Time: 3 Hours

Full marks: 40

Questions are of value as indicated in the margin.

Answer **any four** from the following questions

1. In the Solow model, how does the saving rate affect the steady state level of capital? How can one determine optimal level of savings rate in this case?

   3+7

2. What is the difference between Endogenous Technical Progress and Exogenous Technical Progress? Explain different types of Exogenous Technical Progress. Which type of Exogenous Technical Progress is consistent with stability of steady state? Explain in detail.

   2+3+5

3. Consider a two country Solow model with perfect international capital mobility and analyse the stability problem of the long run equilibrium.

   10

4. Show that the long-run equilibrium is a saddle point in the Ramsey-Solow model.

   10

5. What will be the impact of introduction of durable public goods in place of perishable public good in Barro (1990) model?

   10

6. Show in the context of Arrow Model (1962) that competitive market equilibrium is Pareto inefficient.

   10

7. In a Green Solow Model, show that growth rate of consumption depends on growth rate of environmental quality with utility function

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

but growth rate of consumption does not depend on growth rate of environmental quality with utility function

$u(C, E) = \frac{\theta_1 C^{1-\sigma} + \theta_2 E^{1-\sigma}}{1-\sigma}$.

2+3+5