Indian Statistical Institute, Bangalore

B. Math (Hons.) Third Year
First Semester - Economics I

Final Exam   Date: November 22, 2018
Maximum marks: 50 (one mark for neatness)

1. Write True or False   [0.5 x 10 = 5]

a) Okun's Law is related to Unemployment and GDP.
b) M1 is a measure of broad money.
c) Agriculture is part of the primary sector.
d) Frictional unemployment is associated with recession.
e) Phillips curve necessarily requires that an economy is not operating at full employment output.
f) Expansionary fiscal policy shifts the IS curve leftward (or upward).
g) Stagflation means a situation with high unemployment and low inflation.
h) Change in Inflationary Expectations doesn't have any impact on AS curve.
i) Efficiency wage is the Minimum Wage in an Economy.
j) Tertiary sector is the sector with highest share of employment in India.

2. One mark each   [1 x 4 = 4]

a) What is the difference between Real and Nominal GDP?

 b) In an economy, Nominal GDP in 2016 is given as Rs. 100 Billion and the price level is Rs 100. In 2017, Real GDP becomes, Rs 15 Billion. What is the growth rate in Real GDP between 2016-2017?

c) State one difference between Gross Domestic Product and Net Domestic Product.

 d) Suppose in an Economy, gross fixed capital stock is Rs 150 Billion. With a rate of depreciation of 2%, what will be the worth value of Net fixed capital stock?

3.   [1 + 1 + 2 +1 +2 = 7]

a) In an economy, the total population is 1000. The numbers of adults (above age 15) are 700. Out of that 200 are students in colleges and universities. The total number of employed persons are 300. What is the rate of unemployment in the economy?

b) State one difference between structural and frictional unemployment.

c) State one reason how efficiency wage can create unemployment in the economy.

d) The Phillips Curve is a relationship between X and Y. Fill in.

e) What is wage-productivity gap?

Questions 4 - 11, refer to the same Economy.   [3 + 2 + 4 +4 +2 + 3 + 2 + 4 = 24]

4. An economy has a consumption function C= 300+ 0.5 (Y-T). Investment is given as 100 units and government expenditure and taxes are both 50 units.

a) What is Marginal Propensity to save in the Economy?

b) If government expenditure increases to 75 units and taxes decline by 25 units, what will be change in Y?

5. If Investment function changes to I= 250-25r, r is the rate of interest. Is there any change in government multiplier? If yes, what is the extent of change?

6. Write the IS curve equation for the economy and draw IS curve for r=0 to 5 interval.

7. If government introduces two changes. Tax becomes proportional tax to income, that is T=tY, where t=0.5. Secondly, it increases government expenditure by 200 units. How will these two changes have an impact on IS curve? Write the exact magnitude of change in IS curve.

8. Suppose now, the money demand function is given by $(M/P)^d$= Y-50r. If money supply (M) is fixed at 1000 and price level (P) is 20. What is the equilibrium relation for pair of Y and r?

9. Write the LM curve equation and draw LM curve for r=0 to 5 interval.

10. Now central bank introduces one change in the money supply. M is reduced to 900. Given the same P, what would be the new LM curve equation?

11. Let's assume the economy is an open economy now. Exports (X) are 300 units and Imports are given by M=25+0.2Y. What is the new government budget multiplier for the economy? If the economy increases exports by 50 units what will be change in Y?

12. What is Balance of Payments? What is Foreign Direct Investment?   [1 + 1 = 2]

13. What is the impact of depreciation of currency on an economy's import? What will be impact of depreciation on aggregate demand?   [1 + 2 = 3]

14. If technological improvement happens in an economy. How that would shift the AS curve and give a reason.   [2]

15. Explain why: [1 + 1 = 2]

a) If inflationary expectations increase, money supply should be reduced.

b) If unemployment is high, government spending should be increased.