

0811

12223

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) Illustrate your answer 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. **Answer any EIGHT of the following:** **16**
- a) Translate the following terms in English :-
- i) Dolore urgente
- ii) Si opus sit
- iii) Utenda
- iv) Ex lacte
- b) List reasons causing physical incompatibility.
- c) Calculate the dose of phenacetin for 14 years child using proper formula. Adult dose of phenacetin is 300 mg by oral route.
- d) Define dusting powder. Name two types of dusting powder.
- e) Differentiate between liniments and lotions.
- f) What are desirable qualities of suspensions.
- g) List different test carried out for identification of an emulsion.
- h) Define jellies. What are different types of jellies.
- i) What are properties of an ideal suppository base.

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- j) Give ideal qualities of face powder.
- k) List general requirement of parenteral dosage form.
- l) Why white vaseline is not used in formulation of ophthalmic ointment?

2. Answer any FOUR of the following: 12

- a) Describe modern method of dispensing along with its advantages and disadvantages.
- b) Comment on following prescription :-
R_x Phenobarbitone sodium 0.6 gm
Ammonium bromide 8.0 gm
Water upto 100 ml
Make a mixture.
- c) Define antiperspirants and deodorants. How do they function?
- d) Define cachets. Explain its two type.
- e) Differentiate between syrup and elixir. Give storage condition for elixir.
- f) Define suspension and explain two methods used for evaluation of physical stability of suspension.

3. Answer any FOUR of the following: 12

- a) What do you mean by cracking of emulsion? Describe any four factors responsible for cracking of an emulsion.
- b) Define ointment. Discuss in brief method for preparation of ointment containing combined iodine.
- c) Define suppositories. What are advantages and disadvantages of suppositories.
- d) What do you know about shampoo. Describe formulation of shampoo.
- e) Define parenteral dosage form. Give its advantages and disadvantages.
- f) Define eye drop. Name various preservatives used in formulation of eye drop. Give labelling conditions of eye drop.

4. Answer any FOUR of the following:**12**

- a) Describe two methods for small scale preparation of emulsion.
- b) Classify ointment bases with one example each. Give advantages of water soluble bases.
- c) Write in brief about types of suppositories.
- d) What are depilatories. Mention the different methods used to remove unwanted hair from body.
- e) Describe adjuvants used in formulation of parenteral dosage form.
- f) Give in brief account of contact lens solutions.

5. Answer any FOUR of the following:**12**

- a) In what proportion should 10%, 8% and 4% alcohol be mixed to get 500 ml of 5% alcohol.
- b) Report the incompatibility in following prescription and how will you correct it.

R_x Sodium salicylate 8 gm
Sodium bicarbonate 8 gm
Chloroform water upto 120 ml

Make a mixture.

- c) Give significance of particulate matter monitoring test. Explain any two methods for particulate matter monitoring test.
- d) How will you dispense very small quantity of potent medicament.
- e) Describe method for preparation of mixture containing diffusible solids.
- f) Differentiate between flocculated and non-flocculated suspensions.

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

- a) List the factors that influence dose of drug. Explain any three factors.
 - b) Describe in brief about effervescent granules. Give method of preparation of effervescent granules.
 - c) Define incompatibility. Explain any three therapeutic incompatibility with its method of correction.
 - d) Explain principle of LAL test and rabbit test used for evaluation of parenteral dosage form.
 - e) What do you know about lipsticks. Write ideal properties of lipsticks. Describe in brief about formulation of lipsticks.
 - f) Describe general method for preparation of suppositories.
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Marks

- 1. Attempt any EIGHT of the following: 16**
- a) Give structure and numbering method for. (Any two)
- i) Oxazole
 - ii) Quinoline
 - iii) Piperidine
- b) Define the following terms. (Any two)
- i) Antiseptics
 - ii) Antileprotics
 - iii) Anthelmintics
- c) Give official preparations of following drugs. (Any two)
- i) Benzyl Penicillin
 - ii) Isoniazid
 - iii) Dapsone

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- d) Give two examples of following drug categories. (Any two)
- i) Cardiotonic
 - ii) Antiarrhythmic agent
 - iii) Vasodilator
- e) Draw structure of the following. (Any two)
- i) Aspirin
 - ii) Paracetamol
 - iii) Pethidine
- f) Give two uses and two brand names of (Any two).
- i) Sulphadiazine
 - ii) Cephalexin
 - iii) Tetracycline
- g) Write the hydrolysis products of various cardiac glycosides.
- h) Draw structure give chemical name and uses of Indomethacin.
- i) Give structure for following organic groups (any two).
- i) Acetyl
 - ii) Carboxyl
 - iii) Nitro
- j) Give structure of (any one).
- i) Adrenaline
 - ii) Isoprenaline
- k) Give stability and storage conditions of (any two).
- i) Diethyl ether
 - ii) Halothane
 - iii) Cyclopropane
- l) Define and classify vitamins.

- 2. Attempt any FOUR of the following:** **12**
- a) Give properties, uses, structure of chlorocresol.
 - b) Give chemical classifications of sulferamides. Draw structure of sulphacetamide.
 - c) Classify Parasympatholytic agents.
 - d) Define and classify hypoglycemic agents.
 - e) What are antihistaminic agents. Give structure and uses of Diphenhydramine.
 - f) Define and classify sympathomimetics.
- 3. Attempt any FOUR of the following:** **12**
- a) Give the names of species of plasmodium that cause malaria. Draw structure of any one antimalarial drug.
 - b) What are CNS stimulants? Give structure and uses of caffeine.
 - c) Write structure of Anesthetic ether, Cyclopropane and Halothane.
 - d) Define and classify sedative and Hypnotics.
 - e) Draw structure and write uses and two brand names of Diazepam.
 - f) Define Coagulants and Anticoagulants with examples.
- 4. Attempt any FOUR of the following:** **12**
- a) Give uses of Glyceryl trinitrate and clofibrate.
 - b) Define and classify Local Anesthetics. Draw structure of any one Local Anesthetic agent.
 - c) Give prop, brand name and uses of Ibuprofen.
 - d) Give structure chemical name and uses of thyroxine.
 - e) What are steroidal drugs? Give details about any one steroidal sex hormone.
 - f) Give deficiency symptoms of following vitamins:
 - i) Vitamin A
 - ii) Vitamin B₁₂
 - iii) Vitamin K.

- 5. Attempt any FOUR of the following:** **12**
- a) Classify Antiepileptic drugs. Give uses and brand name of Phenobarbitone.
 - b) Give official preparations and uses of (any two) :
 - i) Atropine
 - ii) Metronidazole
 - iii) Imipramine
 - c) Define and classify Antipsychotics with suitable examples.
 - d) Define and classify diagnostic agents. Give uses of Iopanoic acid and Evans blue.
 - e) Classify cardiovascular agents.
 - f) Give types of diabetes. Give structure and uses of Phenformin.
- 6. Attempt any FOUR of the following:** **16**
- a) Give structure, properties, uses and brand name of Frusemide.
 - b) Define and classify Antibiotics considering their chemical structure.
 - c) What is meaning of following? Suggest drug for their treatment:
 - i) Helminthiasis
 - ii) Candidiasis
 - iii) Amoebiasis
 - iv) Giardiasis
 - d) What is Neoplasm? Classify antineoplastic agents with examples.
 - e) Explain Hypertension. Classify Antihypertensive agents with examples.
 - f) Draw structure of Sulfadiazine, Sulfaguanide and write their IUPAC names.
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- Instructions* – (1) All Questions are *Compulsory*.
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Marks

1. **Define the following terms with two examples of each.**
[ANY EIGHT]

16

- a) Diuretics.
- b) Mydriatics.
- c) Haematinics.
- d) Synergism.
- e) Anorexiant.
- f) Antidepressants.
- g) Nasal decongestants.
- h) Antitussives.
- i) Vermifuge.
- j) Antipyretics.
- k) Antibiotics.
- l) Autacoids.

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- 2. Attempt any FOUR of the following:** **12**
- a) Classify various routes of drug administration. Give merits and demerits of oral route.
 - b) Define Antagonism. Explain the types of Antagonism with suitable examples.
 - c) Explain factors affecting absorption of drugs.
 - d) Define general anaesthetics and explain the stages of anaesthesia.
 - e) Give symptoms and treatment of Barbiturate poisoning.
 - f) Classify non-narcotic analgesics with suitable examples. Explain mechanism of action of salicylates.
- 3. Attempt any FOUR of the following:** **12**
- a) Mention major toxicity for following:
 - i) Streptomycin
 - ii) Chloramphenicol
 - iii) Tetracycline
 - iv) Morphine
 - v) Sulphonamides
 - vi) Phenytoin.
 - b) Mention antidote for following :-
 - i) Salicylate poisoning
 - ii) Morphine poisoning
 - iii) Organophosphorus poisoning
 - iv) Lead poisoning
 - v) Iron poisoning
 - vi) Belladonna poisoning
 - c) Mention dose and route for following :-
 - i) Albendazole
 - ii) Azithromycin
 - iii) Glyceryl trinitrite

- d) Mention therapeutic uses of following :-
- i) Diazepam
 - ii) Griseofulvin
 - iii) Insulin
 - iv) Vitamin B₁₂
 - v) Quinidine
 - vi) Caffeine
- e) Mention Drug contain dicated in following :-
- i) Head injury
 - ii) Constipation
 - iii) Pregnancy
 - iv) Renal failure
 - v) Hyperacidity
 - vi) Myasthenia gravis
- f) Mention drug of choice for following :-
- i) Peptic ulcer
 - ii) Schizophrenia
 - iii) Syphillis
 - iv) Angina pectoris
 - v) Leprosy
 - vi) Insomnia

4. Attempt any FOUR of the following:

12

- a) Define and classify parasympatholytics with examples. Explain muscarinic actions of Acetylcholine.
- b) Classify Antiparkinsonism drugs with suitable examples and explain mechanism of action of levodopa.
- c) Define Epilepsy. Classify anti-epileptic drugs with suitable examples.
- d) Define and classify Antineoplastic drugs with suitable example.
- e) Explain Dale's vasomotor reversal.
- f) What is Bronchial Asthma? Give drug treatment for Bronchial Asthama.

- 5. Attempt any FOUR of the following:** **12**
- a) Classify Antihypertensive drugs with suitable examples.
 - b) Explain mechanism of action of sulphonamides.
 - c) Define and classify antimalarials with examples. Explain mechanism of action of Quinine.
 - d) What are hypoglycemics. Give the difference between Sulphonyl urea and Biguanides.
 - e) Name the drug which is used as cardiotonics. Explain mechanism of action of it.
 - f) Define Antiseptics and disinfectants and explain them with suitable examples.
- 6. Give reasons for the following statements. (Any FOUR)** **16**
- a) Chlorpromazine is called as Largactil.
 - b) Eating of cheeze is forbidden while on MAO inhibitor therapy.
 - c) Water is called as physiological diuretic.
 - d) Thiopental has short duration of action.
 - e) Adrenaline is added with local anaesthetic preparations.
 - f) Penicillin is life saving as well as life threatening drug.
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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.
 - (5) Answer as per the latest amendments.

Marks**1. Answer any EIGHT of the following :****16**

- (a) Write objectives of Pharmacy Act, 1948.
- (b) Define 'Dutiable Goods', under Medicinal and Toilet Preparations Act, 1955.
- (c) State the objectives of Pharmaceutical Legislation. (Any **two**)
- (d) Give the objectives of Narcotic Drugs & Psychotropic Substances Act, 1985.
- (e) Define 'Lunatic' and 'Guardian' as per Medical Termination of Pregnancy Act, 1971.
- (f) Define "Poison" and give any two examples of poison as per Poison Act, 1919.
- (g) Define Magic Remedies as per Drug and Magic Remedies (Objectionable Advertisement) Act, 1954.



- (h) What does Schedule G & Schedule M prescribe as per the Drugs & Cosmetics Act, 1940 ?
- (i) Define Law and Ethics.
- (j) Write objectives of Drugs & Cosmetics Act, 1940.
- (k) Give objective of DPCO 1995.
- (l) State the functions of DTAB & DCC as per D & C Act, 1940.

2. Answer any FOUR of the following :

12

- (a) Write three offences & penalties under Pharmacy Act, 1948.
- (b) Discuss ethics of pharmacist in relation to his job.
- (c) Differentiate Bonded and Non-Bonded Laboratory. (Any **Three**)
- (d) Explain the calculation of retail price as per Drugs (Price Control) Order 1995.
- (e) Define 'Illicit Traffic' under Narcotic Drugs & Psychotropic Substances Act, 1985.
- (f) How drugs are imported for personal use as per Drugs & Cosmetics Act, 1940 ?

3. Answer any FOUR of the following :

12

- (a) Describe recommendations of Drugs Enquiry Committee.
- (b) Give offences and penalties under Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954.
- (c) Under what circumstances the name from register removed as per Pharmacy Act, 1948 ?
- (d) Define 'Opium', 'Coca leaf' and 'Coca derivatives' under Narcotic Drugs & Psychotropic Substances Act, 1985.
- (e) State in brief powers of Drug Inspector under Drugs & Cosmetics Act, 1940.
- (f) Write functions of Pharmacy Council of India as per Pharmacy Act, 1948.

4. Answer any FOUR of the following :**12**

- (a) Give constitution of DTAB as per Drug & Cosmetics Act, 1940.
- (b) Define “Net Worth” and “Free Reserve” as per Drugs (Price Control) Order, 1995.
- (c) State the classes of advertisement of Drugs which are prohibited under Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 (Any **Three**)
- (d) Explain role of Pharmacist in Health Care System.
- (e) Explain the function of Central Drug Laboratory as per Drugs & Cosmetics Act, 1940. (Any **Six**)
- (f) Mention the conditions for ‘Approval of Place’ for medical termination of pregnancy as per Medical Termination of Pregnancy Act, 1971.

5. Answer any FOUR of the following :**12**

- (a) State the qualification for appointment of Drug Inspector as per Drugs & Cosmetics Act, 1940
- (b) State the penalty for ‘Punishment for contravention in relation to cannabis’ as per N.D.P.S. Act, 1985.
- (c) Explain Drugs Price Equalization Account as per Drugs (Price Control) Order, 1995.
- (d) Discuss ethics of Pharmacist in relation to Medical Profession.
- (e) Describe dutiable goods exempted from excise duty as per the Medicinal and Toilet Preparations (Excise Duties) Act, 1955.
- (f) State the rules of State Government for possession, possession for sale and sale of any poison as per the Poison Act, 1919.

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

- (a) Explain circumstances under which RMP can terminate pregnancy under Medical Termination of Pregnancy Act, 1971 and rules thereunder.
 - (b) Enlist the licenses granted by the licensing authority for the sale, stock or distribution of drugs as per Drugs & Cosmetics Act, 1940.
 - (c) Describe layout of bonded laboratory as per the Medicinal and Toilet Preparations (Excise Duties) Act, 1955.
 - (d) Give the penalties as per Drugs & Cosmetics Act, 1940 for (i) Manufacture or sale of drugs without a valid license, (ii) Use of Government Analyst report for advertising.
 - (e) Give the constitution of Pharmacy Council of India as per the Pharmacy Act, 1948.
 - (f) Explain procedure of Drug Inspector for taking samples of Drugs or Cosmetic as per Drugs & Cosmetics Act, 1940.
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- Instructions :**
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Marks**1. Solve any EIGHT of the following :****8 × 2 = 16**

- (a) Define :
 - (i) Trade
 - (ii) Industry
- (b) Define Salesman and give the qualities of a good salesman.
- (c) What is the role of 'Karta' in Joint Hindu Family Business ?
- (d) What is an account ? Mention types of Accounts.
- (e) Write a note on VED Analysis.
- (f) Define Trial Balance and give its objectives.
- (g) Define Partnership. Name the various types of Partners.
- (h) Define Recruitment. Give methods of recruitment.
- (i) Define Bank. Enlist types of Banks.
- (j) Define Wholesalers. Give types of Wholesalers.
- (k) Write two advantages of opening a drug store in a rural area.
- (l) Define Budget. Give objectives of Budgetary Control.



2. Solve any FOUR of the following :**4 × 3 = 12**

- (a) What is Joint Hindu Family Business ? Write its advantages and disadvantages.
- (b) Give main objectives of layout design of the drug store.
- (c) Explain in detail about purchasing procedure.
- (d) Enlist various accounting concepts and explain any one of them.
- (e) Explain the steps in selling process.
- (f) Write a note on evaluation of pharmacist.

3. Solve any FOUR of the following :**4 × 3 = 12**

- (a) Explain functions or services of Commercial Banks.
- (b) What is ABC analysis method of inventory control ? Describe with its advantages.
- (c) Write a note on Retail Departmental Store.
- (d) Define Trade. Give its classification in detail.
- (e) What is Ledger ? Give its blank format with its importance.
- (f) Differentiate between advertisement & sales promotion.

4. Solve any FOUR of the following :**4 × 3 = 12**

- (a) Differentiate between Profit & Loss Account and Balance Sheet.
- (b) Write a note on double entry book-keeping system. Give its advantages.
- (c) Write a note on window display. Give its advantages.
- (d) What is Tender ? Explain the types of tenders.
- (e) Differentiate between partnership business & sole proprietorship.
- (f) Describe the methods used for training.

5. Solve any FOUR of the following :**4 × 3 = 12**

- (a) What do you understand by Petty Cash Book ? Give its blank format with advantages.
- (b) Give objectives and functions of inventory control.
- (c) Explain various techniques of sales promotion.
- (d) Write a note on Financial Institutions.
- (e) Explain the basis for classification of Industry.
- (f) Explain various accounting conventions.

6. Solve any FOUR of the following :**4 × 4 = 16**

- (a) Describe various functions of Management.
 - (b) Differentiate between Wholesalers and Retailers.
 - (c) Classify and describe Budget.
 - (d) Describe methods of Financial Analysis.
 - (e) Describe the methods for determination of economic order quantity. Give its advantages.
 - (f) Describe selection procedure for various jobs.
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Seat No.

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Marks**1. Solve any EIGHT of the following :****2 × 8 = 16**

- (a) Define : (Any **Two**)
 - (i) Hospital
 - (ii) Hospital Pharmacy
 - (iii) Drug Tolerance
- (b) Translate in English : (Any **Four**)
 - (i) Folium
 - (ii) Auristillae
 - (iii) Omni Hora
 - (iv) Hora Somni
 - (v) Guttae
- (c) Classify the types of outpatient.
- (d) Define : (Any **Two**)
 - (i) Cyanosis
 - (ii) Sialogogue
 - (iii) Dyspepsia



- (e) State uses of : (Any **Two**)
 - (i) Catheters
 - (ii) X-Ray Machine
 - (iii) ECG
- (f) What advice must be given to the patient while using : (Any **Two**)
 - (i) Salicylates
 - (ii) Diazepam
 - (iii) Ophthalmic Preparations
- (g) Name the four antibacterial agents added in formation of parenterals.
- (h) Give normal values : (Any **Two**)
 - (i) Thrombocytes
 - (ii) Blood sugar
 - (iii) WBC count
- (i) Define surgical dressings and state its types.
- (j) What do you mean by drug-food interaction ? Give two examples.
- (k) Enlist four functions of PTC.
- (l) Define the following :
 - (i) Bioequivalence
 - (ii) Relative Bioavailability

2. Answer any FOUR :

3 × 4 = 12

- (a) Enlist six functions of Hospital.
- (b) Define clinical pharmacy and describe the scope of clinical pharmacy.
- (c) Explain the role of PTC in drug safety.
- (d) State three points of difference between drug addiction and drug habituation.
- (e) Explain the three sources from which information about drugs is collected for setting up DIC.
- (f) Define Adverse Drug Reactions and write the causes of ADR.

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3. Answer any FOUR :

3 × 4 = 12

- (a) Enlist six functions of Hospital Pharmacy.
- (b) Explain Pathophysiology of : (Any **One**)
 - (i) TB
 - (ii) Hepatitis
- (c) Write the identification tests of Absorbent cotton wool. I.P.
- (d) Define poisons and explain types of poisoning.
- (e) State uses of : (Any **Three**)
 - (i) Allis Tissue Forceps
 - (ii) Scalpels
 - (iii) Artery forceps
 - (iv) Blunt Scissors
- (f) Explain withdrawal symptoms & treatment of alcoholism.

4. Answer any FOUR :

3 × 4 = 12

- (a) Classify hospitals according to :
 - (i) Size
 - (ii) System of Medicine
- (b) Write the composition, functions & dose of universal antidote.
- (c) Enlist six advantages of Unit Dose Dispensing System.
- (d) Explain Teratogenicity with examples.
- (e) Draw & explain typical layout of hospital pharmacy.
- (f) Define Patient compliance. Explain any four reasons of patient non-compliance.

5. Answer any FOUR :

3 × 4 = 12

- (a) Explain factors affecting make or buy decision in hospital.
- (b) State type of drug interaction observed between
 - (i) Folic acid & Phenytoin
 - (ii) Tetracycline & dairy products
 - (iii) Penicillin & Probenecid

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- (c) Write a note on air control in sterile manufacture.
- (d) What is ESR ? State its significance.
- (e) Write guiding principles while using HF.
- (f) Explain pathophysiology of : (Any **One**)
 - (i) CCF
 - (ii) Angina Pectoris

6. Answer any **FOUR** :

4 × 4 = 16

- (a) Enlist the applications of computer in pharmacy and explain its role in inventory control.
 - (b) Define bioavailability. Explain how physical properties of drug affect bioavailability.
 - (c) Write notes on : (Any **Two**)
 - (i) Prepacking of drugs
 - (ii) Ryle's Tube
 - (iii) Drug Information Bulletin
 - (d) Explain : (Any **Two**)
 - (i) Opium Poisoning
 - (ii) Pharmacodynamic Drug Interactions
 - (iii) Plaster of Paris
 - (e) (i) State the pharmacist requirement according to bed strength of hospital.
(ii) What is bedside pharmacy ?
 - (f) (i) Write the characteristics of idiosyncrasy.
(ii) What is drug abuse ? Stat steps involved in its treatment.
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3 Hours / 80 Marks

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15 minutes extra for each hour

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- (2) Answer each next main Question on a new page.
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Marks

1. Attempt any EIGHT of the following: 16
- a) Translate following Latin term in to English.
- i) Palvis
- ii) Dandus
- iii) Jentaculum
- iv) Si opus sit
- b) Enlist the reasons for ‘Therapeutic incompatibility’.
- c) Differentiate between liniment and lotion.
- d) Define mixture and draught.
- e) Convert followings.
- i) One pound = _____ grain (avoir)
- ii) One pint = _____ fl. oz.
- iii) One teaspoon ful = _____ ml.
- iv) One minim = _____ ml

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- f) Differentiate between suppositories and pessaries.
- g) Explain types of dusting powders.
- h) Give ideal qualities of suspension.
- i) Write any four disadvantages of polysaccharide emulsifying agents.
- j) Differentiate between antiperspirants and deodorants.

2. Attempt any FOUR of the following:

12

- a) Define prescription and explain various parts of prescription.
- b) Explain the incompatibility in following prescription and suggest suitable method of correction.

R_x,

Sodium bicarbonate.....	19
Borax.....	19
Phenol.....	0.59
Glycerol.....	209
Water upto.....	90ml

Make a spray solution

- c) Describe method of pyrogen testing using animal.
- d) Explain the following facial cosmetics.
 - i) Compact powder
 - ii) Foundation cream
 - iii) Moisturizing cream
- e) State the meaning of creaming in emulsion and explain factors affecting creaming using Stock's equation.
- f) Find the concentration of sodium chloride required to make isotonic solution containing 0.5% chlorobutal and 1.5% cocaine hydrochloride. (Given : F.P. of 1% w/v solution of chlorobutal = -0.138°C and F.P. of 1% w/v solution of cocaine hydrochloride = -0.09°C)

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

- a) Define posology and calculate dose for a child of 6 month old having adult dose of 200mg.
- b) State the problem in following powder's and mention the method of dispensing
 - i) Hygroscopic and deliquescent
 - ii) Efflorescent powder
 - iii) Explosive powder
- c) List the synthetic thickening agents and give any four difference between flocculated and deflocculated suspension.
- d) Define throat paint, why Glycerine is used as vehicle and state any two labelling instructions for it.
- e) Explain source, properties, use of white soft paraffin with disadvantages of hydrocarbon ointment bases.
- f) Find the volume of 80%, 50%, 30% and water required to get 40% 500 ml.

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

- a) List the emulsifying bases used in preparation of suppositories and give their advantages over fatty bases.
- b) Define shampoo and explain formulation of shampoo with examples.
- c) State any three differentiative point between diffusible and indiffusible mixture and describe method of preparation of diffusible mixture.
- d) Describe any three identification test for emulsion.
- e) Explain characteristic of eye suspension and formula for eye ointment base.
- f) Explain adjusted chemical incompatibility with example.

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

- a) Write short note on Poultice.
- b) Explain the following method of hair removal.
 - i) Epilation
 - ii) Depilation
- c) State the ideal properties of emulsifying agent and list the natural polysaccharide used in preparation of emulsion.
- d) Calculate the displacement value of zinc oxide from following data.
 - i) Capacity of mould = 15 grain
 - ii) Wt of six unmedicated suppositories = 90 grain
 - iii) Wt of six suppositories containing 40% zinc oxide = 132 grain
- e) Explain the following factor which play important role in selection of ointment base.
 - i) Absorption and penetration
 - ii) Emulsifying properties
 - iii) Stability
- f) Describe any two methods of evaluation of suspension.

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

- a) Explain the following factor's of posology.
 - i) Tachyphylaxis
 - ii) Idiosyncrasy
 - iii) Disease condition
 - iv) Environmental factors
- b) Describe any two physical incompatibilities with example.
- c) Define cachets, explain its types and write the advantages of it.
- d) Define jellies, explain its types and state the disadvantages of gelling agents.

- e) Describe the various steps involved in processing of parenterals.
- f) State the calculation, primary emulsion formula, use and method of preparation of following prescription.

R_x

Liquid paraffin.....	60 ml
Phenolphthalein.....	2.09
Agar.....	1.59
Acacia.....	159
Syrup.....	159
Cinnamon water to.....	180 ml

0812

21222

3 Hours / 80 Marks

Seat No.

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15 minutes extra for each hour

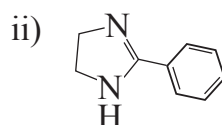
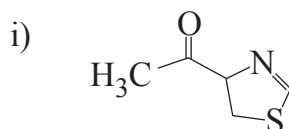
- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answer with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Mobile Phone, Pager and any other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

Marks

- 1. Attempt any EIGHT of the following: 16**
- a) Give the structure and method of numbering for following:
- i) Isoquinoline.
 - ii) Acridine.
- b) Write structure and uses of methyldopa.
- c) Write structures of
- i) Lignocain.
 - ii) Pethidine.
- d) Write the structure of following substituents.
- i) N-methyl carbamoyl.
 - ii) Guanidino.
- e) Write the structure of one drug containing following heterocycles.
- i) Indole.
 - ii) Quinoline.

P.T.O.

- f) Describe uses and official preparations of Biperiden.
- g) Define terms with suitable examples.
- i) Adrenolytics.
 - ii) Cardiotonic drugs.
- h) Write structure and IUPAC name of phenformin.
- i) Enlist three anticoagulants. Write use for any one of them.
- j) Mention the uses and brand names of Pentazocin.
- k) Write the uses of Niacin.
- l) Give IUPAC nomenclature for following compounds.



2. Attempt any FOUR of the following: 12

- a) Draw structure and give IUPAC name for proflavin and chlorocresol.
- b) Define and classify anticonvulsants with suitable examples.
- c) Write structure and IUPAC names of
 - i) Isoprenaline.
 - ii) Acetaminophen.
- d) Mention properties, uses, dosage forms and brand names of Clofibrate.
- e) Classify antiarrhythmic drugs. Write structure of Procainamide.
- f) Write structure, IUPAC name and uses of Indomethacin.

3. Attempt any FOUR of the following: 12

- a) Define and classify antibiotics on the basis of chemical structure. Write suitable examples.
- b) Chemically classify sulphonamides. Write structure and uses of Sulphaguanidine.
- c) Draw structure, write IUPAC name, uses and brand names of Chlorpromazine.
- d) Write structure, IUPAC name and uses of Ethambutol.

- e) Write structure, IUPAC name, uses and brand names of Glutethimide.
- f) Define anticholinergics. Describe therapeutic usefulness of anticholinergics.

4. Attempt any FOUR of the following: 12

- a) Describe storage and uses of:
 - i) Amphotericin B.
 - ii) Propylidone.
 - iii) Hamycin.
 - iv) Congo red.
- b) Define and classify Antitubercular drugs with suitable examples.
- c) Give structure, chemical name, therapeutic uses and brand names of Ampicillin.
- d) Write structures and uses of
 - i) Propantheline.
 - ii) Neostigmine.
- e) Give properties, uses, dosage form and brand name of Betamethasone.
- f) Define vitamins. Write uses and deficiency state for following:
 - i) Cyanocobalamine.
 - ii) Pyridoxine.

5. Attempt any FOUR of the following: 12

- a) Chemically classify antiamoebic drugs with suitable examples from each class.
- b) Write structure and brand names of
 - i) Sulphadiazine.
 - ii) Thyroxine.
- c) Write chemical structure, IUPAC name, properties and uses of drug belonging to 4-aminoquinoline group.

- d) Give therapeutic use and official preparations of
- Chloramphenicol.
 - Oxyphenbutazone.
- e) Name three antibiotics used to treat cancer. Give properties and uses of any one of them.
- f) Write chemical structure, IUPAC name, uses and brand names of Chlorpropamide.

6. Attempt any FOUR of the following:

16

- a) Write structures of following compounds.
- 4-butyl-1, 2-diphenyl pyrazolidine-3, 5-dione
 - 5,5 diphenyl imidazolidine 2, 4-dione
 - 5- α -androstane
 - 3-(4-Chlorophenyl)-N, N-dimethyl-3-(2-pyridinyl)-1-propanamine.
- b) Describe properties, uses and brand names of
- Dapsone.
 - Diethylcarbamazine.
- c) Define and classify with examples.
- Analeptics.
 - Local anaesthetics.
- d) Give the structure and IUPAC name of
- Frusemide
 - Hydrochlorthiazide.
- e) Chemically classify antihistaminic drugs with suitable examples. Draw the structure of Diphenhydramine.
- f) Mention properties, uses and brand names of
- Methimazole.
 - Prednisolone.
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0813

21222

3 Hours / 80 Marks

Seat No.

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15 minutes extra for each hour

- 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Define the following terms with two examples of each (any EIGHT)** **16**
- a) Antibiotics
 - b) Mydriatics
 - c) Haematinics
 - d) Antiemetics
 - e) Expectorants
 - f) Diuretics
 - g) Purgatives
 - h) Anthelmintics
 - i) Sympathomimetics
 - j) Antiseptics
 - k) Antiarrhythmics
 - l) Chemotherapy

P.T.O.

- 2. Attempt any FOUR of the following:** **12**
- a) Give advantages and disadvantages of intravenous route of drug administration.
 - b) Explain pharmacological actions of aspirin.
 - c) Define local anaesthetics. State ideal properties of local anaesthetics.
 - d) Explain 'Dale's vasomotor reversal' of adrenaline with graph.
 - e) Define autocooids. Explain triple response of histamine.
 - f) Classify anticancer drugs with examples.
- 3. Attempt any FOUR of the following:** **12**
- a) Mention the drug of choice in the following conditions:-
 - (i) Leprosy
 - (ii) Gout
 - (iii) Glaucoma
 - (iv) Angina pectoris
 - (v) Insomnia
 - (vi) Rheumatoid Arthritis
 - b) State the important side effects of following drugs:-
 - (i) Penicillin
 - (ii) Reserpine
 - (iii) Quinine
 - (iv) Tetracycline
 - (v) Atropine Sulphate
 - (vi) Aspirin
 - c) Mention the drug contraindicated in following condition:-
 - (i) Liver damage
 - (ii) Pregnancy
 - (iii) Head injury
 - (iv) Hyper acidity
 - (v) Peptic ulcer
 - (vi) G 6 P D deficient patient

- d) Give the route of administration of following drug :-
- (i) Insulin
 - (ii) Mannitol
 - (iii) Nitro-glycerine
 - (iv) Nitrous oxide
 - (v) Diclofenac
 - (vi) Diazepam
- e) Mention dose of following drugs :-
- (i) Aspirin
 - (ii) Paracetamol
 - (iii) Diazepam
 - (iv) Dapsone
 - (v) Ranitidine
 - (vi) Mebendazole
- f) Name one drug each which produce following effect:-
- (i) Bone and teeth deformity
 - (ii) Cinchonism
 - (iii) Dryness of mouth
 - (iv) Cycloplegia
 - (v) Anaphylaxis
 - (vi) Gray baby syndrome

4. Attempt any FOUR of the following:

12

- a) Define antagonism. Differentiate between competitive and non-competitive antagonism.
- b) Classify analgesics and antipyretics with examples.
- c) Give symptoms and treatment for organophosphorus compound poisoning.
- d) Classify anti-hypertensives with examples.
- e) Explain mechanism of action of sulphonamides and co-trimoxazole.
- f) Classify diuretics. Explain 'Thiazides' as diuretic.

- 5. Attempt any FOUR of the following:** **12**
- a) Define hypnotics and sedatives. Classify them.
 - b) Give symptoms and treatment for belladonna poisoning.
 - c) Classify oral hypoglycaemic with examples.
 - d) Enlist and describe the various channels of drug excretion.
 - e) Explain pharmacological actions of adrenaline.
 - f) Discuss the stages of general anaesthetics.
- 6. Give the reason of following statements any FOUR.** **16**
- a) Sulphonamides are not affective in presence of pus.
 - b) Atropine produces photophobia.
 - c) Eating of cheese is forbidden in patients with MAO inhibitor therapy.
 - d) Adrenaline is given along with procaine to produce local anaesthesia.
 - e) Sulphamethaxazole is combined with trimethoprim.
 - f) Penicillin is life saving as well as life threatening drug.
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00814

21222

3 Hours / 80 Marks

Seat No.

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15 minutes extra for each hour

- 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.

Marks

1. Answer any EIGHT of the following :

16

- (a) State the recommendations of Drug Enquiry Committee.
- (b) Differentiate between Law and Ethics.
- (c) Define 'Registered Pharmacist' as per Pharmacy Act, 1948.
- (d) What do schedule N & X prescribes as per Drug & Cosmetic Act, 1940 ?
- (e) Enlist the objectives of Drug Price Control Order, 1995.
- (f) Give the offences & penalties under Objectionable Advertisement Act & Rule 1955.
- (g) Differentiate between bonded & non-bonded laboratory.
- (h) Give the *ex-officio* members of Pharmacy Council of India.
- (i) Define Alcohol & restricted preparation as per Medicinal & Toilet Preparation Act, 1955.
- (j) Define Poison & state the objectives of the Poisons Act, 1919.
- (k) Describe any four education regulations as per the Act.

[1 of 4]

P.T.O.

(l) Give the schedules for following :

- (i) Antitoxin
- (ii) Chlorambucil
- (iii) Chlorpromazine
- (iv) Adrenalin

2. Answer any FOUR of the following :

12

- (a) As per Pharmacy Act 1948, define 'medical practitioner'.
- (b) Describe the offences & penalties under Poison Act, 1919.
- (c) State the procedure for dispatch of sample from drug inspector to government analyst.
- (d) As per Drug & Magic Remedies Act, 1954 define :
 - (i) Advertisement
 - (ii) Magic Remedies
- (e) Describe the general labelling conditions of drug under D & C Act, 1940.
- (f) Give the conditions for approval of places for termination of pregnancies under MTP Act, 1971.

3. Answer any FOUR of the following :

12

- (a) Write the functions of Pharmacy Council of India.
- (b) Enlist the circumstances under which the pregnancies may be terminated as per MTP Act, 1971.
- (c) Define 'Adulterated Drug' as per D & C Act, 1940.
- (d) What is first register ? Give qualification required by a person to enter his name into first register under Pharmacy Act, 1948.
- (e) Give three classes of advertisements prohibited under Drug & Magic Remedies Act, 1954.
- (f) Write the constitution of State Pharmacy Council as per Pharmacy Act, 1948.

4. Answer any FOUR of the following :**12**

- (a) How a pharmacist should handle the prescription according to the pharmaceutical ethics ?
- (b) Write the offences & penalties under the Pharmacy Act, 1948.
- (c) Write the procedure for issue of alcoholic preparations from bonded manufactory.
- (d) State offences & penalties under Medical Termination of Pregnancy Act, 1971.
- (e) Explain the role of pharmacist in health care system.
- (f) Write in brief about objective & scope of Pharmaceutical Legislation in India.

5. Answer any FOUR of the following :**12**

- (a) Give the formula for calculation of retail price of drug formulation & explain the terms involved in it as per Drug (Price Control) Order, 1995.
- (b) Explain in short the powers of drug inspector.
- (c) How the pharmacist is link between medical profession & public ? Explain as per Code of Ethics.
- (d) Which different sale licences are required for wholesale & retail of drugs as per D & C Act, 1945 ?
- (e) Under which conditions the name of registered pharmacist is removed from register ?
- (f) Give the functions of Central Drug Laboratory.

P.T.O.

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

- (a) Give the constitution & functions of DTAB. Mention few changes in definition of drug, recommended by DTAB.
 - (b) Define the following as per Narcotic Drug & Psychotropic Substance Act & Rule :
 - (i) Addict
 - (ii) Narcotic drug
 - (iii) Coca Leaf
 - (c) What are the requirements of bonded laboratory ?
 - (d) State labelling particulars required to appear on label of ophthalmic preparations.
 - (e) Write about offences & penalties under Narcotic Drug & Psychotropic Substance Act, 1985.
 - (f) Define the following as per Medicinal & Toilet Preparation Act, 1955 :
 - (i) Medicinal preparation
 - (ii) Toilet preparation
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00815

21222

3 Hours / 80 Marks

Seat No.

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15 minutes extra for each hour

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Marks

1. Solve any EIGHT of the following :

16

- (a) Define the term :
 - (i) Trade
 - (ii) Delcredere agents
- (b) Give the difference between Heavy Industry and Light Industry.
- (c) Define financial statements. Why is it prepared ?
- (d) Classify the different types of functional middlemen.
- (e) What are the objectives of sale promotion ?
- (f) Define Budget. What are the main objectives of budgetary control ?
- (g) Name the various branches of accounting.
- (h) What is ledger ? Give the format of ledger.
- (i) Write the minimum qualification required to start new retail drug store and wholesale drug store.

[1 of 4]

P.T.O.

- (j) State the advantages of window display.
- (k) Explain in brief the lead time.
- (l) Write the miscellaneous services provided by banks.

2. Solve any FOUR of the following :

12

- (a) Define pharmaceutical management. What are the different functions of management ?
- (b) Explain different kinds of partners in a partnership business.
- (c) Give the difference between firm and company.
- (d) Which steps are involved in selling process ?
- (e) Mention the main advantages of perpetual inventory system.
- (f) Elaborate the stages involved in purchase procedure.

3. Solve any FOUR of the following :

12

- (a) Describe salient features of sole proprietorship.
- (b) Give the advantages & disadvantages of hire purchase trading houses.
- (c) Define scrap. How it is classified ? State its method for disposal.
- (d) Describe 'Input-Output ratio analysis' technique used to control inventory.
- (e) Explain the methods of evaluation of pharmacist.
- (f) "Advertisement is social waste." Give your comment.

4. Solve any FOUR of the following :

12

- (a) Discuss the functions of wholesaler.
- (b) Discuss the advantages and disadvantages of Mail Order Business.

- (c) Describe the general factors to be considered while selecting a site for drug store.
- (d) Discuss different methods of codification of items used in a retail store.
- (e) Which are the different techniques of sale promotion ?
- (f) Define training. Explain various types of training given to the employee.

5. Solve any FOUR of the following :

12

- (a) Explain various hindrances which arises in trade, and discuss how these hindrances can be removed.
- (b) Define 'Inventory Control'. Discuss objectives of Inventory Control.
- (c) Draw an ideal layout design for retail drugs store and give its objectives.
- (d) Give short note on
 - (i) Advantages of joint Hindu family business
 - (ii) Tender
- (e) What do you understand by 'Market Research' ? Write advantages & disadvantages of market research.
- (f) Define finance. What are different types of finance required in a business ? Discuss the various sources of finance.

6. Solve any FOUR of the following :

16

- (a) What is Balance Sheet ? Give its uses. Detail the various items included in balance sheet.
- (b) Define the term 'Trial Balance'. Explain various errors in accounts which are present but not reflected in Trial Balance.

P.T.O.

- (c) Define the term 'Accounting Concept.' How does it differ from 'Accounting Conventions' ? Explain the entity concept and dual aspect concept.
- (d) What is petty cash book ? Explain working of petty cashier.
- (e) Explain the different types of accounts. Explain the rules of debits and credits used to make entries in the books of account.
- (f) Journalise the following transaction in the Journal of Bharat Medical and General Store, Bangalore.

01/05/2012	Prabhu invested in business	₹ 30,000/-
02/05/2012	Open an account with Axis Bank by depositing cash	₹ 10,000/-
03/05/2012	Purchase good for cash	₹ 600/-
04/05/2012	Withdraw cash for personal use	₹ 500/-
06/05/2012	Cash sale	₹ 1000/-
25/05/2012	Paid rent	₹ 350/-
29/05/2012	Paid cartage	₹ 100/-

00816

21222

3 Hours / 80 Marks

Seat No.

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15 minutes extra for each hour

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Marks

1. Solve any EIGHT :

16

- (a) Define any two :
 - (i) Clinical pharmacy
 - (ii) Hospital pharmacy
 - (iii) Drug abuse
- (b) Write one example of each poison (any two) :
 - (i) Corrosive
 - (ii) Neurotics
 - (iii) Organic
- (c) Draw the flow chart for patients in a typical hospital.
- (d) Mention the doses of the following :
 - (i) BAL
 - (ii) EDTA

- (e) Mention suitable method for sterilization :
 - (i) Hand gloves
 - (ii) OT
- (f) Name any two preservatives used in parenteral preparations.
- (g) What are Elite hospitals ?
- (h) Give meaning of following abbreviations :
 - (i) UDDS
 - (ii) SGOT
- (i) What is pre-packaging ?
- (j) Give the uses of (any two) :
 - (i) CT scanner
 - (ii) Ultrasound sonography
 - (iii) Lithotripsy
- (k) Name four quality control test for parenteral.
- (l) Translate following terms in English (any two) :
 - (i) Pulvis
 - (ii) Auristillare
 - (iii) Hora somni

2. Solve any FOUR :

12

- (a) Explain the role of computer in purchase & inventory control in hospital.
- (b) Give the objectives of hospital pharmacy.
- (c) Classify hospitals on the basis of size.
- (d) Give the methods for estimating demand.
- (e) Give importance of Nursing services in hospital.
- (f) Explain the term 'Teratogenicity' with examples.

3. Solve any FOUR :**12**

- (a) Describe the qualities of pharmacist required to run DIS.
- (b) Describe the procedure for procurement of materials in hospital.
- (c) Write the pathophysiology of Epilepsy OR Hypertension.
- (d) Explain the factors affecting make or buy decision in hospital manufacturing.
- (e) Enlist the name of standard prescribed by IP for absorbent cotton wool.
Describe any one test.
- (f) Write the content of Hospital formulary.

4. Solve any FOUR :**12**

- (a) Define the term general patient, referred out patient and ambulatory out patient.
- (b) Define patient compliance. Give reasons for non-compliance.
- (c) Define and classify ADR with examples.
- (d) Write steps involved in general treatment of poisoning.
- (e) Write pathophysiology, signs & symptoms of angina pectoris.
- (f) Explain the three sources of drug information with examples.

5. Solve any FOUR :**12**

- (a) Give the normal values of (any three) :
 - (i) Normal blood sugar
 - (ii) Clotting time of blood
 - (iii) Haemoglobin % in females
 - (iv) Sperm count
 - (v) RBC
- (b) Define PTC and give the role of PTC in drug safety.

P.T.O.

- (c) What advice must be given to patients while using following drugs :
- (i) Diazepam
 - (ii) Boric acid
 - (iii) MAO inhibitors
 - (iv) Diphenhydramine
- (d) Write the purpose and importance of medical record in the hospital.
- (e) Explain the principle and working of an “Autoclave”.
- (f) Write the mechanism of following Drug interaction :
- (i) Folic acid – Phenytoin
 - (ii) Warfarin – Salicylates
 - (iii) Digoxin – Diuretics

6. Solve any FOUR :

16

- (a) Give difference between Drug Habituation and drug addiction.
 - (b) Enumerate factors affecting bio-availability of drugs. Define bio-equivalence.
 - (c) What are withdrawal symptoms of alcohol & write treatment for it.
 - (d) Explain non-charge floor stock drug distribution system in Hospital. Write advantages and disadvantages of complete floor stock system.
 - (e) Give any four drugs which causes addiction. How drug abuse is treated ?
 - (f) Enlist eight functions of hospital.
-