

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)**DEGREE EXAMINATION****FIFTH YEAR****PAPER II – PHARMACOEPIDEMIOLOGY AND PHAMACOECONOMICS***Q.P. Code: 383826***Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****I. Elaborate on :****Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|--|----|---------|----|
| 1. Define the term Pharmacoeconomics, the need for pharmacoeconomics in Indian scenario.
Discuss the types of pharmacoeconomic evaluations. | 17 | 40 min. | 20 |
| 2. Discuss the description, strength and weakness of automated data bases. Write about Group health Co-operative data base. | 17 | 40 min. | 20 |

II. Write notes on :

- | | | | |
|--|---|---------|---|
| 1. Define cross-sectional and meta-analysis studies with an example. | 4 | 10 min. | 6 |
| 2. Give the applications of pharmacoeconomics. | 4 | 10 min. | 6 |
| 3. Role of pharmacoeconomics in formulary management decision. | 4 | 10 min. | 6 |
| 4. Need of pharmacoepidemiology and Evidence based medicine. | 4 | 10 min. | 6 |
| 5. Define Drug utilization review and mention the steps involved. | 4 | 10 min. | 6 |
| 6. Describe cost effectiveness analysis with an example. | 4 | 10 min. | 6 |
| 7. Define cumulative incidence, prevalence and odd' ratio. | 4 | 10 min. | 6 |
| 8. Define attributable risk and relative risk. | 4 | 10 min. | 6 |
| 9. Drug use measures in terms of units of use. | 4 | 10 min. | 6 |
| 10. Write about prescription event monitoring. | 4 | 10 min. | 6 |

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)**DEGREE EXAMINATION****FIFTH YEAR****PAPER II – PHARMACOEPIDEMIOLOGY AND PHAMACOECONOMICS***Q.P. Code: 383826***Time: Three Hours****Maximum: 100 marks****Answer All questions****I. Elaborate on :****Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|---|----|---------|----|
| 1. Discuss the applications of Pharmacoepidemiology.
Explain the various designs used in pharmacoepidemilogic studies. | 17 | 40 min. | 20 |
| 2. Describe the types of pharmaco-economic evaluations and their significance. | 17 | 40 min. | 20 |

II. Write notes on :

- | | | | |
|---|---|---------|---|
| 1. Odds ratio and Relative Risk. | 4 | 10 min. | 6 |
| 2. Prevalence and Incidence. | 4 | 10 min. | 6 |
| 3. Role of pharmacist in drug induced birth defects. | 4 | 10 min. | 6 |
| 4. Trend Analysis and cross sectional studies. | 4 | 10 min. | 6 |
| 5. Applications of software in pharmaco-economic evaluations. | 4 | 10 min. | 6 |
| 6. Units of drug use. | 4 | 10 min. | 6 |
| 7. Significance of pharmaco-economic evaluations in formulary management decisions. | 4 | 10 min. | 6 |
| 8. Phases of Drug Utilization Review. | 4 | 10 min. | 6 |
| 9. Origin and evolution of pharmacoepidemiology. | 4 | 10 min. | 6 |
| 10. Methods of measurement of medication adherence. | 4 | 10 min. | 6 |

[LD 826]

OCTOBER 2013

Sub. Code: 3826

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)

DEGREE EXAMINATION

FIFTH YEAR

PAPER II – PHARMACOEPIDEMIOLOGY AND PHAMACOECONOMICS

Q.P. Code: 383826

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(2 x 20 = 40)

1. Discuss the significance and steps of drug utilization review.
2. What are the various types of pharmaco-economic evaluations? Explain.

II. Write notes on:

(10 x 3 = 30)

1. Describe
 - a) cross sectional studies.
 - b) cohort studies.
 - c) case-control studies.
2. Discuss briefly positive and negative outcomes of pharmacoepidemiological studies.
3. Discuss Odds ratio and Relative Risk.
4. Medication adherence and its measurement.
5. Applications of epidemiological model.
6. Record linkage system.
7. Illustrate the use of softwares in pharmaco-economics.
8. Role of pharmaco-economics in formulary management decisions.
9. What is defined daily dose and prescribed daily dose.
10. Discuss case reports and case series.

[LE 826]

APRIL 2014

Sub. Code: 3826

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)

DEGREE EXAMINATION

FIFTH YEAR

PAPER II – PHARMACOEPIDEMIOLOGY AND PHAMACOECONOMICS

Q.P. Code: 383826

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(2 x 20 = 40)

1. How do you express the outcome of drug use in pharmacoepidemiologic studies?
Discuss briefly on meta-analysis.
2. Discuss various criteria for pharmacoeconomic studies.
Explain cost-minimization analysis and cost-effectiveness analysis.
What are the various applications of pharmacoeconomics?

II. Write notes on:

(10 x 3 = 30)

1. Methods of medication adherence measurement.
2. Randomized controlled trials and case control studies.
3. Applications of pharmacoepidemiology and pharmacoeconomics.
4. Use of software in pharmacoeconomics.
5. Origin and evolution of pharmacoepidemiology.
6. Briefly discuss the 'concept of risk' in pharmacoepidemiology.
7. Describe Ad Hoc data sources and automated data systems.
8. Explain cost benefit analysis and cost utility analysis.
9. Define pharmacoeconomics and discuss the need of pharmacoeconomic evaluations.
10. Prescription event monitoring and record linkage system.

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)

DEGREE EXAMINATION

(2009-2010 Regulation)

FIFTH YEAR

PAPER II – PHARMACOEPIDEMIOLOGY AND PHAMACOECONOMICS

Q.P. Code: 383826

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(4 x 10 = 40)

1. Write briefly on defined daily doses and prescribed daily doses as a outcome measurement of Pharmacoepidemiology.
2. Write a note on origin, aims and applications of Pharmacoepidemiology.
3. Elaborate on Cross-Sectional, Cohort, Case- Control Studies of Pharmacoepidemiological Methods.
4. Briefly explain about role of Pharmacoeconomic Evaluations in Formulary Management Decisions.

II. Write notes on:

(6 x 5 = 30)

1. Write a note on spontaneous reporting with a help of a Case Study.
2. Write briefly on Pharmacoepidemiology and it's risk management.
3. Explain about Cost-Minimization Pharmacoeconomic Evaluation.
4. Write a note on Ad-Hoc data sources available for Pharmacoepidemiological studies.
5. Write briefly on Time-Risk relationship of Pharmacoepidemiology.
6. Write an note on applications of Software in Pharmacoeconomics.

[LG 826]

APRIL 2015

Sub. Code: 3826

DOCTOR OF PHARMACY (PHARM. D / POST BACCALAUREATE)

DEGREE EXAMINATION

(2009-2010 Regulation)

FIFTH YEAR

PAPER II – PHARMACOEPIDEMIOLOGY AND PHAMACOECONOMICS

Q.P. Code: 383826

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(4 x 10 = 40)

1. Explain the Pharmacoepidemiological methods used to study drug induced birth defects.
2. Discuss the types of Pharmacoeconomic evaluations.
3. Elaborate a note on studies of vaccine safety.
4. Differentiate Cross sectional and Cohort studies.

II. Write notes on:

(6 x 5 = 30)

1. Need for Pharmacoepidemiological studies.
2. Requirements for an ideal database.
3. Clinical importance of drug utilization review.
4. Case Control studies.
5. Strengths and weaknesses of prescription event monitoring.
6. Importance of Meta – analysis.

[LH 826]

OCTOBER 2015

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION**

(2009-2010 Regulation)

FIFTH YEAR

PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. Code : 383826

Time: Three Hours

Maximum: 70 marks

Answer ALL questions

I. Elaborate on :

(4 x 10 = 40)

1. Define Pharmacoepidemiology and explain its outcome measurement related to prevalence and incidence rate, medication adherence management.
2. Write a brief note on Cost-Benefit, Cost-Effectiveness study Parameters with the help of Case Studies.
3. Briefly explain about the significance of Hospital Pharmacoepidemiology.
4. Explain about the Merits and Demerits of Softwares applications of Pharmacoeconomics.

II. Write notes on :

(6 x 5 = 30)

1. Write a note on measurement of risk and relative risk.
2. Write a note on automated data systems for Pharmacoepidemiological studies.
3. Explain in detail about Prescription Event Monitoring.
4. Explain the Protocol for studies of Vaccine Safety.
5. Briefly write on Cost-Utility analysis.
6. Write a note on drug induced birth defects of Pharmacoepidemiology.

[LI 826]

APRIL 2016

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code: 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on :

(4 x 10 = 40)

1. Define Pharmacoeconomics. Explain about cost-benefit analysis with suitable examples.
2. Write about Ad Hoc data sources available for Pharmacoepidemiological studies.
3. Explain the merits and demerits of Cohort and case control studies.
4. Briefly discuss about the significance of Relative and Attributable risk.

II. Write notes on :

(6 x 5 = 30)

1. Explain the method, advantage and disadvantage of a cross sectional study.
2. Briefly write about spontaneous reporting system.
3. Explain the outcome of drug measures in terms of units of drug dispensed.
4. Explain the terms VAERS, VSD and CISA.
5. Discuss briefly about record linkage system.
6. Write about the importance of Bayesian neural network method in Pharmacoepidemiological studies.

[LJ 826]

OCTOBER 2016

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Briefly explain about the concept of risk involved in Pharmacoepidemiology.
2. Define Medication Adherence. Explain the methods to evaluate Medication Adherence.
3. Write the merits and demerits case control and Meta-analysis studies.
4. Explain the need of pharmaco-economic evaluations in formulary management.

II. Write notes on:

(6 x 5 = 30)

1. Explain the various cost factors involved in Pharmaco-economic evaluation.
2. Explain the Pharmacist role in Drug utilization review.
3. Write the merits and demerits of Automated Data system.
4. Briefly write about computerized databases used in Pharmacoepidemiological research.
5. Write a note on the importance of post marketing surveillance.
6. List the methods and application of Hospital Pharmacoepidemiology.

[LK 826]

MAY 2017

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Elaborate on the aims and applications of pharmacoepidemiology with suitable example.
2. Discuss in detail about quantitative models used in pharmacoepidemiology.
3. Write in detail about various software's used for pharmacoeconomic analysis.
4. Explain in detail about cost minimization analysis and its significance.

II. Write notes on:

(6 x 5 = 30)

1. Write a brief note on cost utility analysis.
2. Describe about time risk relationships with suitable examples.
3. Write a note on Ad hoc case control and randomized studies.
4. Write a note on applications of pharmacoeconomic studies.
5. Describe the various outcome measures of drug use.
6. List various types of Bias involved in pharmacoepidemiology.

[LL 826]

OCTOBER 2017

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code: 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Write the applications of pharmacoeconomics with respect to case based studies.
2. Discuss on cost effectiveness and cost benefit analysis.
3. Write on record linkage studies.
4. Discuss about the pharmacoepidemiological data bases.

II. Write notes on:

(6 x 5 = 30)

1. Prevalence, incidence and incidence rate.
2. Role of pharmacoeconomics in formulary management.
3. Drug use measures in terms of units of use.
4. Spontaneous reporting.
5. WHO programme for ADR reporting.
6. Difference between Cohort study and Case-Control study.

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

[LM 826]

MAY 2018

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain case control and cohort studies. What are the advantages and disadvantages of case control and cohort studies?
2. Write a detailed note on Spontaneous reporting system.
3. Write a note on hospital pharmacoepidemiology.
4. Discuss the types of pharmaco-economic evaluations.

II. Write notes on:

(6 x 5 = 30)

1. Softwares in pharmaco-economics.
2. Automated data bases.
3. Various types of risk in Pharmacoepidemiology.
4. Drug utilization review.
5. Outcome measure in pharmacoepidemiology.
6. Case reports.

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[LN 826]

OCTOBER 2018

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMOLOGY AND PHARMACOECONOMICS**

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Describe the types of pharmaco-economic evaluations and their significance.
2. Explain the various designs used in pharmaco-epidemiological studies.
3. Discuss the steps involved in drug utilization review and its significance.
4. Differentiate prevalence, incidence and incidence rate.

II. Write notes on:

(6 x 5 = 30)

1. Define cross-sectional and cohort studies with an example.
2. Write about time-risk relationship of pharmaco-epidemiology.
3. Write about prescription event monitoring.
4. Define attributable risk and relative risk.
5. Origin of pharmaco-epidemiology.
6. Write about units of drug dispensed.

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

[LO 826]

MAY 2019

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Role of pharmacoeconomics in formulary management decision.
2. Discuss briefly about positive and negative outcomes of pharmacoepidemiological studies.
3. Explain how softwares are useful in conducting pharmacoeconomic studies and list out the softwares that are available.
4. Discuss prescription event monitoring and record linkage with its merits, demerits and its applications.

II. Write notes on:

(6 x 5 = 30)

1. Write note on drug induced birth defects.
2. Adverse drug reaction reporting system in India.
3. Define pharmacoepidemiology and write its applications.
4. Describe Ad Hoc data sources and automated data systems.
5. Define daily dose and prescribed daily dose.
6. Write note on risk management in pharmacoepidemiology.

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[LP 826]

OCTOBER 2019

Sub. Code: 3826

**PHARM. 'D' AND PHARM. 'D' (POST BACCALAUREATE)
DEGREE EXAMINATION
(2009-2010 Regulation)
FIFTH YEAR
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain in detail about randomized studies and their application in pharmacoepidemiological studies.
2. Discuss in detail on the criteria for pharmacoeconomic study.
3. Explain about cost effective analysis and its application in pharmacoeconomics.
4. Explain the methods available for studying drug effects in humans.

II. Write notes on:

(6 x 5 = 30)

1. Write a note on record linkage system and post marketing surveillance.
2. Describe the role of pharmacist in drug utilization evaluation (DVE) studies.
3. Write a note on attributable risk and relative risk with suitable examples.
4. Describe the methods to estimate indirect cost.
5. Write a brief note on limitations of pharmacoeconomic studies.
6. Describe the advantages and disadvantages of cost benefit analysis.

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

[PHARMD 0321]

MARCH 2021

Sub. Code: 3826

(OCTOBER 2020 EXAM SESSION)

PHARM. 'D' (POST BACCALAUREATE) DEGREE EXAMINATION

FIFTH YEAR (2009-2010 Regulation)

PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain the merits and demerits of Cohort and Case control studies.
2. Describe the types of Pharmacoeconomics evaluations.
3. Explain the role of Pharmacoeconomics in formulary management decision.
4. Discuss the significance and steps of drug utilization review.

II. Write notes on:

(6 x 5 = 30)

1. Define Odds ratio, Relative Risk and Attributable Risk.
2. Write a note on cost minimization analysis.
3. Write about the various types of costs in Pharmacoeconomics.
4. Write a note on Outcome measures in Pharmacoepidemiology.
5. Write a note on prescription event monitoring.
6. The importance of Meta-Analysis.

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

[PHARMD 0122]

**JANUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 3826

**PHARM 'D' AND PHARM. 'D' (POST BACCALAUREATE) DEGREE EXAMINATION
FIFTH YEAR (2009-2010 Regulation)
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS
*Q.P. Code : 383826***

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Discuss the Ad Hoc data sources for pharmacoepidemiological studies.
2. Discuss the various methods of pharmaco-economic evaluation.
3. Explain about pharmacoepidemiology & risk management.
4. Enumerate the drug use measures in pharmacoepidemiology.

II. Write notes on:

(6 x 5 = 30)

1. Define case report, case series, case control, cohort studies with examples.
2. Write a note on record linkage studies.
3. Write a note on measurement of risk and relative risk.
4. Define cross sectional study, what are its advantages and disadvantages.
5. Write a note on Spontaneous reporting.
6. Define ICER, ACER and the formulas for calculating.

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

[PHARMD 0522]

MAY 2022

Sub. Code: 3826

(APRIL 2022 EXAM SESSION)

PHARM 'D' AND PHARM 'D' (POST BACCALAUREATE) DEGREE EXAMINATION

FIFTH YEAR (2009-2010 Regulation)

PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Q.P. Code : 383826

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Define the term Pharmacoeconomics and the need for Pharmacoeconomics in Indian scenario.
2. Define pharmacoepidemiology, its origin, evolution and need of pharmacoepidemiology.
3. Explain the various study designs in pharmacoepidemiology.
4. Explain cost benefit analysis with the help of a case study.

II. Write notes on:

(6 x 5 = 30)

1. Role of Pharmacoeconomics in Formulary management decision.
2. Write a note on medication adherence measurement.
3. Write a note on applications of Software in Pharmacoeconomics.
4. Define the terms efficacy & effectiveness and positive & negative outcomes.
5. Differentiate between experimental & non experimental studies with examples.
6. The importance of Meta-Analysis.

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

[PHARMD 1122]

**NOVEMBER 2022
(OCTOBER 2022 EXAM SESSION)**

Sub. Code: 3826

**PHARM 'D' AND PHARM 'D' (POST BACCALAUREATE) DEGREE
EXAMINATION
FIFTH YEAR (2009-2010 Regulation)
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS
*Q.P. Code : 383826***

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Discuss the description, strength and weakness of automated databases. Write about Group health co-operative data base.
2. Elaborate the significance of Evidence based Medicines.
3. Enumerate the Steps in Drug Utilization Review.
4. Define ADR. Explain Spontaneous reporting system.

II. Write notes on:

(6 x 5 = 30)

1. Write note on defined daily doses.
2. Give the applications of Pharmacoeconomics.
3. Prevalence, Incidence and Incidence rate.
4. Write note on Cost Minimization Analysis.
5. Applications of Nomograms in Pharmacoepidemiology.
6. Outcome measure in Pharmacoepidemiology.

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

[PHARMD 0423]

APRIL 2023

Sub. Code: 3826

**PHARM. 'D' (POST BACCALAUREATE) DEGREE EXAMINATION
FIFTH YEAR (2009-2010 Regulation)
PAPER II – PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS**

Q.P. Code: 383826

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Write a note on hospital pharmacoepidemiology.
2. Discuss the types of pharmacoeconomic evaluations.
3. Explain the importance of Vaccine safety studies.
4. Enumerate the Various software's used in Pharmacoeconomics.

II. Write notes on:

(6 x 5 = 30)

1. Explain the Pharmacist role in Drug utilization review.
2. Various types of risk in Pharmacoepidemiology.
3. Write note on drug induced birth defects.
4. Adverse drug reaction reporting system in India.
5. Write note on Record Linkage system.
6. Define pharmacoeconomics and discuss the need of pharmacoeconomic evaluations.
