

**August 2011**

**[KZ 4265]**

**Sub. Code: 4265**

**THIRD B.PHARM. EXAMINATION**

**Paper V – HOSPITAL AND CLINICAL PHARMACY**

***Q.P. Code : 564265***

**Time : Three hours**

**Maximum: 100 Marks**

**Answer ALL questions.**

**I. Essay questions:**

**(2 x 20 = 40)**

1. Discuss in detail the preparation of radioisotopes and specifications for radioactive laboratory?
2. Explain in detail the preparation of Hospital formulary?

**II. Write short notes on:**

**(8 x 5 = 40)**

1. Discuss the functions of Pharmacy and Therapeutic committee.
2. Write the procedure involved in dispensing of controlled drugs.
3. Mention the packing materials used prior to sterilization.
4. Explain drug – drug interaction with examples.
5. Write the methods for collecting drug information.
6. Write about the dosage individualization in patients.
7. Write a note on Prescription filling?
8. Discuss the steps in counseling.

**III. Short Answer Questions:**

**(10 x 2 = 20)**

1. Types of purchase.
2. Important contents of Hospital formulary.
3. Examples for sterilization equipments.
4. Define radioactive half life.
5. Record linkage studies.
6. Define ward Pharmacy
7. Importance of Master formula card
8. Two disease treatment schedule
9. Types of charging policy
10. Continuing education programme for pharmacist

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**February 2012**

**[LA 4265]**

**Sub. Code: 4265**

**THIRD B.PHARM. EXAMINATION  
Paper V – HOSPITAL AND CLINICAL PHARMACY**

***Q.P. Code: 564265***

**Time: Three hours**

**Maximum: 100 Marks**

**Answer ALL questions.**

**I. Elaborate on:**

**(2X20=40)**

1. List out and explain in detail about the various methods of drug distribution in a hospital.
2. Define Pharmacy and Therapeutic Committee and discuss its objective and functions in detail.

**II. Write notes on:**

**(8X5=40)**

1. Prescription filling and refilling.
2. Dispensing to Out Patients.
3. Dry heat sterilization and its equipment.
4. Budget preparation.
5. Medication Error.
6. Sources of Drug Information.
7. Classification of ADR's.
8. Inventory control and its significances.

**III. Short Answer:**

**(10X2=20)**

1. Object drug in drug interactions.
2. Controlled substances.
3. Units of Radioactivity.
4. Idiosyncrasy
5. Types of medication Error.
6. Patient compliance.
7. Different Phases of Clinical Trials.
8. ABC Analysis.
9. Case Control Studies.
10. Types of Hospitals.

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[LB 4265]

AUGUST 2012

Sub. Code: 4265

**THIRD YEAR B.PHARM. EXAM**

**Paper V – HOSPITAL AND CLINICAL PHARMACY**

***Q.P. Code: 564265***

**Time : Three hours**

**Maximum: 100 Marks**

**(180 Min) Answer ALL questions in the same order.**

**I. Elaborate on:**

**Pages Time Marks  
(Max.) (Max.) (Max.)**

- |   |    |    |    |
|---|----|----|----|
| 1. (a).Define hospital formulary system, what are the guidelines for hospital formulary system? What are the contents of hospital formulary?                      |    |    |    |
| (b).Discuss the steps involved in patient counseling and the barriers involved in patients counseling.  | 19 | 33 | 20 |
| 2. What is patient compliance? Give its types, factors associated with and consequences of non- compliance. Describe the methods of achieving patient compliance? | 19 | 33 | 20 |

**II. Write notes on:**

- |  |   |   |   |
|--|---|---|---|
| 1. Explain the various methods of production of radio pharmaceuticals.                           | 3 | 8 | 5 |
| 2. Distribution system of drugs for the in-patients.   | 3 | 8 | 5 |
| 3. Explain automatic stop order for dangerous drugs.   | 3 | 8 | 5 |
| 4. Write a note on various counseling procedures adopted for diabetes and hypertension patients. | 3 | 8 | 5 |
| 5. Write a note on purchasing procedure in hospitals.  | 3 | 8 | 5 |
| 6. Reporting of adverse drug reaction.   | 3 | 8 | 5 |
| 7. Write a note on drug interaction.   | 3 | 8 | 5 |
| 8. Discuss the role of hospital pharmacist in continuing education program.                      | 3 | 8 | 5 |

**III. Short Answer:**

- |  |   |   |   |
|--|---|---|---|
| 1. Idiosyncrasy.                                 | 1 | 5 | 2 |
| 2. EOQ.  | 1 | 5 | 2 |
| 3. Methods of detecting adverse drug effects.    | 1 | 5 | 2 |
| 4. Pharmacokinetic parameters.                   | 1 | 5 | 2 |
| 5. ICH-guidelines.                               | 1 | 5 | 2 |
| 6. Rational use of drugs.                        | 1 | 5 | 2 |
| 7. Out-patient dispensing methods.               | 1 | 5 | 2 |
| 8. Non charge floor stock drugs.                 | 1 | 5 | 2 |
| 9. Techniques of inventory control.              | 1 | 5 | 2 |
| 10.Prevention of radiation hazards in hospitals. | 1 | 5 | 2 |

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[LC 4208]

FEBRUARY 2013

Sub. Code: 4265

**THIRD YEAR B.PHARM. EXAM**

**Paper V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code : 564265*

**Time: Three Hours  
(180 Min)**

**Maximum: 100 marks**

**I. Long Essays:**

(2 x 20 = 40)

1. Explain in detail the preparation of Hospital formulary?
2. Discuss in detail the drug dispensing methods for outpatients and inpatients?

**II Short Notes:**

(8 x 5 = 40)

1. Functions of Pharmacy and Therapeutic committee.
2. Types of material used for Sterilization in hospital?
3. Methods used in drug information retrieval?
4. Note on preparation of radioisotopes in lab.
5. Explain adverse drug reaction following drug withdrawal.
6. Discuss the concept behind medication history interview
7. Explain the concept of professional training for pharmacist in hospital
8. Discuss Case Control studies with example?

**III. Short Answers:**

(10 x 2 = 20)

1. Examples for medication error.
2. Genetically determined toxicity.
3. Units for radioactivity.
4. Define adverse drug reaction.
5. Mention computerized based drug information services.
6. Different types of labeling in Pharmacy store
7. Two barriers in counseling
8. Define continuing pharmacy education programme
9. Define spontaneous case reporting?
10. Mention any two records to be preserved during the manufacture sterile products?

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**(LD 4265)**

**AUGUST 2013**

**Sub. Code: 4265**

**THIRD YEAR B.PHARM. EXAM**  
**PAPER V – HOSPITAL AND CLINICAL PHARMACY**  
***Q.P. Code: 564265***

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. Explain in detail about the objectives and functions of pharmacy and therapeutic committee.
2. Discuss briefly about the preparation of radio isotopes

**II. Write notes on:**

**(8X5=40)**

1. Responsibilities of hospital pharmacist
2. Contents of hospital formulary
3. Types of outpatients
4. Dry heat sterilization and its equipment
5. Cohort studies
6. Pharmacodynamic drug interaction
7. Patient compliance
8. Clinical trials

**III. Short Answers on:**

**(10X2=20)**

1. Units of radioactivity
2. Drug profile
3. Allergic drug reaction
4. Types of purchase
5. Mention any two disease treatment schedule
6. Examples for sterilization equipments
7. Significance of PTC
8. Types of medication errors
9. Spontaneous case reports
10. Dosage individualization

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**(LE 4265)**

**FEBRUARY 2014**

**Sub. Code: 4265**

**THIRD YEAR B.PHARM. EXAM  
PAPER V – HOSPITAL AND CLINICAL PHARMACY**

***Q.P. Code: 564265***

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on:**

**(2X20=40)**

1. Define and explain various phases of clinical trials with their significance.
2. Classify and explain Adverse Drug Reaction. Add a note on excessive pharmacological effects.

**II. Write notes on:**

**(8X5=40)**

1. Hospital formulary system
2. Drug information resources
3. Composition and functions of pharmacy and therapeutic committee
4. Classification of hospital with examples.
5. Interaction between anti-diabetics with dexamethasone
6. Barriers of patient counseling
7. Medication errors and their prevention
8. Concept and uses of medication history interview

**III. Short Answers on:**

**(10X2=20)**

1. Ambulatory patients
2. Unit dose dispensing system
3. Radioactive half life
4. Master formula card
5. Economic order quantity
6. Various methods of sterilization
7. Dots therapy
8. Contents of hospital formulary
9. Importance of Inventory control
10. Dispensing of narcotics

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(LF 4265)

AUGUST 2014

Sub. Code: 4265

**THIRD YEAR B.PHARM. EXAM  
PAPER V – HOSPITAL AND CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 marks**

**I. Essay:**

**(2X20=40)**

1. What is hospital pharmacy? Discuss typical organizational structure of hospital pharmacy department and its responsibility in health care system.
2. Define pharmacy and therapeutic committee. Discuss the objectives and functions of pharmacy and therapeutic committee.

**II. Short notes:**

**(8X5=40)**

1. Define compliance. Discuss about various methods to improve non-compliance.
2. Dry heat sterilization.
3. Dispensing of drugs to inpatients.
4. Therapeutic Drug Monitoring of phenytoin.
5. Preparation of hospital formulary.
6. Classification of ADR
7. Drug-Drug interaction
8. Patient medication counseling.

**III. Short Answers:**

**(10X2=20)**

1. Biological half life
2. What is satellite pharmacy?
3. Define the term sterilization
4. Idiosyncrasy
5. Define drug inventory control
6. Reason for conducting clinical trial
7. Radioisotope generations
8. Medline
9. Ambulatory patient
10. Define agonist - antagonist

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**(LG 4265)**

**FEBRUARY 2015**

**Sub. Code: 4265**

**THIRD YEAR B.PHARM. EXAMINATION  
PAPER V – HOSPITAL AND CLINICAL PHARMACY**

***Q.P. Code: 564265***

**Time: Three hours**

**Maximum: 100 marks**

**I. Essay: (2 x 20 = 40)**

1. Define and explain nuclear pharmacy, preparation of radio isotopes and proper disposal of radioactive hazards.
2. a) Explain in brief about purchase and inventory control methods.  
b) Role of pharmacist in the management of central sterile supply unit.

**II. Short notes: (8 x 5 = 40)**

1. Cohort studies and case control studies.
2. Retrieval of information and Medline
3. Dispensing of controlled drugs
4. Hospital formulary preparation, revision and contents
5. Role of pharmacist in budget preparation and implementation
6. Classification of adverse drug reaction
7. Interaction between tetracycline and food products
8. Good clinical practices and reasons for conducting clinical trials

**III. Short answers: (10 x 2 = 20)**

1. Functions of pharmacy and therapeutic committee
2. VED analysis
3. Therapeutic drug monitoring
4. Steps involved in patient counseling
5. Idiosyncrasy
6. EOQ
7. Medication error classification
8. Radioactive half life
9. Primary source of information on drugs
10. Multi specialty hospital

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**B.PHARM. DEGREE EXAMINATION**  
**THIRD YEAR**  
**PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer All Questions**

**I. Essay:**

**(2 x 20 = 40)**

1. Dispensing of drugs to in-patients, types of drug distribution system, charging policy and labeling.
2. What is drug information center? Discuss in detail about various resources for drug information center. Add note on answering drug information queries.

**II. Short notes :**

**(8 x 5 = 40)**

1. Methods of detecting adverse drug effects.
2. Patient Medication counseling.
3. Different phases of clinical trials.
4. Pharmacy & Therapeutic committee.
5. Inventory control of drugs.
6. Pharmacodynamic drug interactions.
7. Purchasing procedure of drugs in hospital.
8. Radiation hazards.

**III. Short answers:**

**(10 x 2 = 20)**

1. TDM indications.
2. Nuclear pharmacy.
3. Adverse Drug Reaction Monitoring.
4. Clinical trial.
5. Human ethical committee.
6. Lead time.
7. ABC analysis.
8. MEDLINE.
9. Hospital formulary.
10. Mobile dispensing unit.

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(LI 4265)

FEBRUARY 2016

Sub. Code: 4265

**THIRD YEAR B.PHARM. EXAMINATION  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

***Q.P. Code: 564265***

**Time: Three hours**

**Maximum: 100 Marks**

**I. Essay :**

**(2 x 20 = 40)**

1. What are the various methods of Drug Distribution? Discuss the dispensing of drugs to outpatients & inpatients.
2. What is Patient Medication Counseling? Give the various steps involved and barriers in patient Counseling.

**II. Short notes on :**

**(8 x 5 = 40)**

1. Write a note on dry heat Sterilization.
2. Discuss the preparation of Hospital formulary.
3. Give an account of radiation hazards.
4. What are the various sources of information on Drugs?
5. What are the different methods of detecting Adverse Drug Reactions?
6. Give the indications for Therapeutic drug monitoring.
7. Write the method of preparation of a hospital budget.
8. Discuss-Ethics in clinical research.

**III. Short answers on :**

**(10 x 2 = 20)**

1. Give two methods to improve patient compliance.
2. Yellow card system.
3. What is Pasteurization?
4. Give the units of Radioactivity.
5. What is Hypersensitivity reaction? Give an example.
6. Give the significance of Cohort studies.
7. What is Envelope system?
8. Mention two reasons for conducting clinical trials.
9. Give the types of drug interactions.
10. Write the composition of PTC.

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(LJ 4265)

AUGUST 2016

Sub. Code: 4265

**B.PHARM. EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. a) Define a hospital. Discuss the organization of a hospital.  
b) Discuss the contents and preparation of a hospital formulary.
2. a) What are the different types of drug interactions? Discuss drug interactions involving absorption.  
b) What is patient compliance? Give the methods to improve compliance.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Write a note on purchasing procedures followed in a hospital.
2. GCP – ICH Guidelines.
3. Discuss the role played by a pharmacist in TDM.
4. Outline the production of radioisotopes using radio isotope generators.
5. Give an account of unit dose drug dispensing for inpatients.
6. What are the different ways of packing of materials before sterilization?
7. Give the different sources of drug information.
8. Give the responsibilities of a hospital pharmacist.

**III. Short answers on:**

**(10 x 2 = 20)**

1. What is non charge floor stock drugs?
2. What do you mean by record linkage studies?
3. Give two examples for medication error.
4. Define clinical trials.
5. What is a drug information centre?
6. Define radioactive half life.
7. Give two methods used to measure the radiation dose received.
8. Mention the advantages of individual prescription order.
9. What are the physical methods of sterilization?
10. Give reasons for TDM of phenytoin.

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(LK 4265)

FEBRUARY 2017

Sub. Code: 4265

**B.PHARM. EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. a) Discuss in detail about the purchase procedure for a hospital pharmacy.  
b) Explain inventory, inventory control and explain in detail about the ABC analysis.
2. a) What are clinical trials and explain in detail about the various phases of it, along with the applications?  
b) What are adverse drug reactions and write in detail about its causality assessment.

**II. Write notes on:** **(8 x 5 = 40)**

1. Write a brief note on unit dose dispensing technique.
2. Explain how dispensing of controlled substances are to be carried out in a hospital pharmacy?
3. Discuss briefly the production of radioactive pharmaceuticals.
4. Explain briefly on various radiation hazards and methods to prevent it.
5. Write a brief note on cohort and case control studies.
6. Explain briefly the barriers for patient counseling.
7. Write briefly about the ethics in clinical research.
8. What are the principles of Good Clinical Practice (GCP)?

**III. Short answers on:** **(10 x 2 = 20)**

1. Patient Medication Counseling.
2. Patient Compliance.
3. Classification of drug interactions.
4. Examples for Drug - Food Interactions.
5. Composition of a Pharmacy and Therapeutic Committee.
6. What are spontaneous case reports?
7. Different types of sterilization.
8. List out various types of drug distribution to hospital inpatients.
9. Define a hospital formulary and its contents.
10. Permissible radiation dose level.

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(LL 4265)

AUGUST 2017

Sub. Code: 4265

**B.PHARM. DEGREE EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Define and explain nuclear pharmacy. Outline the production of radioisotopes using radio isotope generators.
2. Discuss about Drug information center, various resources for drug information center and steps involved in answering drug information query.

**II. Write notes on:** **(8 x 5 = 40)**

1. Define drug interaction and its types.
2. Role of pharmacist in the management of central sterile supply unit.
3. Define compliance and various methods to improve compliance.
4. Write a note on in-patient drug distribution system.
5. Preparation of hospital formulary.
6. Discuss the inventory control techniques.
7. Discuss about pharmacy and therapeutic committee.
8. Patient counseling and steps involved in patient counselling.

**III. Short answers on:** **(10 x 2 = 20)**

1. Define adverse drug reaction.
2. Cohort and case control study.
3. Units of Radioactivity.
4. Dry heat sterilization.
5. Drug-food interaction.
6. Define medication error.
7. Define EOQ.
8. Types of budget.
9. Phase -IV of clinical trials.
10. ICH guidelines.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LM 4265)

FEBRUARY 2018

Sub. Code: 4265

**B.PHARM. DEGREE EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** (2 x 20 = 40)

1. Explain in detail the various methods of drug distribution in a hospital.
2. Define hospital, classify them. Discuss in detail about the organization of a hospital and its importance.

**II. Write notes on:** (8 x 5 = 40)

1. Types of material used for sterilization in a hospital.
2. Role of pharmacist in therapeutic drug monitoring.
3. Concept and uses of medication history interview.
4. Write in detail the preparation of radioisotopes.
5. Define Adverse Drug Reactions and methods of detecting Adverse Drug Reactions.
6. Phases of clinical trials and GCP – ICH Guidelines.
7. Discuss the purchase procedures in a hospital.
8. What are the different ways of packing of materials before sterilization?

**III. Short answers on:** (10 x 2 = 20)

1. Define clinical trials.
2. Define Pasteurization.
3. Drug information resources.
4. Excessive pharmacological effects.
5. MEDIPHOR, MEDLINE.
6. Dispensing of controlled substance.
7. Record linkage studies.
8. Barriers in patient counseling.
9. Define hospital formulary.
10. Drug–Drug interactions.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LN 4265)

AUGUST 2018

Sub. Code: 4265

**B.PHARM. DEGREE EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** (2 x 20 = 40)

1. Write in detail about clinical trials with various phases and explain the guidelines governing clinical trials.
2. a) Define Adverse Drug Reaction and classify the ADR with suitable example.  
b) Describe the role of pharmacist to monitor ADR.

**II. Write notes on:** (8 x 5 = 40)

1. Budget preparation and implementation.
2. Radiation hazards and their prevention.
3. Sources of information of drugs.
4. Rules and regulations for dispensing of controlled drugs.
5. Role of pharmacist to improve Patient Compliance.
6. Responsibilities of a hospital pharmacist.
7. Pharmacokinetic drug interaction with suitable example.
8. Explain the Barriers and steps in patient counselling.

**III. Short answers on:** (10 x 2 = 20)

1. Nuclear pharmacy.
2. What is pharmacist intervention?
3. Drug - food interaction with example.
4. How to assess percentage of compliance?
5. Isotopic tagging.
6. TDM of phenytoin.
7. Urine markers.
8. Teratogenicity.
9. Contents of Hospital Formulary.
10. Significance of ABC analysis.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LO 4265)

FEBRUARY 2019

Sub. Code: 4265

**B.PHARM. DEGREE EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** (2 x 20 = 40)

1. Define Hospital formulary system. Explain in detail the preparation of hospital formulary.
2. Define Nuclear Pharmacy. Discuss briefly about the production of Radio Pharmaceuticals.

**II. Write notes on:** (8 x 5 = 40)

1. Unit dose drug dispensing for inpatients.
2. Discuss the function of Pharmacy and Therapeutic Committee.
3. Role of Pharmacist in the management of central sterile supply unit.
4. Inventory Control of drugs.
5. Write the brief note on Spontaneous case reports.
6. Types of medication error and their prevention.
7. Drug - Drug interaction.
8. Ethics in clinical research.

**III. Short answers on:** (10 x 2 = 20)

1. Patient Compliance.
2. Lead time.
3. Define Radioactive half-life.
4. Idiosyncrasy.
5. Clinical Trial.
6. Drug Profile.
7. Define Ward Pharmacy.
8. What is NONLIN?
9. Objectives of Drug Budget.
10. List few drugs which require cold storage.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LP 4265)

AUGUST 2019

Sub. Code: 4265

**B.PHARM. DEGREE EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** (2 x 20 = 40)

1. Define Pharmacy and Therapeutic Committee. Discuss the objectives, composition, and functions of Pharmacy and Therapeutic Committee.
2. a) What is drug information center? Discuss in detail about various resources for drug information center.  
b) What is Patient Compliance? Give the methods to improve the compliance.

**II. Write notes on:** (8 x 5 = 40)

1. Functions of a Hospital Pharmacy.
2. Charging Policy for Drugs.
3. Different Phases of Clinical Trials.
4. Classification of Adverse Drug Reaction.
5. Write about the Dosage Individualization in Patients.
6. Write the procedure involved in dispensing of controlled drugs.
7. Discuss the various sterilization equipments used in central Sterile supply unit.
8. Drug – Food Interaction.

**III. Short answers on:** (10 x 2 = 20)

1. Hospital Formulary.
2. Define Anaphylaxis.
3. What is buffer stock?
4. Define Blind Screening.
5. What is Roentgen?
6. Reasons for conducting clinical trials.
7. Satellite Pharmacy.
8. Define Over The Counter (OTC) drugs.
9. Barriers in Patient Counselling.
10. Ambulatory Patients.

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THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

(LQ 4265)

FEBRUARY 2020

Sub. Code: 4265

**B.PHARM. DEGREE EXAMINATION  
THIRD YEAR  
PAPER V – HOSPITAL & CLINICAL PHARMACY**

*Q.P. Code: 564265*

**Time: Three hours**

**Maximum: 100 Marks**

**I. Elaborate on:** (2 x 20 = 40)

1. Define and explain nuclear pharmacy, preparation of radioisotopes and proper disposal of radioactive hazards.
2. Define and explain the various phases of clinical trials with their significance.

**II. Write notes on:** (8 x 5 = 40)

1. Methods of detecting adverse drug effects.
2. Purchasing procedure of drugs in the hospital.
3. Discuss about the ethics in clinical research.
4. Discuss the preparation of Hospital formulary.
5. Good Clinical Practice–International Council for Harmonization (GCP–ICH) Guidelines.
6. Write a brief note on cohort and case control studies.
7. Explain briefly the barriers for patient counseling.
8. Define drug interaction and its types.

**III. Short answers on:** (10 x 2 = 20)

1. Drug information resources.
2. Phase–IV of clinical trials.
3. List out various types of drug distribution to hospital inpatients.
4. MEDIPHOR, MEDLINE.
5. Record linkage studies.
6. Drug–Drug interactions.
7. Units of Radioactivity.
8. Write the composition of the Pharmacy and Therapeutic Committee (PTC).
9. Lead time.
10. ABC analysis (or) selective inventory control.

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