Ex/UG/ECO/4.2/63/2017

BACHELOR OF ARTS EXAMINATION, 2017

(2nd Year, 4th Semester)

ECONOMICS (HONOURS)

MACROECONOMICS II

Time : Two hours Full Marks : 30

Answer any two from the following questions

1. Consider the following information regarding an economy: $Y = K^{0.5}L^{0.5}$, $S = 0.2Y$, $I = 2000/r$, $L_{s0} = 100$, $K_0 = 10000$, $d = 0$, where L_{s0} and K_0 denote labour supply and capital stock at the point of time 0 and d denotes depreciation. It is also given that labour supply grows at the rate of 20 percent per unit of time. Assume that the classical theory holds good in the given economy. In the light of the given information, answer the following questions:

Derive the interest rate and consumption in the given economy at the point of time 0. Derive the equilibrium values of $(W/P)_t$, r_t and the growth rates of capital and output. How will equilibrium values of $(W/P)_t$, r_t and the growth rates of capital and output behave over time from t=0 onward? Illustrate your answer using diagrams. [15]

2. Consider Tobin's portfolio choice model of speculative demand for money. Suppose the individual's given wealth W_0 = Rs.1000, his utility function in risk and return is $U = R - o.5\rho^2$, the mean and standard deviation of g are 0 and 0.1 respectively. The interest rate r = 0.1. How will the individual allocate his given wealth between money and the risky asset? How will his allocation change due to substitution effect alone following an increase in r from 0.1 to 0.2?

[10+5=15]

3. Suppose an individual's salary of Rs.8,000 gets deposited in his bank account on the first day of every month. His monthly expenditure is also Rs.10,000. To carry out his expenses, he withdraws a given amount of money, Rs.C, at regular intervals. He has to pay a fee of Re.1 per withdrawal, whatever be the sum withdrawn. Interest rate prevailing in the market is 0.1. Derive the optimum value of C. Illustrate your answer in a diagram. How will your answer change, if the withdrawal fee is raised from Re.1 to Rs.8? Explain your answer using a diagram. [9+6=15]