

P.R.GOV.T. COLLEGE (AUTONOMOUS), KAKINADA.
I B.SC, ACTUARIAL SCIENCE/FIRST SEMESTER (w.e.f 2020-21)
COURSE-I
COURSE TITLE: BASICS OF BUSINESS ECONOMICS

Total Hrs. of Teaching-Learning:75 @ 6 h/Week

Total Credits:05

UNIT – I (12 Hours)

Nature and scope of economics – Methodology in economics – Concepts of Demand and Supply – Elasticity of demand – price, income, cross.

UNIT – II (12 Hours)

Cardinal and Ordinal approaches – Law of Diminishing Marginal utility – Indifference curve – Consumer's equilibrium– Consumer surplus

UNIT – III (12 Hours)

Market forms – Perfect and Imperfect Markets –Features of various markets – Monopoly, Monopolistic Competition, Oligopoly – Notion of Controlled and Administered prices.

UNIT – IV (12 Hours)

Concepts of Payback period – Average Annual Rate of return – Net Present Value – Internal Rate of Return criterion – Elements of Social Cost Benefit analysis

UNIT – V (12 Hours)

National income and social accounts – concept and measurement of national income – Introduction to Macro Economic policy and Money and monetary institutions.... RBI, Commercial banks – Concept of Insurance, Stock exchanges, SEBI, IRDA. Nature, characteristics and phases of Trade cycles – Control of Trade Cycles.

Co-Curricular Activities (15 Hours):

Problem Solving / Seminars / Assignments /Quiz /Group Discussions /Open Text Book Test
/Oral test /Brain Storming

Text Books:

1. A. Koutsoyiannis, Modern Microeconomics – Macmillan, London.
2. A. W. Stonier and D.C. Hague, A Text book of Economic Theory - ELBS & Long man Group, London.
3. P. N. Chopra, Macroeconomics, Kalyani Publishers, Ludhiana, 2014

Reference Books:

1. CT-7 study material of Institute of Actuaries of India
2. Ackley (1976) Micro Economics – Theory and policy, Macmilan publishing company, Newyork.
3. Gupta S.B(1994), Monetary Economics, S.Chand& Co., New Delhi.4. Heijdra B.J. and F.V.Ploeg (2001) Foundations of Modern Economics, Oxford university Press, Oxford.
4. Telugu Academy Publications on Microeconomics.
5. Microeconomics, Spectrum Publishing House, Hyderabad, 2017.
6. Macroeconomics, Spectrum Publishing House, Hyderabad, 2016
7. Central Statistical Organization, National Accounts Statistics.

P. R.GOV'T. COLLEGE (AUTONOMOUS), KAKINADA
MODEL BLUE PRINT FOR THE YEAR 2020-21
I B.SC (MSAS) Course-I
Course Title: Basics of Business Economics

SEMESTER-I

Model Blue print for the question paper setter

Max. Marks :60

Time : 2 ½ Hrs.

UNIT	Essay Questions 10 Marks	Short Questions 5 Marks	Marks allotted to the chapter
I	02	01	25
II	02	01	25
III	01	01	15
IV	02	02	30
V	01	01	15
Total Marks Including choice	08	06	110

I YEAR /I Sem B.Sc. (MSAS) Course – I
Basics of Business Economics
Question Bank

Short Questions:

1. Deductive method.
2. Inductive method.
3. Income Elasticity
4. Cross Elasticity
5. Cardinal utility
6. Ordinal utility
7. Consumer Surplus
8. Types of Markets
9. SEBI
10. GIC
11. LIC
12. Features of Trade Cycles.

Essay Questions:

13. Define economics and explain its scope.
14. Define Law of Demand and explain exceptions to law of demand.
15. Define Price Elasticity of Demand and Explain methods to measure price elasticity.
16. Critically examine law of Diminishing marginal utility.
17. Critically examine law of Equi-marginal utility.
18. Explain properties of Indifference curves.
19. Explain how consumer attain equilibrium with I_c ?
20. Explain features of perfect competition.
21. Explain features of Monopoly.
22. Explain features of Monopolistic competition.
23. Explain features of oligopoly.
24. Explain elements of social cost benefit analysis.
25. Define national income and explain methods to measure national income.
26. Explain various concepts of national income.
27. Explain the functions of Commercial Banks.
28. Explain the functions of RBI.
29. Explain phases of Trade cycles.

P.R.GOV.T.COLLEGE (AUTONOMOUS), KAKINADA
MODEL PAPERS FOR THE YEAR 2018-2019
I YEAR B.Sc. (MSAS) Course – I
MODEL PAPER
Basics of Business Economics

Time : 2½ Hrs.

SEMESTER-I

Max. Marks: 60

SECTION-A

Answer Any Four Questions

(4x5=20M)

1. Nature of Economics
2. Deductive Method
3. Cardinal and Ordinal approaches
4. Consumer's surplus
5. Controlled and Administered Prices
6. Macro –Economic policy

SECTION-B

Answer ALL of the following Questions

(4x10=40M)

7. A) Explain the theory of demand and its exemptions?
(or)
B) Explain the law of Diminishing Marginal Utility
8. A) Bring out the system of first equilibrium in the short run as well as in the long run in the perfect competitive market?
(or)
B) Explain the functions of RBI
9. A) Explain the concept of cost benefit analysis and element in social cost benefit analysis?
(or)
B) Explain the Definitions of National Income and its measurement methods?
10. A) Explain the concept of National Income
(or)
B) Explain the phases of trade cycles

P.R.GOV.T. COLLEGE (AUTONOMOUS), KAKINADA.
I B.SC, ACTUARIAL SCIENCE/SECOND SEMESTER (w.e.f 2020-21)
I B.SC, (MSAS) - COURSE - II
Title: BASICS OF FINANCIAL MATHEMATICS
SEMESTER - II
Total Hrs. of Teaching-Learning:75 @ 6 h/Week Total Credits:05

UNIT – I (12 Hours)

Simple and Compound interest, Compound interest tables, Present Value, Normal and Effective rates of interest, Effective rate corresponding to a nominal rate and Vice-Versa, Discount and Discounted value, Varying rates of interest, Equation of Value, Equated time of payment.

UNIT – II (12 Hours)

Repayment of loan by uniform installments when the frequency of installments is the same as that with which interest is convertible, Repayment of loan by uniform installments consisting of both interest and principle repayment, when the frequency of installment is different from that with which interest is convertible, Redemption of Loans by a sinking fund, Lender's sinking fund, Further consideration on redemption of loan, Capital redemption policies, Office premiums, Surrender Value.

UNIT – III (12 Hours)

Nominal and Effective rates of Discount, Average interest yield on the life fund, Money weighted rate of return, Time weighted rate of return and linked internal rate of return,.

UNIT – IV (12 Hours)

Column l_x , Column d_x , Column q_x , Column p_x , The probabilities of survival and death, Stationary population, L_x , T_x , Curtate expectation of life, Complete expectation of life, Central death rate M_x , Selection and select rates, Ultimate table, Aggregate table. Construction of Mortality tables, Stages involved in construction of mortality table, The data to be used, Period of investigation, Unit of investigation, The method of investigation, Census method, application of census method to life office data, Determination of exposed to risk and deaths.

UNIT – V (12 Hours)

Life Assurance premiums-General Considerations, Assurance benefits-Pure Endowment assurance, Endowment assurance, Temporary Assurance or Term assurance, Whole life

Assurance, Double Endowment assurance , Increasing Temporary Assurance, Increasing Whole life Assurance, Commutation functions D_x , C_x , M_x , and R_x , Expressions for present values of assurance benefits in terms of Commutation functions, Fixed term (Marriage) Endowment, Educational annuity plans

Co-Curricular Activities (15 Hours):

Problem Solving / Seminars / Assignments /Quiz /Group Discussions /Open Text Book Test /Oral test /Brain Storming

Text Books:

1. An Introduction to Mathematics of finance by J.J.McCUTCHEON and W.F.SCOTT

Reference Books:

1. Actuarial Mathematics by Bowers Gerber Hickman Jpmes Nesbitt

BLUE PRINT FOR THE QUESTION PAPER SETTER

PAPER - BASICS OF FINANCIAL MATHEMATICS

(FOR I B.Sc ACTUARIAL SCIENCE) SEMESTER-II

Max. Marks: 60

Time: 2 ½ Hours

CHAPTER NAME	ESSAY QUESTIONS 10 MARKS	SHORT QUESTIONS 05 MARKS	MARKS ALLOTTED TO CHAPTER
I. Unit –I	02	01	25
II. Unit – II	02	01	25
III. Unit –III	01	01	15
IV. Unit –IV	02	02	30
V. Unit –V	01	01	15
TOTAL MARKS INCLUDING CHOICE	08	06	110

BASICS OF FINANCIAL MATHEMATICS
SEMESTER-II
QUESTION BANK

Short Questions:

1. Explain effective rate corresponding to a nominal rate and vice-versa.
2. Write a short note on varying rates of interest?
3. A promises to pay B a sum of Rs.200 at the end of 3 years and another Rs.400 at the end of 5 years from now. What immediate cash payment should B accept instead of the above payments, if interest is calculated at 5% p.a.?
4. Find the effective rate p.a. corresponding to the nominal rate of 8%p.a. convertible quarterly.
5. Explain the repayment of loan by uniform installments ?
6. Explain redemption of loans in detail?
7. Explain redemption of loans by a sinking fund?
8. Explain capital redemption policies and office premium?
9. Explain the probability of survival ?
10. Define stationary population?
11. Explain section and select rates?
12. Define aggregate tables & ultimate tables?
13. Explain pure endowment assurance & temporary assurance?
14. Write a short note on mortality table?
15. Define life Assurance premiums and its benefits?

Essay Questions:

1. What is a actuarial present value ? and explain the relation ship between effective rate and nominal rate with their equations?
2. Explain redemption of loans by a sinking fund and lender's sinking fund?
3. Explain nominal and effective rates of discount and average interest yield on the life fund?
4. Write about money weighted rate of return with their advantages & disadvantages?
5. Write about time weighted rate of return with their advantages & disadvantages
6. Write about the Stages involved in construction of mortality table explain briefly ?

7. Explain in brief about the curtate expectation of life and complete expectation of life?
8. What is period of investigation? how Census method is applicable to life office data, ?
9. What are different types of assurance and explain the double endowment assurance ?
10. Explain pure endowment and temporary endowment assurance?
11. Define commutation functions and also explain in briefly?
12. Explain the present values of assurance and its benefits in terms of Commutation functions?

P.R.GOVERNMENT COLLEGE(AUTONOMOUS), KAKINADA
MODEL PAPERS FOR THE YEAR 2020-21
I YEAR B.Sc. (MSAS) Course – II
MODEL PAPER
BASICS OF FINANCIAL MATHEMATICS
SEMESTER-II

TIME: 2 ½ Hrs

Max. Marks: 60

SECTION-A

Answer **Any Four** questions

4X5=20 M

1. Explain the normal and effective rate of interest?
2. Explain the repayment of loan by uniform installments ?
3. Explain the capital redemption policies?
4. Explain select and ultimate life table?
5. Write a short note on mortality table?
6. Define life Assurance premiums and its benefits?

SECTION-B

Answer any **TWO** of the following

2X10=20M

7. What is a actuarial present value ? and explain the relation ship between effective rate and nominal rate with their equations?
8. Explain redemption of loans by a sinking fund and lender's sinking fund?
9. Explain office premiums, Surrender Value.?
10. Explain nominal and effective rates of discount and average interest yield on the life fund?

SECTION-C

Answer any **TWO** of the following

2X10M=20M

11. Explain in brief about the curtate expectation of life and complete expectation of life?
12. What is period of investigation? how Census method is applicable to life office data, ?
13. What are different types of assurance and explain the double endowment assurance ,
14. Explain the present values of assurance and its benefits in terms of Commutation functions?