

M.A. Examination, 2023
Semester-IV
Economics
Course: OP-16 (Optional)
(Modern Growth Theory)

Time: 3 Hours

Full marks: 40

Questions are of value as indicated in the margin.

Answer **any four** from the following questions

1. What is "Knife-edge instability" problem? What solution is prescribed by Cambridge school to tackle this problem?
3+7
2. In the Solow model, how does the saving rate affect the steady state level of capital? How can one determine the optimal level of savings rate in this case?
3+7
3. What will be the consequences of introducing human capital in Solow model.
10
4. What will be the effect of introducing proportional consumption tax replacing proportional income tax in Barrow (1990) model? Explain the steady state properties in this modified Barrow (1990) model.
7+3
5. What will be the impact of introduction of durable public goods in place of perishable public good in Barrow (1990) model?
10
6. In the context of Arrow Model (1962), show model that competitive market equilibrium is Pareto inefficient.
10

7. Derive the results of the Green Solow model about steady-state equilibrium and optimum abatement rate when the utility function is given by

$$u(C, E) = \frac{(C^\mu E^{1-\mu})^{1-\sigma} - 1}{1-\sigma}, \text{ where notations have their usual specifications.}$$