

**Indian Statistical Institute, Bangalore**

B. Math. Third Year

First Semester - Economics I

Final Semester

Duration : 3 hours

Date : Nov 17, 2016

Marks: 75

1. Jatin has invested Rs. 20,000 as a fixed deposit in a bank for one year in 2014. The bank states that it will pay him an interest rate of 8 per cent per annum. In 2015, he invests Rs. 20,000 and is told that he would receive a rate of 10 per cent. [2]

(a) Can we deduce that Jatin is getting a higher return than what he received in 2014?

(b) What more information do we need to conclude about his real return?

2. From the Table below, calculate the following [4]

	Rs. billion
Consumption	26000
Investment	5000
Government budget surplus	450
GDP	124000
Depreciation	200
Government expenditure	8000

(a) NDP

(b) Government transfers minus taxes

(c) Personal disposable income

(d) Savings

3. State one weakness of the concept of GDP. [1]

4. Tixania has a population 1200 million. Of this, 20 per cent are below the age of 15, 2 per cent are institutionalized, 15 per cent are working and 25 per cent are not employed and not seeking jobs.

(a) What is the total size of labour force? [4]

(b) What is the potential labour force?

(c) What is the unemployment rate?

(d) What is the labour force participation rate?

5. What type of unemployment would prevent the unemployment from falling to zero, even in a very good job market? [1]

a) Structural unemployment

b) Frictional unemployment

c) Recessionary unemployment

d) Cyclical unemployment

e) Efficiency unemployment

6. Which of the following industries is NOT part of the services sector? [1]

a) Wholesale and retail trade

b) Finance and insurance

c) Construction

d) Hotels and restaurants

7. The Indian economy is a service economy. This implies [1]

a) A large proportion of workers are engaged in the services sector

b) Growth of income is mainly on account of the services sector

c) Services sector is bigger than the manufacturing sector

d) All of the above

8. If the marginal propensity to save increases, the Keynesian income/spending multiplier [1]  
 a) falls  
 b) rises  
 c) remains the same  
 d) cannot comment

9. Given the following information [2]

Income (Y)	Consumption (c)	Saving (s)	MPC
100	80	20	
110	87	23	
120	92	28	
130	95	35	
140	97	43	

- (a) Calculate the marginal propensity to consume.  
 (b) How does MPC change as income rises?
10. If the consumption function in an economy is given by  $C = 90 + 0.75Y$  and  $I = 35$   
 a. What is the level of C and AD at income levels of 0, 500 and 600. [3]  
 b. If the output rises to 600 then will demand be higher or lower than output, by how much? [2]  
 c. If Investment rises by 25 then what is the increase in equilibrium income. [2]

11. In the AD and AS model, which curve shifts (initially) and in what direction when the following occur? [8]  
 a. An increase in supply of goods  
 b. An increase in government spending  
 c. An increase in taxation  
 d. An increase in money supply

12. Suppose government increases spending by 100 million rupees but at the same time increases taxes by 100 million. In a standard macroeconomic model, by how much would equilibrium output change? [2]  
 a) Output will not change  
 b) Output will increase by 100 million rupees  
 c) Output will decrease by 100 million rupees  
 d) We cannot say

13. Assume a standard AD curve. If the marginal propensity to save rises from  $\frac{1}{4}$  to  $\frac{1}{2}$ , how does the slope of the AD curve change? Draw the two AD curves. [4]

14. Which of the following are not assets of a bank? [1]  
 a) Cash  
 b) Deposits with the RBI  
 c) Government bonds  
 d) Savings deposits

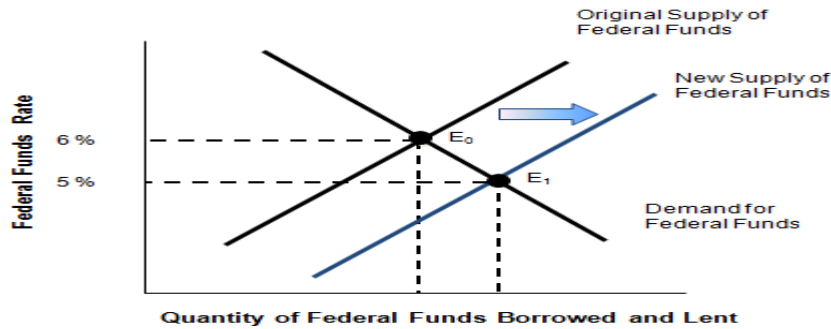
15. Given the following information on a bank [1]

Assets		Liabilities	
Reserves	3000,000	Deposits	1150,000
Loans	6000,000		
Bonds	2500,000		

If the required reserve ratio is 0.20, calculate the required reserves of this bank.

16. Refer to the graph below. Suppose that the Central Bank makes an open market purchase of bonds. This is likely to result in a \_\_\_\_\_ in reserves and a \_\_\_\_\_ in the bank (federal funds) rate. [2]

- a. Fall, fall
- b. Fall, rise
- c. Rise, rise
- d. Rise, fall



Note: Federal funds refer to Central Bank funds.

17. When will a fall in interest rates not increase intended investment? [2]

18. In the balance of payments account, payments for imports of goods and services is counted as [1]

- a) an outflow in the current account.
- b) an inflow in the current account.
- c) an outflow in the capital account.
- d) an inflow in the capital account.

19. The current account is in deficit in India. This implies that in the capital account [1]

- a) Inflows equal outflows
- b) Inflows must be higher than outflows
- c) Inflows must be less than outflows
- d) is zero

20. If the exchange rate between U.S. dollars and Indian rupees changes from \$1 = 60 rupees to \$1 = 65 rupees then... [1]

- a) The Rupee has appreciated against the US dollar .
- b) The Rupee has depreciated against the dollar.
- c) US goods are cheaper for Indians.
- d) None of the above.

21. If money stock is Rs 100 million, and the size of the nominal GDP is 130 million. [2]

- a) What is the Velocity of money?
- (b) State the quantity equation you used to calculate V.

22. In the 2016 Indian budget, the pie chart on where a rupee comes from showed that 63 paise came from taxes, 13 paise from non-tax revenue, 3 paise from non-debt capital receipts and 21 paise from borrowing and other liabilities. What is an example of non-tax revenue. [2]

23. Refer to the Table below. [4]

- a) What is the revenue deficit?
- b) What is the fiscal deficit?

Table: Union budget, India, (in crores of rupees), 2016-17

1	Revenue receipts	1377022
2	Capital receipts, of which	601038
3	Recoveries of loan	10634
4	Other receipts	56500
5	Borrowing and other liabilities	533904
6	Total receipts	1978060
7	Total expenditure, of which	1978060
8	Revenue expenditure	1731037

24. Fiscal deficit or deficit spending is not likely to raise prices (lead to inflation). Given one condition under which the above statement will be true. Can this condition be applied to India. [3]

25. The economy of the United Kingdom can be characterized by the following set of equations:

$$\bar{Y} = 2400$$

$$\frac{M^D}{P} = 1470 + 0.4Y - 10000(r + \pi_e) (\pi_e = 0.03) \quad \text{(Real money demand)}$$

$$\frac{M^S}{P} = 2000 \quad \text{(Real money supply)}$$

$$C^d = 388 + 0.6(1 - t)Y - 50000r \quad (t = 0.4) \quad \text{(Desired consumption)}$$

$$I^d = 600 - 12000r \quad \text{(Desired savings)}$$

$$NX = 300 - 0.2Y + 0.01Y_{for} + 10000(r - r_{for}) \quad \text{(Net exports)}$$

$$Y_{for} = 12000 \quad \text{(Foreign real output)}$$

$$r_{for} = 0.02 \quad \text{(Foreign real interest rate)}$$

$$G = 900 \quad \text{(Government spending)}$$

$$TR = 200 \quad \text{(Government transfers)}$$

where the relevant numbers are measured in (real) billions of pounds sterling.

a) Find the IS equation. [3]

b) Find the LM equation. [3]

c) Find the short-run equilibrium value of interest rate. [3]

d) Find the short-run equilibrium value of output. [3]

e) Is the economy above or below its full output? [1]

26. Give one factor constraining growth in a less developed economy? [2]

27. Wages are sticky in a labour market because \_\_\_\_\_. Complete. [1]

Neatness : 1Mark