

**RESEARCH DEGREE PROGRAMME IN
ECONOMICS**

Term-End Examination

December, 2018

00473

REC-102 : ECONOMIC THEORY

Time : 3 hours

Maximum Marks : 100

Note : *Answer questions from each section as directed.*

SECTION A

Answer any two questions from this section. 2×20=40

1. Describe the Ramsey–Cass–Koopmans set-up of inter-temporal optimisation. Explain how the Ramsey–Cass–Koopmans model can be extended to set up a Real Business Cycle model.
2. Consider the utility function $u = q_1^\alpha q_2^\beta$. Let prices be p_1 and p_2 and income be m .

Derive

- (a) The indirect utility function
- (b) The expenditure function
- (c) Test the expenditure function and indirect utility function through Roy's identity and Shephard's lemma.

3. State the Arrow Impossibility Theorem. Sketch a proof, giving the assumptions carefully.

4. State Walras's Law. Sketch a proof of the existence of equilibrium prices in the case of general equilibrium under pure exchange, making the relevant assumptions.

SECTION B

Answer any five questions from this section

5×12=60

5. Discuss the determination of equilibrium unemployment in search-theoretic models.
6. Describe static decision-making by rational individual under uncertainty, stating clearly the objects of choice.
7. (a) State and prove Hotelling's Lemma.
(b) Use the Envelope Theorem to derive conditional input demand function.
8. Explain the structure of a general auction. What do you understand by 'Winner's curse'?
9. Discuss the New Keynesian approach to macro-economics. Bring out its differences from the Standard Keynesian approach. In what way is the New Keynesian approach similar to the New Classical approach?

- 10.** Explain the concept of Nash equilibrium. How is this concept refined to obtain the relevant equilibrium pertinent to Cournot Duopoly under incomplete information ?
- 11.** Explain the following concepts :
- (a) Characteristic function
 - (b) Core
- 12.** Explain
- (a) Adverse Selection
 - (b) Signalling
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