

M.A./M.Sc. 2nd Semester Examination, 2023

ECONOMICS

PAPER – ECO-202

(Theories of Economic Growth)

(Old and New Syllabus)

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

GROUP—A

1. Answer any *two* of the following questions : 2×2
 - (a) Interpret the fundamental equation of Solow growth model.
 - (b) What are the determinants of growth in Robinson's model ?

(Turn Over)

(c) What are the important features of limping golden age ?

(d) State and interpret the Inada conditions.

2. Answer any *two* of the following questions : 4×2

(a) Distinguish between Harrod-neutral and Hicks-neutral technical progress. Illustrate the concept of the capital augmenting technical progress.

(b) What is golden age equilibrium ? Explain whether this equilibrium is stable or not.

(c) Estimate the share of profit and wage after correction made by Pasinetti.

(d) Briefly explain the transitional dynamics and steady state situation in Solow growth model.

3. Answer any *one* of the following questions : 8×1

(a) Illustrate the concept of absolute convergence and relative convergence.

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- (b) Explain the Robinson's growth model from income and expenditure points of views. Interpret the equilibrium condition of this model.

6 + 2

GROUP-B

4. Answer any *two* of the following questions : 2×2

- (a) Calculate the growth rate of real per capita income for the year 2023 if the nominal aggregate income for 2022 and 2023 are respectively Rs. 100000 and Rs. 110000, rate of increase in general price level is 4.5 % per annum, and population growth rate is 1.5% per annum.

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- (b) Define Learning by Doing and Learning by Investing in the context of endogenous growth theory.

2

- (c) Write down the expression of household's total budget constraint in the Ramsey model. Derive the households' budget constraint in per capita terms.

1 + 1

(d) What is Knowledge Capital ? Mention its different types. 1 + 1

5. Answer any *two* questions : 4 × 2

(a) Explain the Solow Growth Accounting System using a general production function incorporating two inputs-labour and capital, and an exogenous technological progress term with α and β as the respective shares of labour payment and capital payment. 4

(b) Discuss how the introduction of human capital into the production activity makes perpetual positive growth rate of income. 4

(c) Define Conservation Capital. Mention three advantages of producing conservation capital. 1 + 3

(d) What are the differences between a Cobb-Douglas production function and an AK type production function in terms of returns to capital, returns to scale and output elasticity of capital ? 4

6. Answer any *one* of the following questions : 8×1

- (a) Using an intertemporal utility function derive the expression of rate of growth of per capita consumption expenditure in Ramsey model under a decentralised system. 8
- (b) Discuss how the incorporation of good public system helps in generating positive growth of per capita consumption in the long run in the absence of variable income tax. What will happen to the result if a proportional income tax is levied upon the households and firms ? 6 + 2
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