Ex/PG/ECO/37/63/2017

MA 2ND YEAR 3RD SEMESTER 2017

RESOURCE ECONOMICS

TIME TWO Hours | Full Marks 30

Answer any ***three***

1. How is an exhaustible resource different from ordinary good? What are the optimality conditions of extraction of exhaustible resource by a social planner? Using these conditions show the behavior of price overtime under the following cost conditions:

(i) extraction is costless.

(ii) extraction cost is constant.

(iii) $C = C(X, y), C_X < 0, C_y > 0, C_{Xy} < 0.$

(iv) $C = yC(X)$

2+2+2+2+2

2. Show that a resource industry, extracting and supplying exhaustible resource, exhausts its reserve more quickly than monopoly but less rapidly than the competitive industry. 7+3

3. Elaborate the different aspects of logistic growth curve of a renewable resource. Define Schafer Production function. Using logistic growth curve and Schafer Production function, show both the biological and economic equilibrium. Show the relationship between effort and the catch under different stock level. 4+2+2+2

[Turn over

4. Derive the fundamental equation of common property problem. In what sense the market based equilibrium allocation of vessels will be too excessive? Shortly discuss the following as optimum regulations of common property:

(i) privatization

(ii) pure quota system

(iii) Pure licensing system

(iv) Pure tax system. 6+4

Q5. One form of sustainability is intergenerational equity of consumption. Show how this intergenerational equity can be achieved? What happens to consumption path if there is depreciation of reproducible capital? 7+3