BACHELOR OF ARTS EXAMINATION, 2023

(2nd Year, 1st Semester)

ECONOMICS

[MACROECONOMICS BI]

Time : Two Hours Full Marks : 30

Answer any ***two*** questions.

1. (a) Suppose the economy is characterised by the following behavioural equations :

$$C = c_0 + c_1 Y_D$$

$$Y_D = Y - T$$

$$I = b_0 + b_1 Y$$

Government spending and taxes are constsnt. (All symbols have their usual meaning)

(i) What is the value of the investment multiplier? Under what condition the value of the multiplier is positive?

(ii) Suppose that consumers decide to consume less (and therefore to save more) for any given amount of disposable income. Specifically, assume that consumer confidence (c_0) falls. What will happen to output? (Use appropriate derivation).

(iii) Suppose households attempt to save more, so that consumer confidence falls. In an IS-LM diagram, show the effect of the fall in consumer confidence on output and interest rate. How does your answer differ from that of part(ii)?

(b) Consider the following function related to IS-LM model.

$S = -500 + 0.2(Y-T) + 100r$

$I = 100 + 2Y - 80r$

$T = 300$; $G = 300$

$M/P = 0.5Y - 200r$

$P = 1$

$M = 500$

(All symbols have their usual meaning)

(i) What is the equilibrium value of income (Y) and interest rate(r)?

(ii) Suppose Central Bank increases money supply directly by open market operations. Derive and explain, how will that intervention affect the income and interest rate?

(iii) Do you find any paradoxical result in part (ii)? Explain using proper justification. 2+2+3+3+3+2

2. (a) Why might Keynesians be pessimistic about the ability of monetary policy to stimulate output in situations such as the 1930s Depression in the

(ii) Will the AD become more or less elastic if the slope of the investment function changes to-200?

(iii) Find out the government expenditure multiplier in terms of the slope of the AD and AS curves.

(b) State whether the following statements are true or false or uncertain.

(i) If government spending and taxes increase by the same amount, the IS curve does not shift.

(ii) Depreciation of nominal exchange rate can always improve current account balance.

(iii) The wages earned by a German worker working in a firm in Maharashtra contributes to the GDP of Germany and GNP of India. (4+2+3)+(2+2+2)

United States or the recessions in Japan in the 1990s? What type of policy would Keynesian economist expect to be effective in such situations?

(b) Consider the aggeregate supply curve for an economy given by

$$P_t = P_t^e(1+\mu)F(ut, z)$$

Where P_t = actual price level at time period t; P_t^e = expected prices at time t; and the function, F, given by,

$$F(u_t; z) = 1 - \alpha\mu_t + z$$

captures the effect of the unemployment rate (ut) at time t and the level of unemployment benefits (z) on the price level (through their effects on wages). Assume $\mu > 0$ denotes the monopoly mark-up. Assume μ and z are constant.

(i) Show that the aggregate supply curve can be transformed to be written in terms of π_t(the inflation rate) and the expected inflation rate, π_t^e.

(ii) Now assume that $\pi_t^e = \theta\ \pi_{t-1}$ where $\theta > 0$. What is this equation called? Re-write the equation in part i, and interpret when $\theta = 1$ and $\theta \neq 1$.

(iii) Assume $\pi_t^e = \pi_{t-1}$. Derive the natural rate of unemployment, and express the change in the inflation rate in terms of the natural rate. Briefly interpret this result.

[Turn over

(c) Consider the data for a hypothetical economy :

a. Merchandise exports - 100
b. Service Import - 80
c. Gross Invenstment - 500
d. Increase in home country's ownership of assets abroad 160
e. Merchandise imports - 125
f. Service exports - 90
g. Increase in foreign ownership of assets at home country - 200
h. Unilateral transfer - 50
i. Domestic savings - 500

(i) Calculate trade balance, current account balance and balance of payment.

(ii) Calculate public savings assuming that there is no transfer payment.

(iii) Does this economy face the twin deficit problem? If yes, then suggest a suitable way to overcome it. 3+7+5

3. (a) The following data are provided for a hypothetical economy :

Product market equilibrium : $Y = 200 - 40r$

Money market equilibrium : $1000 = P(0.25Y - 200r)$

Production function : $Y = N^{1/3}$

Wages : 20

Assume that consumption is function of income (Y) and investment is a function of interest rate(r).

(i) Derive the AD and the AS equations.