

Indian Statistical Institute, Bangalore

B. Math (H) Third Year

Back paper - Economics I

Maximum marks: 50
2023

Time: 3 hours

Date: November 28,

Section I: 30 marks. Questions are of one mark each and all questions are compulsory.

1. The depreciation of a country's real exchange rate would increase the export of goods, and make the economy more competitive. True or False?

2. Rising inventories usually indicate:

- a) an economy that grows faster than expected.
- b) an unexpectedly slowing economy.
- c) an unexpected increase in sales.
- d) a rise in import tariff.

3. What is Okun's Law?

4. "Inflation is generally procyclical" means

- a) higher rates of inflation tend to precede periods of high economic growth.
- b) prices on average rise in an economic expansion but remain constant after a business cycle peak
- c) the rate of inflation tends to rise in periods of high economic growth and fall in periods of low economic growth.
- d) both b and c.

5. The Phillips Curve in economics illustrates the relationship between which two economic variables:

- a) Inflation and Unemployment
- b) Interest Rate and Investment
- c) Consumption and Savings
- d) Price Level and Real GDP

6. Consider the quantity theory of money equation. Suppose the actual money supply is M^* which is not equal to M ; according to the neutrality principle, the variable that would adjust to achieve equilibrium is:

- a) V
- b) Y

- c) P
- d) M

7. Real GDP is defined as:

- a) Nominal GDP adjusted for population change.
- b) Nominal GDP adjusted for capacity utilization.
- c) Nominal GDP adjusted for exchange rates.
- d) Nominal GDP adjusted for inflation.

8. To adjust GDP from market prices to factor cost:

- a) Add indirect taxes.
- b) Deduct indirect taxes and deduct subsidies.
- c) Deduct indirect taxes and add subsidies.
- d) Adjust for inflation.

9. What is the shape of the LM curve when the economy is in a liquidity trap:

- a) The curve is upward sloping
- b) The curve is downward sloping
- c) The curve is vertical
- d) The curve is horizontal

10. The monetary base is:

- a) The sum of currency in circulation and commercial bank reserves.
- b) The foreign exchange reserve held by the central bank.
- c) The official reserves held by commercial banks.
- d) The sum of currency in circulation and the currency held by commercial banks.

11. Which one of the following industries is NOT part of the primary sector?

- a) Forestry
- b) Mining
- c) Electricity companies
- d) Farming

12. Which of the following is NOT a leakage from the circular flow of income and expenditure

- a) Imports
- b) Government purchases
- c) Savings

d) Taxes

13. Child care provided by a licensed day care centre is not included in GDP calculation. True or False?

14. If nominal money stock (M) is Rs. 200 million, the size of nominal GDP is Rs. 400 million. Calculate the velocity of money.

15. An increase in the nominal GDP by 6% can correspond to:

- a) a decrease of real GDP by 4% and an increase of prices by 10%.
- b) an increase of real GDP by 5% and a decrease of prices by 1%.
- c) a decrease in real GDP by 3% and an increase of prices by 3%.
- d) an increase of real GDP by 9% and an increase of prices by 3%.

16. Budget surplus refers to:

- a) an excess of government outlays over taxes.
- b) an excess of government revenues over total outlays.
- c) the difference between fiscal deficit and interest payments.
- d) the sum of total expenditure and borrowings.

17. Textile and clothing production is labor intensive, which means that:

- a) It relies on large capital investments.
- b) It is concentrated in high-wage countries.
- c) It requires a large number of labor hours in proportion to other inputs.
- d) It tends to have higher labor productivity than capital intensive industries.
- e) All of the above.

18. Which of the following are not assets of a commercial bank?

- a) Government bonds
- b) Reserves
- c) Deposits with the Central Bank
- d) Savings deposits

19. Which of the following economic indicators is directly affected by changes in the price level:

- a) Gross Domestic Product
- b) Unemployment rate
- c) Labour force participation rate
- d) Population growth rate

20. Suppose government increases the spending by Rs. 150 million, but at the same time increases taxes by Rs. 150 million. The equilibrium output will change by Rs. 150 million. True or False?

21. What type of unemployment would prevent the unemployment from falling to zero, even in a very good job market?

- a) Structural unemployment
- b) Frictional unemployment
- c) Recessionary unemployment
- d) Cyclical unemployment
- e) Efficiency unemployment

22. Which of the following are possible explanations for the existence of sticky wages in the real world?

- a) Wages can be set at particular level by long-term contracts.
- b) Employers may be slow to reduce wages because they fear worker unrest.
- c) Employers may pay workers efficiency wages.
- d) All of the above
- e) None of the above

23. Suppose that Ashok's income increases from Rs 30,000 per year to Rs 35,000. At the same time, his consumption changes from Rs 26,000 per year to Rs 29,000 per year. What is Ashok's marginal propensity to consume?

- a) 0.1
- b) 0.3
- c) 0.4
- d) 0.6
- e) 0.8

24. What is the equation for the Keynesian income/spending multiplier?

- a) $mpc / (1 + mpc)$
- b) $1 / (1 - mpc)$
- c) $mpc / (1 - mpc)$
- d) $1 / (1 + mpc)$
- e) $(1 - mpc) / (1 + mpc)$

25. Suppose the marginal propensity to consume in an economy is 0.9. What would be the Keynesian multiplier in this economy?

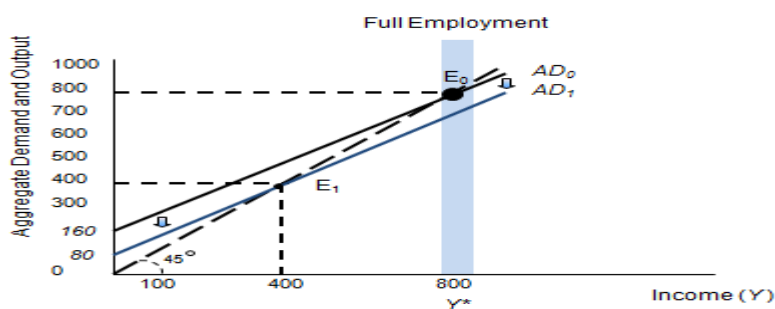
- a) 1
- b) 2
- c) 5
- d) 10
- e) 20

26. Suppose that intended investment dropped from 140 billion to 60 billion rupees, and the marginal propensity to consume is 0.8. If this is an example of a closed economy with no government sector, then output will be expected to drop by:

- a) 700 billion rupees.
- b) 400 billion rupees.
- c) 300 billion rupees.
- d) 80 billion rupees.

27. Refer to the figure below. Suppose that when the level of output is 800, the economy is at a full employment level represented by E_0 . Imagine that a fall in investor confidence causes the AD line to shift downward to AD_1 . Under this new scenario, point E_1 represents a situation:

- a) where injections and leakages are equal.
- b) of macroeconomic equilibrium.
- c) of persistent unemployment.
- d) where output, income, and spending are equal.
- e) All of the above



28. Suppose the government increases spending by Rs 200 million but at the same time increases taxes by Rs 200 million. In a standard macroeconomic model, by how much would equilibrium output change?

- a) Output would increase by Rs 400 million
- b) Output would increase by Rs 200 million
- c) Output would decrease by Rs 200 million

- d) Output would decrease by Rs 400 million
- e) We don't have enough information to predict the change in output

29. If the government wants to stimulate the level of economic activity through the use of fiscal policy, then _____ government spending will raise the level of economic equilibrium, while _____ government spending will lower it.

- a. eliminating; increasing
- b. increasing ; decreasing
- c. maintaining ; eliminating
- d. decreasing ; increasing
- e. maintaining; increasing

30. Which one of the following is not an example of government transfer payments to individuals or firms?

- a. Social security payments
- b. Unemployment compensation
- c. Interest payments to holders of government bonds
- d. Investment in infrastructure
- e. Agricultural subsidies

Section B: 12 marks. Questions are of two marks each, attempt six questions.

31. The total adult population in a country X is 250 million. It is reported that 150 million are in the labour force. There are 100 million employed persons. Calculate the following:

- a. Worker population ratio.
- b. Unemployment rate.

32. Consider an economy that is currently experiencing an oil price shock. How would this oil price shock impact the short-run aggregate supply curve in this economy? Discuss with a diagram.

33. What is the difference between a cyclical deficit and a structural deficit?

34. Explain if the following would be included in the calculation of GDP or not.

- a. The rise in life expectancy over time.
- b. The iron that goes into the steel that goes into a refrigerator bought by a consumer.
- c. The sale of a new car.

d. Salaries paid to Koreans workers working in India.

35. What are the two main accounts in the balance-of-payment account, and how do they differ?

36. Explain why efficiency wages can create unemployment in the economy.

37. Define the concept of the Keynesian multiplier in the context of macroeconomics. How would an increase in government spending impact the level of real GDP in an economy, according to the theory of the Keynesian multiplier?

Section C: 8 marks. Questions are of four marks each, attempt two questions.

38. For each of the following, indicate which curve in the AS/AD model shifts (initially), and in which direction(s):

a. An adverse supply shock

b. An increase in government spending

c. A monetary contraction designed to lower the long-run inflation rate

39. Suppose the Central Bank makes an open market purchase of bonds, what would happen to the following?

a. federal funds rate.

b. money supply.

c. aggregate demand in the economy.

40. What happens in the Keynesian model if households decide to be spend less and save more? Do the following exercise to find out.

a. Suppose that the economy starts out in a situation with $C = 20 + .8Y$ and Intended Investment = 60. Carefully graph the resulting AD curve, labelling the levels of aggregate demand that result when income (Y) is equal to 0, 300, 400, and 500.

b. What is the equilibrium level of income in this initial case? What is the equilibrium level of saving?