule.
- b) As per D and C rules schedule R prescribe.....
- c) Which of the following is prohibited to be imported ?
- i) Toilet preparations ii) Ayurvedic Drugs
- iii) Misbranded Drugs iv) Schedule C, G Drugs
- d) CPCSEA stands for
- e) Define captive animal as per prevention of cruelty to Animal Act. 1960.
- f) Out of 22 members of food Authority, the proportion women is
- i) Half ii) One - Third
- iii) One - Fourth iv) Two - Third
- g) Which act's prime objective is to make sure that the essential drugs are available to all at a reasonable price.
- h) For calculation of price of bulk drugs a return of 12% is allowed on costing.
- i) Short term marginal ii) Long term marginal
- iii) Periodic iv) Intermediate
- i) Code of pharmaceutical ethics developed by.....
- j) Define the term minor.
- k) The CDSCO is a body.
- l) Which authority issue the drug manufacturing license.....
- m) Minimum haemoglobin value required for a donor to donate-blood isgm/dl
- n) Medical devices rules were established in the year
- i) 1971 ii) 1917
- iii) 1997 iv) 1979
- o) Head office of National Institute of Disaster Management (NIDM) is situated in which city?
- p) Consumer protection Act is significant to ?
- i) All goods and services ii) Immovable goods
- iii) Movable goods iv) Selected goods and services
- q) Define Bioethics
- r) As per Bioethics. Enlist the principle of justice.
- s) Moral rules to protect and defend the right of patient is mentioned under principle of bioethics.
- t) Animal anatomical wastes are categorised under which category of biomedical waste.
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