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National Institute of Technology Goa

Programme Name: **B.Tech.**

End Semester Examinations, May-2021

Course Name: Economics | Course Code: HS250

Date: **12-05-21** | Time: 9.30-12.30

Duration: **3 Hours** | Max. Marks: **100**

ANSWER ALL QUESTIONS

1. Define investment multiplier. Explain the process of investment multiplier with suitable illustration **[5 Marks]**

2. Use the supply and demand curves to analyze the effect of the following events on the market for cotton cloths in Tamilnadu **[5 Marks]**

(a) Unseasonal rain in the cotton-growing area of Tamilnadu(TN) damages the cotton crops
(b) Mumbai cotton market experiences a boom in their cotton segment due to their favourable weather condition, and hence TN traders start to import cotton from Mumbai
(c) All employees in TN required to wear cotton clothes manufactured in TN
(d) The new weaving machines with the latest technology are invented in TN

3.

a. Initially, a consumer faces the budget line of $\boldsymbol{p_1 x_{1+} p_2 x_{2+} = m}$. Suddenly, the price of good 2 doubles, the price of good 1 becomes 8 times larger, and income becomes 4 times larger. Write down an equation for the new budget line in terms of the original prices and income.

b. Suppose, the government decided to impose a lump-sum tax of 'L', a quantity tax on commodity 1 of 'q', and a quantity subsidy on good 2 of 's' on the original budget line mentioned in (a). Write down the formula for the new budget line **[2.5x2=5 Marks]**

4. From the given data below, calculate (i) GDP at market price, (ii) GDP at factor cost, and (iii) GNP. **[2x 3= 6 Marks]**

description	Amount in billion
Household consumption expenditure	550
Govt. Consumption expenditure	250
Gross fixed capital formation	50
Depreciation	150
Indirect taxes	160
Subsidies	40
Imports	200
EXports	250
Net income from abroad	150

5. The cost of producing Laptops has fallen over the past several decades. **[2x 3= 6 marks]**
   (a) Draw a supply-and-demand diagram to show the effect of falling production costs on the price and quantity of laptop sold.
   (b) In your diagram, show what happens to consumer surplus and producer surplus.
   (c) Suppose the supply of a laptop is very elastic. Who benefits most from falling production costs—consumers or producers?

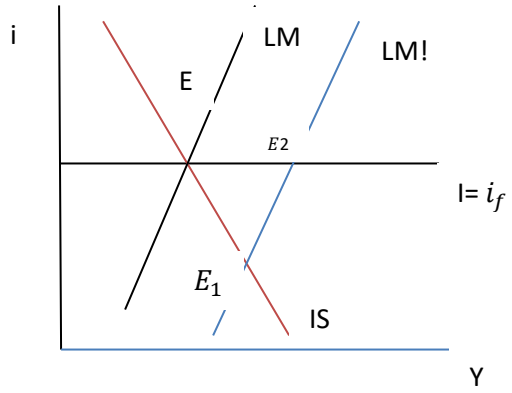
6. Explain the impact of the following actions on the IS and LM curves with the help of a neat diagram. Also, show how the changes are going to affect the equilibrium output/income. **[3 x2=6 Marks]**

(a) Govt. of India has decided to vaccinate all of their citizens, and the sudden imposition of lockdown has affected their budget allotments. To mobilize the fund for the 'mission vaccination' cabinet has decided to cut down their annual investment expenditure by 50%.

(b) Due to the strict Fiscal Policy, people's purchasing power got reduced dramatically. To encourage their spending activity, RBI decided to purchase government securities through open market operations

7. (a) Distinguish between the marginal rate of substitution (MRS) and the marginal rate of technical substitution (MRTS). **[2+2+4=8 Marks]**
(b) What does equality between MRS and MRTS indicate?
(c) Graphically explains the equality between MRS and MRTS

8. Refer the following diagram to explain the given questions **[2+0+2+2+2=8 Marks]**



(a) Explain the representation of the curve
(b) Explain the three equilibrium positions
(c) Specify any reason that causes a shift in LM curve to LM1
(d) Whether economy will be stable at E1 or E2?
(e) How do you link all the activity with Exchange rate?

9. J.M. Keynes' "General *Theory of Employment, Interest, and Money*" had highlighted the role of aggregate demand (AD) while determining the equilibrium income. In a simple economy without government, Consumption **(C)** and investment **(I)** demands are the central pillars of AD. One of the arguments for supporting his theory is that to increase the Investment demand for increasing income.

(i) Whether an increase in consumption demand will increase or decrease the income? Explain your answer with justification
(ii) Show graphically how a given increase in **(I) l**eads to an increase in income
(iii) Suggest some measures to increase the consumption demand? **[3+3+2=8 Marks]**

10. Few goods and their features are given below. Explain how did the following action will change their demand curve? **[8 Marks]**

Commodity	**Nature**
Ice cream	Normal good
Bus travel	Inferior good
Coffee (which is a substitute for tea)	substitutes
Tea	Giffen good

(i) You are facing a salary cut by 25%
(ii) Tea price increase by 25%
Note: The answer should be supplied in the following format.

Action	**Commodity**	**Potential change**	**Reason**
Salary cut by 25%	Ice cream		
	Bus travel		
	Coffee		
	Tea		
Tea price increase by 25%	Ice cream		
	Bus travel		
	Coffee		
	Tea		

11. Mr. Joe wants to buy 120 units of a stock when the price is ₹4 (Point A) and 80 units when the price goes to ₹6 (Point B).
(a) Draw Mr. Joe's demand curve by using Points A & B
(b) Calculate the price elasticity of demand when Joe moves from point A to Point B
(c) Repeat the calculation when he moves from point B to Point A
(d) What observation can you make about it?
(e) How can you resolve the issue? Explain the process **[1+2+2+1+4=10 Marks]**

12. This section addresses demand, supply, equilibrium, and budget constraint. **[2+2+2+4=10 Marks]**
(a) What is the main difference between short-run and long-run supply curves of apartments?
(b) Serum Institute of India, the maker of Covishield, has decided to offer one dose of Covid-19 Vaccine at the rate of ₹ 150 for central government, ₹ 300 for state government, and ₹ 600 for private hospitals. What type of market did you observe here?
(c) Many state governments have reduced RTPCR test costs (a test to identify the Covid-19 virus presence) from ₹ 1700 to ₹ 500. How is the government action going to change the market equilibrium? Explain the situation with the help of demand and supply curves
(d) What is the connection between the slope of a budget constraint and the opportunity cost?

13.

(a) Derive the IS curve when the consumption and investment function in a two sector economy as follows: C(Y) = 10+0.5Y, I (i) = 200- 2000i **[3 x 5=15 Market]**

(b) Draw the IS curve derived from section (i)

(iii) Derive the LM function from the given information: Ms= 150, & Md= 0.5y+150-1500i

(iv) Draw the LM function derived from section (iii)

(v) Integrate the product market equilibrium with the money market equilibrium and estimate the equilibrium values of i & Y