

0811

21819

3 Hours / 80 Marks

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) 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) Why gargles are supplied in concentrated form.
 - b) What is double wrapping? Where it is useful?
 - c) Discuss the drawbacks of cocoa butter as a suppository base.
 - d) Give the metric equivalent of the following:
 - (i) 1 pound
 - (ii) 1 grain
 - (iii) 1 dessert spoonful
 - (iv) 15 minim
 - e) List reasons causing therapeutic incompatibility
 - f) Define with example (any one)
 - (i) Douches
 - (ii) Gargles
 - (iii) Inhalations
 - g) What is HLB? Give its significance

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- h) Give any four qualities of a good suspension
- i) Define antiperspirants and deodorants
- j) Give the reasons “glycerine is choice of vehicle for throat paints”
- k) White Vaseline is not used in ophthalmic ointment. Why?
- l) What are the advantages of parenteral products?

2. Attempt any FOUR of the following:

12

- a) Write the advantages and disadvantages of powder as a dosage form.
- b) Define incompatibility. What is tolerated and adjusted incompatibility?
- c) Explain the term supercription, inscription and subcription.
- d) What are elixirs? How do they differ from syrup
- e) Describe layout of sterile products area
- f) Translate the following terms in English
 - (i) Capiendus
 - (ii) Guttae
 - (iii) Hora somni
 - (iv) Trochiscus
 - (v) Ungentum
 - (vi) Dolere urgente

3. Attempt any FOUR of the following**12**

- a) Report the incompatibility in following prescription how will you correct it?

Rx

Quinine sulphate 1.5 gm

Dilute sulphuric acid 4.0 ml

Potassium iodide 8.0 gm

Water 9.5 200ml

Fiat Mistura

Signa– Cochleare amplum quartis horis summendum

- b) Define mixture and draught. Give different types of vehicle used in preparation with example.
- c) Define cachets. Write the advantages and disadvantages of a cachets as dosage form.
- d) Write the dose of following drugs:
- (i) BCG Vaccine
 - (ii) Aspirin
 - (iii) Sodium bicarbonate
 - (iv) Frusemide
 - (v) Streptomycine
 - (vi) Castor oil
- e) What is emulsion? How are emulsions prepared by dry gum method?
- f) Give in brief account on contact lens solutions.

- 4. Attempt any FOUR of the following** **12**
- a) What is importance of date and age of patient in prescription writing?
 - b) Name the additives used in suspension. Discuss the significance of wetting and flocculating agents.
 - c) Define “displacement value”. Write its importance in suppository.
 - d) What is shampoos? Mention the desirable properties of shampoo.
 - e) Name the various facial cosmetics. Describe in short rouges.
 - f) What are ointments? Write the desirable properties of an ointment bases.
- 5. Attempt any FOUR of the following:** **12**
- a) Describe the test for identification of type of an emulsion
 - b) What is a face powder? Write the desirable properties of face powder.
 - c) Comment “aqueous solutions are usually not preferred for ear drops”. List formulation ingredients of ear drop.
 - d) Define posology. Calculate dose of acetaminophene for a child of six months, if adult dose is 500 mg
 - e) What are the various approaches to overcome incompatibility due to liquification.
 - f) What are intravenous fluids? Write their uses.

6. Attempt any FOUR of the following:**16**

- a) Describe modern methods of dispensing the prescription.
 - b) Classify the various methods and give the formulae for the calculation of pediatric doses.
 - c) What are liniment and lotion? Write the composition of Turpentine Liniment and Calamine Lotion.
 - d) Define eye drops. Mention the terminal sterilization process of eye drop.
 - e) Give the significance of particulate matter and mention different method in its detection.
 - f) Describe the various methods for the preparation of ointments.
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Marks

- 1. Attempt any EIGHT of the following:** **16**
- a) Give structure and numbering method for (any two):
- (i) Furan
 - (ii) Imidazole
 - (iii) Thiazole
- b) Define following terms (any two):
- (i) Diuretics
 - (ii) Antineoplastics
 - (iii) Anticoagulants
- c) Give the structure of following organic group (any two):
- (i) Cyano
 - (ii) Aniline
 - (iii) Benzyl
- d) Give the structure and numbering method for following (any two):
- (i) Benzimidazole
 - (ii) Acridine
 - (iii) Quinoline.

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- e) Give the uses of (any two):
- (i) Paracetamol
 - (ii) Proflavin
 - (iii) 5-Fluorouracil
- f) Give the stability – storage condition of (any two):
- (i) Heparin
 - (ii) Insulin
 - (iii) Thrombin
- g) Give the brand names of (any two):
- (i) Phenformin
 - (ii) Tetracycline
 - (iii) Aspirin.
- h) Give the names of two drugs from the following categories (any two):
- (i) Antiseptic and Disinfectant
 - (ii) Antihypertensives
 - (iii) Antihistaminics
- i) Draw the structure of the following (any two):
- (i) Caffeine
 - (ii) Haloperidol
 - (iii) DEC
- j) Give the structure and uses of (any one):
- (i) Atropine
 - (ii) Propranolol
- k) Define vitamins. Write the importance of Vit A.
- l) Write uses of (any two):
- (i) Evan's blue
 - (ii) Congo –red
 - (iii) Indigocarmine

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

- a) What is Co-trimoxazole? Explain mechanism of action and give two brand names of Co-trimoxazole.
- b) Define “neoplasm” and classify antineoplastic agents.
- c) Explain diabetes mellitus. Classify hypoglycemic agents with examples.
- d) Give structure properties and uses of ‘Thyroxin’.
- e) Name the drug used in (any three):
 - (i) Myasthenia gravis
 - (ii) Leprosy
 - (iii) Gout
 - (iv) Tuberculosis
 - (v) Parkinsonism.
- f) Define Cholinergic drugs. Write the uses of Pilocarpine and Physostigmine.

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

- a) Define sedative and hypnotics. Classify them.
- b) Draw the structure of steroidal nucleus with numbering. Write uses of testosterone.
- c) Define “Cardiovascular agent”. Classify them based on their therapeutic uses with examples.
- d) What is Histamine? Give structure and uses of any antihistaminic agent.
- e) Give the structure and uses of (any two):
 - (i) Ampicillin
 - (ii) Halothane
 - (iii) Phenytoin
 - (iv) Hydrochlorthiazide
- f) Define and classify diuretics with examples.

- 4. Attempt any FOUR of the following:** **12**
- a) Define and classify Antiomalarial agents.
 - b) Define the term Cardiotonic. Write about their hydrolysis products.
 - c) Define Thymoleptics / Antidepressant. Give structure and uses of Imipramine.
 - d) Give the structure chemical name and uses of Dapsone.
 - e) Draw the structure from the chemical name and name the drugs:
 - (i) 4 amino 2 hydroxy benzoic acid
 - (ii) Ni-acetyl Sulfanilamide
 - f) Define CNS stimulants. Discuss their uses and draw structure of Coramine.
- 5. Attempt any FOUR of the following:** **12**
- a) What is Amoebiasis? Write structure and uses of Metronidazole.
 - b) Define and classify general Anaesthetics based on their route of administration.
 - c) Define antibiotics. Give structure preparation and uses of Benzyl Penicilline.
 - d) Define Local Anaesthetics. Write structure and chemical name of procaine hydrochloride.
 - e) What are Antihyperlipidemic Agents? Give properties and brand names of Clofibrate.
 - f) Name the respective vitamins of which nutritional deficiency leads to:
 - (i) Beri-beri
 - (ii) Rickets
 - (iii) Scurvy.

6. Attempt any FOUR of the following:**16**

- a) What is epilepsy? Classify anticonvulsants with example.
 - b) Classify Antibiotics with examples.
 - c) Give structure, properties, uses and brand names of Phenobarbitone.
 - d) Give uses and preparation (any two):
 - (i) Chloramphenicol
 - (ii) Salbutamol
 - (iii) Hyoscine
 - (iv) Promethazine.
 - e) Give uses and stability – storage condition of (any two):
 - (i) Paraldehyde
 - (ii) Cyclopropane
 - (iii) Diethyl ether
 - (iv) Rifampicin
 - f) Write structure properties uses and preparations of Menadione.
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Marks

1. **Define the following terms with two examples of each (any EIGHT):**

16

- a) Chemotherapy
- b) Antiemetic
- c) Haemostatic
- d) Antiarrhythmic agents
- e) Vermicidal
- f) Autacoids
- g) Miotics
- h) Fibrinolytics
- i) Analeptics
- j) Expectorants
- k) Diuretics
- l) Disinfectants

P.T.O.

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

- a) Define pharmacodynamics. Explain different mechanisms of drug action.
- b) Explain plasma protein binding of drugs and give its significance.
- c) Define antagonism. Differentiate between competitive and non-competitive antagonism.
- d) Classify oral hypoglycemic with examples. Give mechanism of action of metformin.
- e) Define drug metabolism. Explain first pass effect.
- f) Give advantages and disadvantages of intramuscular route of drug administration.

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

- a) Name the drug producing following effect:
 - (i) Osteoporosis
 - (ii) G 6 P D deficiency
 - (iii) Hypoglycemia
 - (iv) Hyperplasia of gums
 - (v) Extrapyrarnidal effect
 - (vi) Systemic alkalosis
- b) Mention the drug of choice in following condition:
 - (i) Rheumatoid arthritis
 - (ii) Candidiasis
 - (iii) Atherosclerosis
 - (iv) Skeletal muscle spasm
 - (v) Leprosy
 - (vi) Depression

- c) Mention the drug contraindicated in following condition:
- (i) Gastric bleeding
 - (ii) Hypokalemia
 - (iii) Edema
 - (iv) Myasthenia gravis
 - (v) Lactation
 - (vi) Congestive cardiac failure
- d) Give dose of following drugs:
- (i) Omeprazole
 - (ii) Albendazole
 - (iii) Diazepam
 - (iv) Diclofenac
 - (v) Metoprolol
 - (vi) Pioglitazone
- e) Give adverse drug reaction of following drug:
- (i) Rifampicin
 - (ii) Nitroglycerin
 - (iii) Ibuprofen
 - (iv) Digitalis
 - (v) Insulin
 - (vi) Kanamycin.
- f) Give therapeutic use of following drugs:
- (i) Acyclovir
 - (ii) Noscapine
 - (iii) Indapamide
 - (iv) Cetrizine
 - (v) Loperamide
 - (vi) Bisacodyl

- 4. Attempt any FOUR of the following:** **12**
- a) Classify antiasthmatic agents with examples.
 - b) Give the pharmacological profile of adrenaline.
 - c) Define haematinics. Explain: Vitamin B12 injection is given in pernicious anemia.
 - d) Define epilepsy. Justify. During the treatment of epilepsy antiepileptic drugs should not be withdrawn abruptly.
 - e) Classify parasympathomimetics with examples
 - f) Discuss the stages of general anesthesia. Give two examples of parentally administered general anesthetics.
- 5. Attempt any FOUR of the following:** **12**
- a) Classify antihypertensive agents with examples.
 - b) What is cancer? Give examples of two anticancer drugs. Mention common side effects of anticancer drugs.
 - c) Classify antibiotics with examples.
 - d) Define analgesics. Justify: Morphine should not be given in abdominal pain.
 - e) Give pharmacological profile of aspirin.
 - f) Give symptoms and management of acute barbiturate poisoning.
- 6. Give the reason of following statements (any FOUR):** **16**
- a) Sulphonamides are not much used nowadays.
 - b) Atropine is given along with neostigmine in myasthenia gravis.
 - c) Levodopa is given in combination with carbidopa.
 - d) Penicillin are called life saving as well as life threatening drug.
 - e) Quinidine is given to patient who is on digoxin therapy.
 - f) Higher the therapeutic index, safer will be the drug. Justify the statement.
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Marks

1. **Answer any EIGHT of the following:** **16**
- a) Give Ex-officio member of Joint state pharmacy council.
- b) Define Advertisement under DMR Act 1954.
- c) State any two measures for combating abuse of narcotic drugs and illicit traffic.
- d) How retail price of formulation is calculated under DPCO-1995?
- e) Give any two difference between Bonded and Non Bonded Laboratory.
- f) Define Guardian and Owner under MTP Act, 1971.
- g) Give the objectives of DMR Act, 1954.
- h) Mention any four conditions of license for sale of schedule H and Schedule X drug under D and C Act, 1940.
- i) State what does following prescribe under D and C Act, 1940:
- (i) Form 20A
- (ii) Form 20G

P.T.O.

- j) Discuss any two functions of P.C.I
- k) Give objectives of Pharmacy Act, 1948.
- l) Define “Formulation”.

2. Answer any FOUR of the following: 12

- a) What is DEC? Give its recommendations.
- b) Define Adulterated Drug under D and C Act, 1940.
- c) Define Magic remedies and give exempted advertisement under DMR Act 1954.
- d) Discuss certain operations controlled by central Govt. Under NDPS Act, 1985.
- e) Give offences and penalties under pharmacy Act, 1948.
- f) State the various rules prescribed by State Govt for possession, possession for sale and for sale of poisonous substance under Poisons Act, 1919.

3. Answer and FOUR of the following: 12

- a) Discuss the role of DTAB with its constitution (only Ex-officio members).
- b) Describe labeling provisions under D and C Act, 1940 for the following:
 - (i) Hair dyes
 - (ii) Vaccines.
- c) Give procedure for price fixation or revision of Bulk drug under DPCO 1995.
- d) Explain role of Pharmacist in Healthcare.
- e) Differentiate between Law and Ethics.
- f) Define “Cannabis” and “Opium Derivative” under NDPS Act, 1985.

- 4. Answer any FOUR of the following:** **12**
- a) How Diploma in Pharmacy Institutions in India are approved by central council?
 - b) Define “Drug Inspector”. Give his powers under D and C Act, 1940.
 - c) Give requirements of Bonded Laboratory.
 - d) Define “Poison” under Poisons Act, 1919 and give its classification.
 - e) Discuss Pharmacist in relation to his trade.
 - f) Describe the labeling requirement of ophthalmic preparation under D and C Act, 1940.
- 5. Answer any FOUR of the following:** **12**
- a) Define “Registered Pharmacist” and “Displaced person” under Pharmacy Act, 1948.
 - b) Define “Networth” and “Free Reserve”.
 - c) Give various particulars required to be mentioned in an application for obtaining license for manufacture in Bond.
 - d) Discuss objectionable advertisements under Drugs and Magic Remedies Act, 1954.
 - e) Which are the different circumstances under which pregnancy can be terminated under MTP Act, 1971?
 - f) Give functions of Central Drug Laboratory.
- 6. Answer any FOUR of the following:** **16**
- a) What are Education Regulations? Mention various particular under it.
 - b) What does Sch H and Sch X to the D and C rules prescribe? Give any two examples of each.
 - c) Give offences and penalties under DMR Act, 1954.
 - d) Define “R.M.P” under MTP Act, 1971. Explain various training and experience for him under the Act.
 - e) Explain various ethics to be followed by a person while dealing with the prescription.
 - f) Give penalties for various offences under NDPS Act, 1985.
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Marks

- 1. Answer any FIVE of the following : (2 marks for each)** **10**
 - (a) Define Budget. Explain in short its objectives.
 - (b) Write at least two advantages and two limitations of 'Financial Statements'.
 - (c) Define the term 'Account'. Explain its types.
 - (d) Explain the importance of salesmanship in 'Pharmaceutical Industry'.
 - (e) Explain how will you apply VED analysis for drug-store.
 - (f) Define 'Tender'. Explain 'Open Tender'.
 - (g) Define and classify 'Industry'.

- 2. Answer any FOUR of the following : (3.5 marks for each)** **14**
 - (a) Define the term 'firm'. Give advantages of partnership type of organisation.
 - (b) What is drug codification ? Explain various methods of drug codification.

- (c) Define market research. Explain various sources for the same.
- (d) Define Bank. Write its functions.
- (e) What is accounting convention ? Explain various accounting conventions.
- (f) Define ledger. Give its importance and format.

3. Answer any FOUR of the following : (3.5 marks for each)

14

- (a) Define budgetary control. Explain in short classification of budget.
- (b) Write about any three methods for analysis of 'Financial statement'.
- (c) Define 'Training'. What subject must be covered under training of pharmacist.
- (d) Define and classify 'Trade'.
- (e) Explain different types of middlemen involved in the distribution of goods from the producer to consumers.
- (f) Define sales promotion. Give various techniques of sales promotion.

4. Answer any FOUR of the following : (3.5 marks for each)

14

- (a) Explain 'Petty Cash Book' along with its format.
- (b) What do you mean by 'Balance Sheet' ? Give its format and objective.
- (c) Define Economics. Write about different types of economic systems.
- (d) Write disadvantage of 'Sole proprietorship' type of business.
- (e) Define 'Scrap and Surplus'. Give its disposal procedure.
- (f) Write about various qualities of successful salesmen.

5. Answer any FOUR of the following : (3.5 marks for each)**14**

- (a) What is 'Profit and Loss Account' ? Give its objective and format.
- (b) What is Journal ? Give its format and advantages.
- (c) What do you mean by 'Joint Stock Company' ? Give its two advantages and two disadvantages.
- (d) Define management, pharmaceutical management. Mention various functions of management.
- (e) Give advantages of departmental store.
- (f) Enlist the qualities of the approved supplier.

6. Answer any FOUR of the following : (3.5 marks for each)**14**

- (a) What is 'Trial Balance' ? Explain two methods for preparation of Trial-Balance along with its format.
 - (b) What is 'Day-Book ?' Explain in short various types of Day-Books.
 - (c) Give salient features of 'Multiple Shop'.
 - (d) List the documents required for getting the licence of starting wholesale trade.
 - (e) Write note on perpetual method of inventory control along with its advantages.
 - (f) Define financial planning. Give various sources for collection of finance.
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1. Answer any EIGHT of the following :

Marks

16

- (a) Define :
 - (i) Hospital pharmacy
 - (ii) Teratogenicity
- (b) Give the normal physiological value of : (any four)
 - (i) Haemoglobin
 - (ii) Blood cholesterol
 - (iii) Clotting time of blood
 - (iv) Sperm count
 - (v) Heart rate
- (c) Translate into English : (any four)
 - (i) Guttae
 - (ii) Unus
 - (iii) Charata
 - (iv) Bis in Die
 - (v) Omni Nocte

- (d) What is the full form of following : (any four)
- (i) WFI
 - (ii) DIC
 - (iii) PTC
 - (iv) CUDD
 - (v) EEG
- (e) What advice will you give to patients about following drugs ? (any two)
- (i) Spermicidal jellies & cream
 - (ii) MAO – Inhibitors
 - (iii) Salicylates
- (f) Name two preservatives used in parenteral preparation.
- (g) Define the term – Referred Patient, Ambulatory Patient.
- (h) Give any two reasons for patient non-compliance.
- (i) Give the uses of : (any two)
- (i) Rule's tube
 - (ii) CT Scanner
 - (iii) X-ray machine
- (j) What are the benefits of unit Dose Dispensing ?
- (k) Classify Hospital on the basis of its bed size.
- (l) Name four quality control tests for parenterals.

2. Solve any FOUR :

12

- (a) Name various methods of sterilization. Give principle of HOT AIR OVEN & AUTOCLAVE.
- (b) Write in brief about BED-SIDE Pharmacy.

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- (c) What is prepackaging of medicines ? Give its advantages.
- (d) Enlist the abilities required for Hospital Pharmacist. Explain any two.
- (e) Give the functions of PTC.
- (f) Discuss drug-food interactions.

3. Solve any FOUR :

12

- (a) Which are the equipments used for manufacturing of pills & compressed tablets as per Drug & Cosmetic Act and Rules ?
- (b) Name any four surgical instrument with their uses.
- (c) What are the functions of Modern Hospital ?
- (d) Describe signs, symptoms & pathophysiology of Rheumatoid Arthritic Or Diabetes.
- (e) Explain what happens when the following drugs are prescribed together :
 - (i) Digitalis & Diuretics
 - (ii) Warfarin & Phenyl Butazone
- (f) Define Hospital formulary. Write the guiding principles while using hospital formulary.

4. Solve any FOUR :

12

- (a) What is Idiosyncrasy and Allergy ?
- (b) Define clinical pharmacy. What is the scope of clinical pharmacy ?
- (c) Enlist the different softwares used in Hospital pharmacy. Explain the use of computer in Inventory control.
- (d) How surgical cotton is evaluated as per I.P. ?
- (e) Define Hallucinogen. Give the effects and treatment of LSD.
- (f) Define DIB. Write sources of drug information.

P.T.O.

5. Solve any FOUR :**12**

- (a) Differentiate between Drug Addiction and Drug Habituation.
- (b) Classify Antidotes with examples.
- (c) Define Bioequivalence. Explain first pass effect.
- (d) What are the objectives and functions (any three of each) of Hospital pharmacy ?
- (e) Define outpatient. Explain the Receipt and Issue system to outpatient.
- (f) Define and classify poisons.

6. Solve any FOUR :**16**

- (a) Describe the Location & Layout of central sterile service room.
 - (b) What is (ADR) – Adverse Drug Reaction ? Give the classification of ADR. Give the reasons for Adverse Drug Reaction.
 - (c) Write the Role of pharmacist in patient counselling.
 - (d) Discuss four important factors governing make or buy decision.
 - (e) Describe procurement or purchase procedure step-by-step.
 - (f) Explain floor stock system.
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