The PhD entrance examination would have two different question papers: one for students with Economics background and another for students with Non-Economics background. Students should exercise their preference while appearing for the PhD Entrance Examination. The Details of the syllabi are given below:

I. ECONOMICS BACKGROUND APPLICANTS

1.1 MACROECONOMICS

- National Income Accounting Methods
- Classical Model, Keynesian Model, IS-LM Model, Fiscal and Monetary Policies
- Solow Growth Model
- Inflation, Index Numbers
- Exchange Rate Systems
- Balance of Payments Account
- Keynesian Multipliers in an Open Economy
- Structural Reforms
- Indian Money Market and RBI’s Monetary Policy

Suggested readings:

1.2 MICROECONOMICS

- Consumer Behaviour
- Production and Costs
- Markets – Perfect Competition, Monopoly, Monopolistic Competition, Oligopoly
- Theory of Distribution/ Theory of Factor Markets

Suggested readings:
- Anna Koutsoyiannis. *Modern Microeconomics. 2nd ed*. Macmillan India Limited

1.3 MATHEMATICS, STATISTICS & BASIC ECONOMETRICS

- **Matrix Algebra**: Vectors and matrices, matrix operations, determinants.
- **Calculus**: Functions, limits, continuity, differentiation of functions of one or more variables. Unconstrained optimization, definite and indefinite integrals, integration by parts and integration by substitution.
- **Constrained and Unconstrained Optimization**: First and Second order conditions.
• **Statistics:** Elementary probability theory, conditional probability, Bayes’ theorem, probability distributions – Binomial, Poisson, Uniform and Normal, measures of central tendency, skewness, kurtosis, dispersion, correlation and regression

• **Econometrics:** Assumptions of the CLRM and properties of the estimators, OLS, Gauss Markov theorem, Violations of CLRM assumptions (detection & remedies).

**Suggested readings:**

II. **NON-ECONOMICS BACKGROUND APPLICANTS**

1. **BASIC ECONOMICS**
   - Demand and Supply, Concept of Elasticity, Movement along the curve versus shift of the curve
   - Basic Utility Theory, Indifference Curves
   - Production Function, Average Cost, Marginal Cost, Short run, Long run cost curves
   - Perfect Competition and Monopoly
   - National Income (GDP, GNP) and multipliers, inflation, price index number

**Suggested readings:**

2. **MATHEMATICS AND STATISTICS**
   - **Matrix Algebra:** Vectors and matrices, matrix operations, determinants.
   - **Calculus:** Functions, limits, continuity, differentiation of functions of one or more variables. Unconstrained optimization, definite and indefinite integrals, integration by parts and integration by substitution.
   - **Constrained and Unconstrained Optimization:** First and Second order conditions.
   - **Statistics:** Elementary probability theory, conditional probability, Bayes’ theorem, measures of central tendency, skewness, kurtosis, dispersion, correlation and regression (assumptions of the CLRM and properties of the estimators), OLS, Gauss Markov theorem, probability distributions – Binomial, Poisson, Uniform and Normal.

**Suggested readings:**