Class-12

ECONOMICS

GENERAL EDUCATION DEPARTMENT
SAMAGRA SHIKSHA, KERALA

SAMAGRA SHIKSHA KERALA

MACROECONOMICS

XII

2021

Part 2 INTRODUCTORY MACROECONOMICS

Chapter	Topics to be focused
Chapter 1 Introduction	1.1 EMERGENCE OF MACROECONOMICS
Chapter 2 National Income accounting	2.1 SOME BASIC CONCEPTS OF MACROECONOMICS 2.2.1 The Product or Value Added Method 2.2.2 Expenditure Method 2.2.3 Income Method 2.2 CIRCULAR FLOW OF INCOME AND METHODS OF CALCULATING NATIONAL INCOME
Chapter 3 Money and Banking	3.1 FUNCTIONS OF MONEY 3.2 DEMAND FOR MONEY AND SUPPLY OF MONEY 3.2.1. Demand for Money 3.2.2. Supply of Money
Chapter. 4 Determination of Income and Employment	4.1 AGGREGATE DEMAND AND ITS COMPONENTS 4.1.1. Consumption 4.1.2. Investment 4.2 DETERMINATION OF INCOME IN TWO-SECTOR MODEL
Chapter 5 Government Budget and the Economy	5.1 GOVERNMENT BUDGET — MEANING AND ITS COMPONENTS 5.1.1 Objectives of Government Budget 5.1.2 Classification of Receipts 5.1.3. Classification of Expenditure 5.2 BALANCED, SURPLUS AND DEFICIT BUDGET
Chapter 6 Open Economy	6.1 THE BALANCE OF PAYMENTS 6.1.1 Current Account 6.1.2 Capital Account

Chapter 1
Introduction

Points to remember

Classical school of thought

- The dominant thinking in economics before Keynes was that all the labourers who are ready to work will find employment and all the factories will be working at their full capacity.

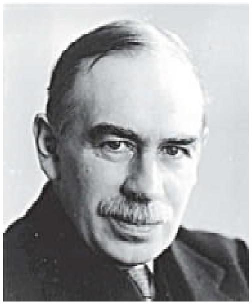
Great depression of 1929

- The period from 1929 to 1933 is called the period of great depression.
- During this time there was a huge fall in output and employment in the countries of Europe and America. It affected other countries of the world as well.
- Demand for goods in the market was low, many factories were lying idle, workers were thrown out of jobs.
- Unemployment rate rose from 3 per cent to 25 per cent in USA.

  These events made economists think about the functioning of the economy in a new way.
- Keynes book "The General theory of Employment, interest and Money" published in 1936 was an attempt in this direction.
- The consequences of Great depression gave birth to Macro Economics.

Activity 1

1. Name the person in the picture.
2. Name his celebrated book published in 1936
3. Countries of Europe and North America were trapped in Economic crisis. In USA unemployment rate rose from 3 persent to 25 percent. Aggregate output fell by 33 percent it affected other countries of the world.



a) Name the crisis

b) Name a separate branch of economics emerged after the crisis

Answers

Activity

1. **J.M.Keynes**
2. **The General Theory of Employment Interest and Money**
3. **a. Great depression of 1929**

   b. Macro economics

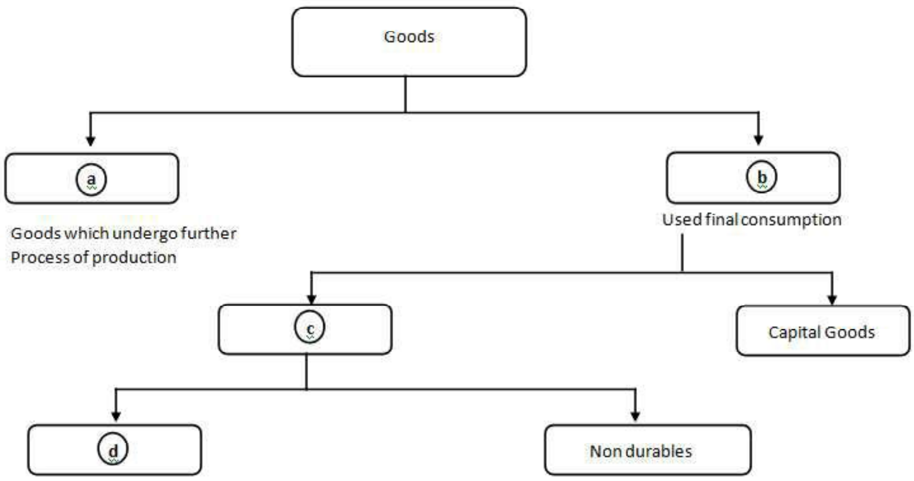
Chapter 2
National Income Accounting

Points to remember

- National Income is the sum total of all final goods and services produced in the economy during a given period of time
- The goods which are meant for final use and will not pass through any further stages of production is called final goods. These final goods can be consumer goods and capital goods. Consumer goods can be durables and non durables. Inter mediate goods are goods used as inputs or raw materials to produce final goods.
- Stocks are defined at a particular point of time while flows are defined over a period of time.
- Circular flow of income is the pictorial illustration of the interdependence and inter relation of different sectors in an economy.
- We can calculate National Income in three ways;
  A) By measuring the aggregate value of spending for the final goods and services (Expenditure method)
  B) By measuring the aggregate value of final goods and services produced (Product method or Value-added method)
  C) By measuring the sum of factor payments or factor incomes in the form of rent, wages, interest and profit. (Income method)
- Inventory is the stock of unsold goods, semi-finished goods or raw materials which a firm carries from one year to the next.
- Change in the Inventory = Production of a firm during a year – Sale of the firm during a year.

Activities

1. Fill the Boxes

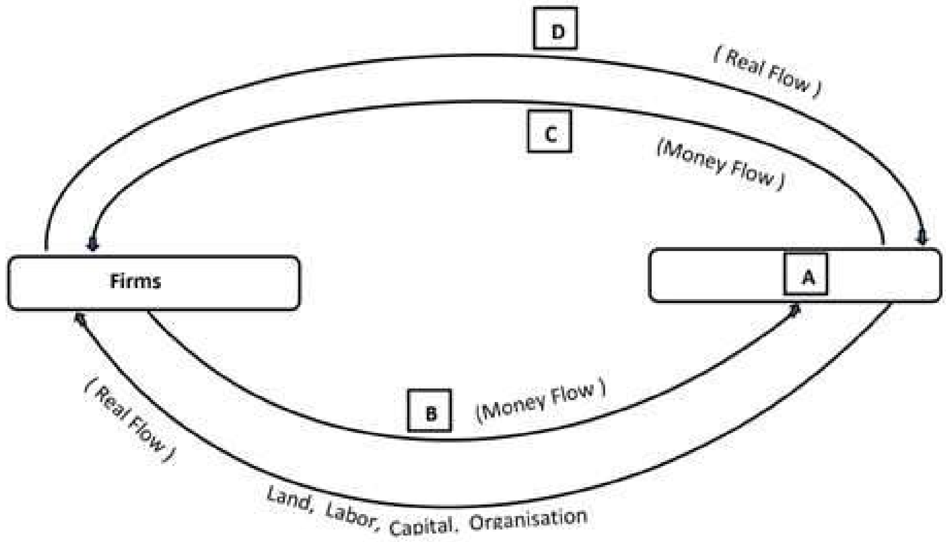


Hints: Intermediate goods, final goods, consumer goods, durables

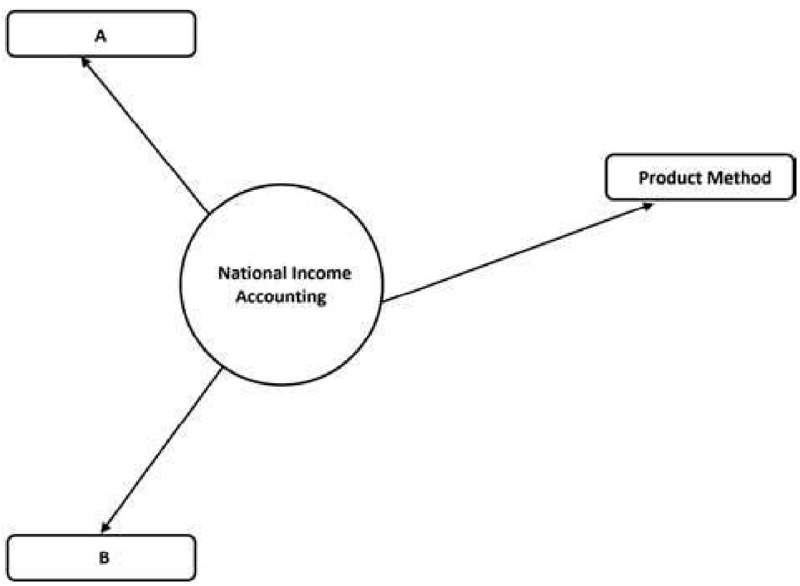
2. Categorise into stock and flow

Inventory, National Income, Imports, Total Debt, Foreign Exchange reserve, change in money supply, wealth, change in inventory.

3. Complete the diagram



4. Fill the blanks



5. Fill the blanks

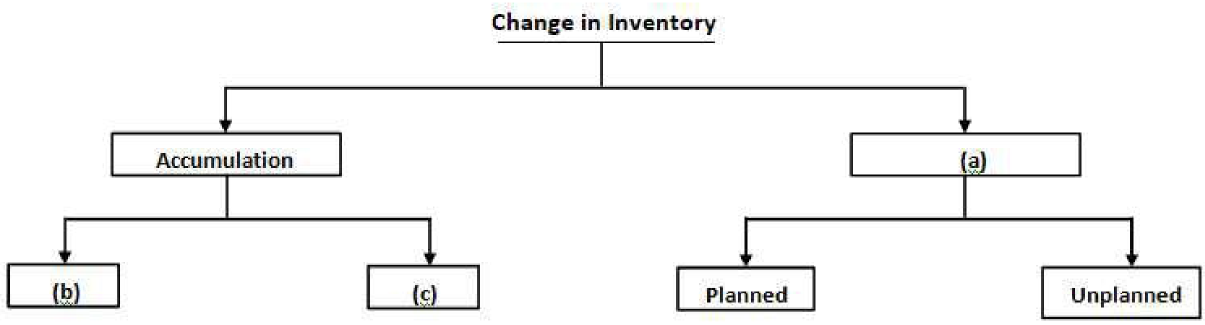
Product Method	Expenditure Method	Income Method
Aggregate Value of final Goods and services	Final _____ (a) _____ of all sectors	Adding factor Incomes
Value added = Total Production – _____ (b) _____	i) _____ (c) _____ ii) Investment iii) _____ (d) _____ iv) Export Revenue	Four Factor Incomes i) Rent (R) ii) _____ (e) _____ iii) Interest (I) iv) _____ (f) _____
$GDP = \sum_{i=1} GVA\ N$ Sum of Gross value added of all firms In the economy	GDP = C + I + G + X – M Sum of expenditures of all sectors minus imports	GDP = _____ (g) _____ Sum of incomes received by all individuals in the economy in the form of rent, wages, interest and profit

6. There are three firms in the economy. GDP is the sum of Gross value added of all firms in the economy.

Firms	Total Production	Intermediary products	Value Added
Firm A	50	0	50
Firm B	150	50	_____ (a) _____
Firm C	200	150	_____ (b) _____

GDP = _____ (c) _____

7. Complete the boxes



Complete the following:-

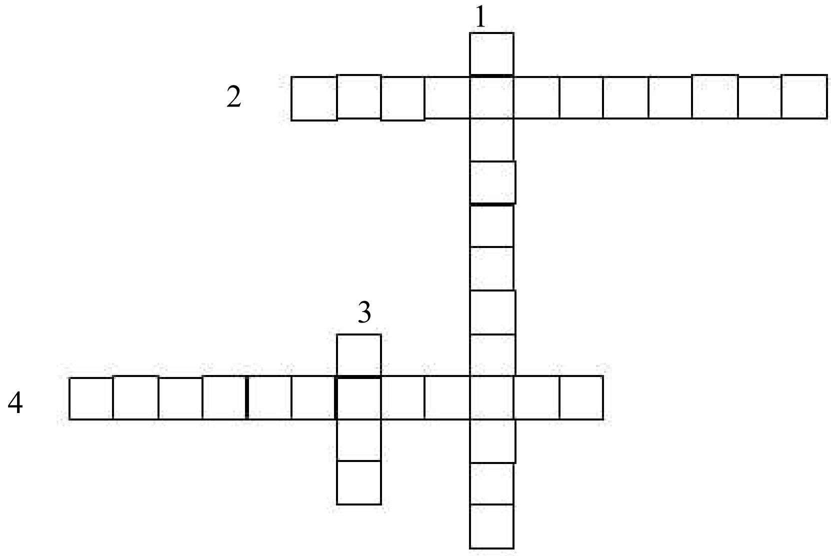
8. Expenditure Method (GDP) = $\boxed{\text{Consumption}} + \boxed{\text{(a)}} + \boxed{\text{(b)}} + \boxed{\text{(c)}} - \boxed{\text{Imports}}$
9. Income Method (GDP) = $\boxed{\text{(a)}} + \boxed{\text{wages}} + \boxed{\text{(b)}} + \boxed{\text{Profit}}$
10. Clear the Puzzle

ACROSS

2. Wear & Tear
4. Increase in Inventory

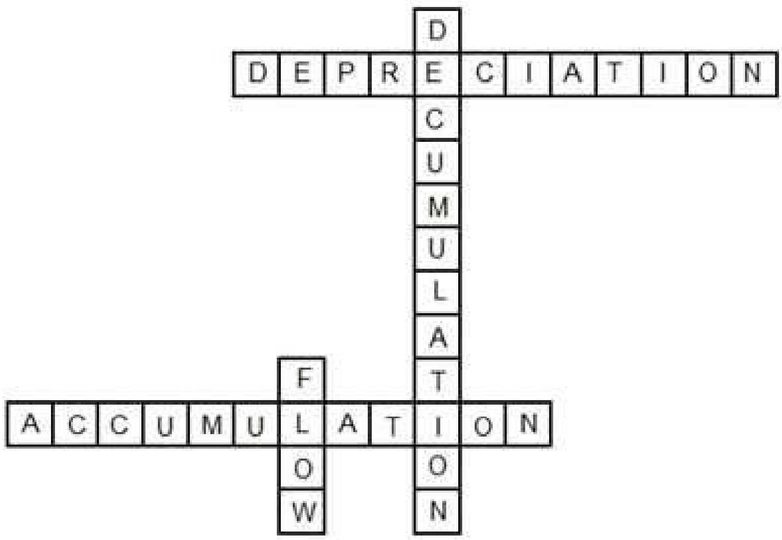
DOWN

1 Decrease in Inventory
3. Defined over a period



Answer key

1. a. Intermediary goods — b. Final goods
   c. Consumer goods — d. durables
2. Stock
   Inventory, Total debt, Foreign exchange reserve, wealth
   Flow
   - National Income
   - Imports
   - Change in money supply
   - Change in inventory
3. a. Prices of goods & services from households to firms
   b. Factor rewards from firms to households
4. A. Households — B. Factor rewards
   C. Prices of Goods — D. Goods & services
5. A. Income Method — B. Expenditure Method
6. (a) Expenditure
   (b) Intermediary goods
   (c) Consumption
   (d) Government
   (e) wages
   (f) profit
   (g) R + W + I + P
7. (a) 50
   (b) 50
   (c) 150
8. (a) Decumulation
   (b) Planned
   (c) Unplanned
9. (a) Investment
   (b) Government
   (c) Exports
10. (a) Rent
    (b) Interest
11.



Chapter 3
Money and Banking

Points to remember

- money is the commonly accepted medium of exchange
- other early system of exchange is barter system,where goods are exchanged for goods

Drawbacks of barter system

- lack of common measure of value
- lack of store of value
- difficulty of division
- absence of double coincidence of wants
- lack of transfer of value.

The introduction of money removes all these difficulties

- The function of money is that it acts as a
  - medium of exchange
  - store of value,measure of value
  - standard of deffered payments
  - helps in transferring value and is the basis of credit.
- Demand for money : It is the desire of a person to hold money to fulfill the following 3 motives.

  transaction motive

  precautionary motive

  speculative motive
- Supply of money - consists of currency notes and coins issued by monetary authority

Measures of money supply in India

m1= currency + demand deposits

m2 = m1 + savings deposits with post office savings bank,

m3 = m1 + net time deposits of commercial banks

m4 = m3 + total deposits with post office savings organisations

Functions of commercial banks

accepting deposits

giving loans

credit creation

High powered money : Total liability of monetary authority

Functions of RBI

Issue currency notes

Banker's bank

Government's bank

Custodian of foreign exchange reserves

Controller of credit and money supply

Lender of last resort

Activity

Find the odd one out

1 store of value Barter system, standard of deferred payment, transfer of value
2 bankers bank, accepting deposits, controller of credit, note issue
3 RBI, SBI, Canara bank, Federal bank
4 cheque, draft, Deposits, Money in hand
5 M1, M2, P1, M3

Write true or false

6 RBI was established in 1983
7 M1 and M2 are known as narrow money
8 Money overcomes the problems of barter system
9 M4 measure of money is the least liquid concept
10 When interest rate is high, people becomes more interested in holding money.
11 Central bank of the country does not deal with public directly.

Give one word for

(12) Exchanging commodities for commodities
(13) The total liability of monetary authority
(14) A commonly accepted medium of exchange
(15) The apex institution of monetary system

Complete the following table

(16) M1 = Cu + …….
(17) M2 = M1+ …….
(18) Two measures of Broad Money : M3, ……

Match the following

	A	B
(19)	plastic money	central bank
(20)	barter system	debit/credit cards
(21)	accept deposits	double coincidence of wants
(22)	Lender of last resort	stock variable
(23)	supply of money	commercial bank

24 Prepare a brief note on functions of central bank

Answers

1 Barter System
2 Accepting deposits
3 RBI
4 Money in hand
5 P1
6 False

7 True
8 True
9 True
10 False
11 True
12 Barter
13 High powered money
14 Money
15 RBI
16 Demand deposits
17 Savings deposits with post office
18 M_4
19 Debit/credit cards
20 Double coincidence of wants
21 Commercial bank
22 Central bank
23 Stock variable
24 Functions of central bank—issue, currency note, governments bank, bankers bank, controller of credit and money supply, custodian of foreign exchange, reserve, lender of last resort, publisher of reports

Chapter 4
Determination of Income and Employment

Points to remember

- Aggregate demand - total demand in the economy
- There are twocomponents of aggregate demand in a two Sector model—consumption demand and investment demand
- Ex-ante- planned values
- Expost- real values
- APC- ratio of total consumption and total income c/y
- APS- ratio of total savings and total income s/y
- MPC- ratio of change in income and change in consumption $\frac{\Delta c}{\Delta y}$
- MPS- ratio of change in income and change in savings $\frac{\Delta s}{\Delta y}$

  MPC+MPS=1
- Consumption function - relationship between consumption and income

Activity

A Choose the correct answer from the bracket

1) APS = (C/S, S/Y)
2) The level of equilbrium income is determined by
   (aggregate demand and national income,
   aggregate demand and aggregate supply,
   aggregate demand and saving,
   aggregate demand and personal income)
3) MPC + MPS = (1, 0, >1, ∞)
4) If a person's disposable income is Rs.400 and his consumption expenditure is also rs 400, his amount of saving is
   (Rs.100, 0, Rs.50)
5) Aggregate demand is the summation of consumption and
   (saving, income , investment)
6) In a two sector economy, aggregate demand is equal to
   (C + G , C + S, C + I , X –M)
7) Consumption depends on
   (savings, income, aggregate demand, all of the above)
8) Aggregate demand is
   (positively related to income, negatively related to income, equal to income, all of the above)

9) c =f (y) , is related to
(saving function, consumption function, investment function)

10) Desired savings during an accounting year
(actual savings, expost savings, ex ante savings)

11) Which of the following is correct
(1-MPC=MPS, 1-MPS=MPC, MPC+MPS=1, all of the above)

B Give one word for

1) The planned level of investment
2) Ratio of total savings and total income
3) The total demand in an economy
4) Addition to the stock of physical capital
5) The most important determinant of consumption demand
6) The relationship between consumption and income is termed as
7) The part of income which is not consumed
8) The minimum level of consumption even if income is zero
9) Ratio between incremental income and incremental saving
10) An equilbrium state where all resources in the economy are fully utilised

C State whether the following statements are true or false

1) Consumption changes in the same direction as income
2) As income increases aggregate demand also increases
3) Investment made irrespective of the level of income is called Autonomous Investment.
4) The ratio of total consumption to total income is called APS
5) The value of MPC lies between 0 and 1
6) Equilbrium level of income is that level of income where Aggregate demand = Aggregate supply
7) The value of MPC of rich class is higher
8) Expost measures of variables are related to actual value
9) Aggregative supply is equal to consumption +saving (C+S)
10) Even if income is zero,some consumption still takes place

D Complete the following table

Income	Consumption	Saving	APC
0	15	……	…..
50	50	……	…..
100	85	……	…..

Answers

A
1 S/Y
2 Aggregate Demand and Aggregate Supply
3 1
4 0
5 Investment
6 C + I
7 Income
8 Positively related to income
9 Consumption function
10 Ex ante savings
11 All of the above

B
1) Ex Ante investment
2 APS
3 Aggregate demand
4 Investment
5 Consumers income
6 Consumption function
7 Savings
8 Autonomous consumption
9 MPS
10) Full employment

c

1) true
2) true
3) true
4) false
5) true
6) true
7) false
8) true
9) true
10) true

d

Income	Consumption	Saving	APC
0	15	-	-
50	50	0	1
100	85	15	0.85

Chapter 5
Government Budget and the Economy

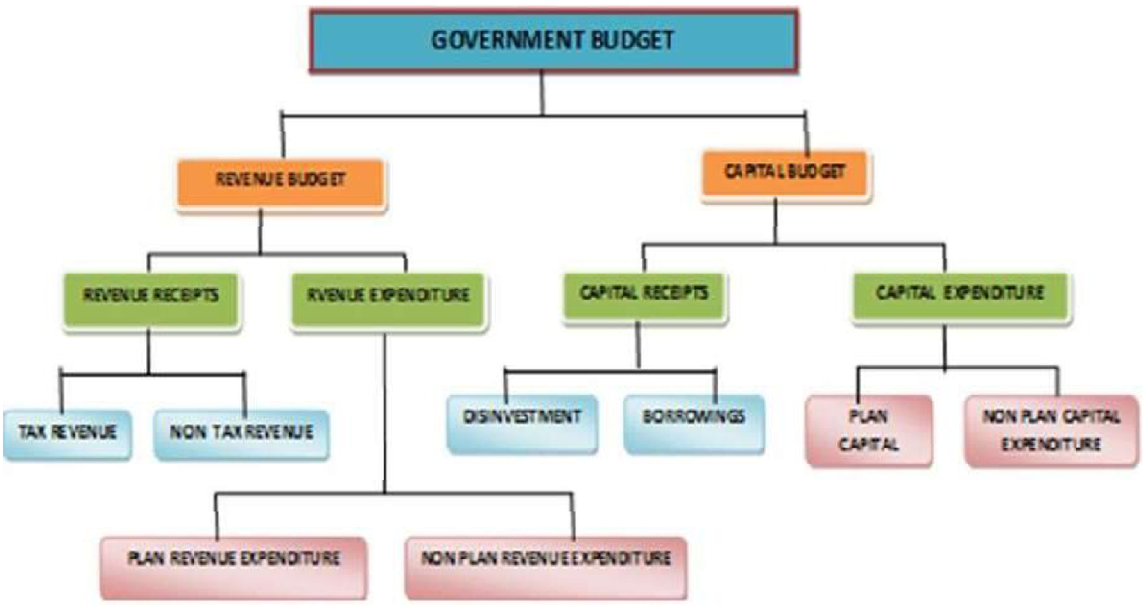
Points to remember :

- The revenue and expenditure statement of the government is termed as budget
- In India Budget is to be presented before the parliament as per article 112 of the constitution

Objectives of budget

- **Allocation function**- Government provides certain goods and services which cannot be provided by the private sector, such goods are collectively consumed. These are termed as **public goods**. eg : roads, bridges, parks etc.
- Goods which are individually consumed are known as private goods. eg : car, books etc
- **Distribution function**—The Government uses budget to impose new taxes, modifies existing tax rates and also makes transfer payments .thereby tries to reduce inequalities in income distribution and wealth
- **Stabilisation function** – Changes in aggregate demand and supply creates economic instabilities in the economy.the government,through budget makes changes in its taxation,revenue, expenditure policies and tries to achieve stability

Components of Government Budget



Activity

A. **C**hoose the correct answer from the bracket

1) Which of the following is a component of budget
[a. budget expenditure, b. budget receipts, c. both a and b]

2) The expenditure which do not create assets for the government
a) revenue expenditure b) capital expenditure c) both a and b)

3) Budget is presented in the parliament by
[a. prime minister, b. finance minister c. defence minister, d. home minister]

4) In a balanced budget
a) income< expenditure b) income = expenditure
c)income>expenditure

5) Fiscal policy includes
a) taxes b) public debt c) public expenditure d) all of these

6) Which type of expenditure is made when government constructs a new dam
a) capital expenditure b) revenue expenditure c) both a and b

7) Which of the following is not a direct tax.
a) income tax b) excise duty c) corporation tax

8) The estimated revenue receipts for a financial year is Rs.20,000 crores and its estimated expenditure is Rs.22,000 crores. the budget of the government is
a) surplus b) deficit c) balanced

9) The major source of revenue receipts for the government is
a) tax, b) profit c) fines

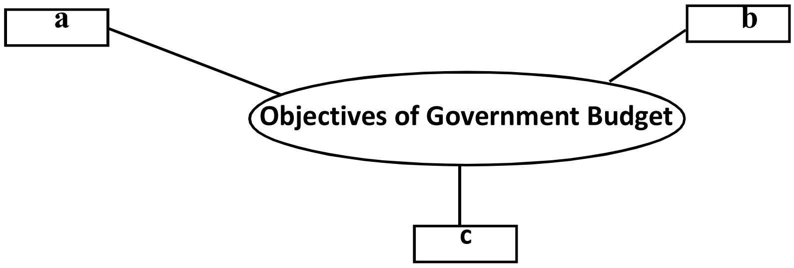
10) Disinvestment is an example of
a) capital receipts b) revenue receipts c) both a and b

11) A compulsory payment imposed by the government on households and producers
(a) fees b) fines c) tax d) penalty

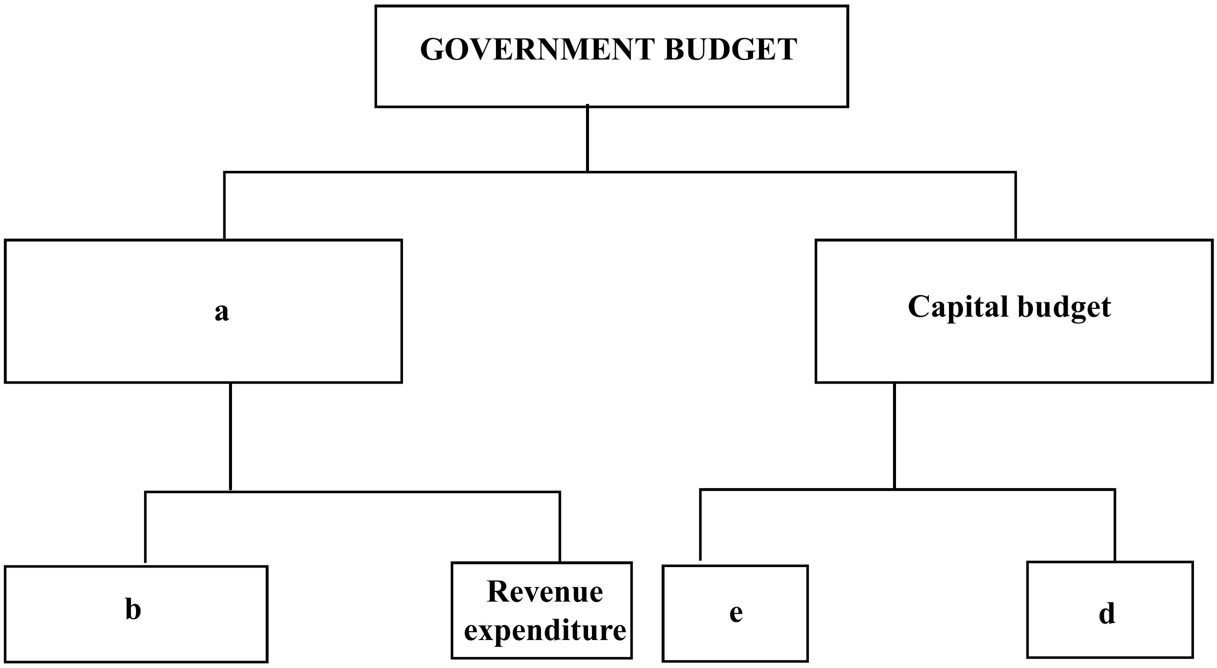
B. State true or false

1) Public goods are non excludable
2) Reducing government expenditure on education, health, poverty eradication programmes would positively affect the economy.
3) The amount collected by the government as taxes is often termed as capital receipts.
4) The budget is a statement that gives the estimated revenue and expenditure for a financial year.
5) Redistribution of income and wealth increases economic inequality.
6) Through budget government effictively and efficiently plans and implements social welfare programmes.

C) Complete the box



D) Complete the following chart



Answers

A

1 Both a and b

2 Revenue expenditure

3 Finance minister

4 Income = expenditure

5 All of these

6 Capital expenditure

7 Excise duty

8 Deficit

9 Tax

10 Capital receipts

11 Tax

B

(1) true

(2) false

(3) false

(4) true

(5) false

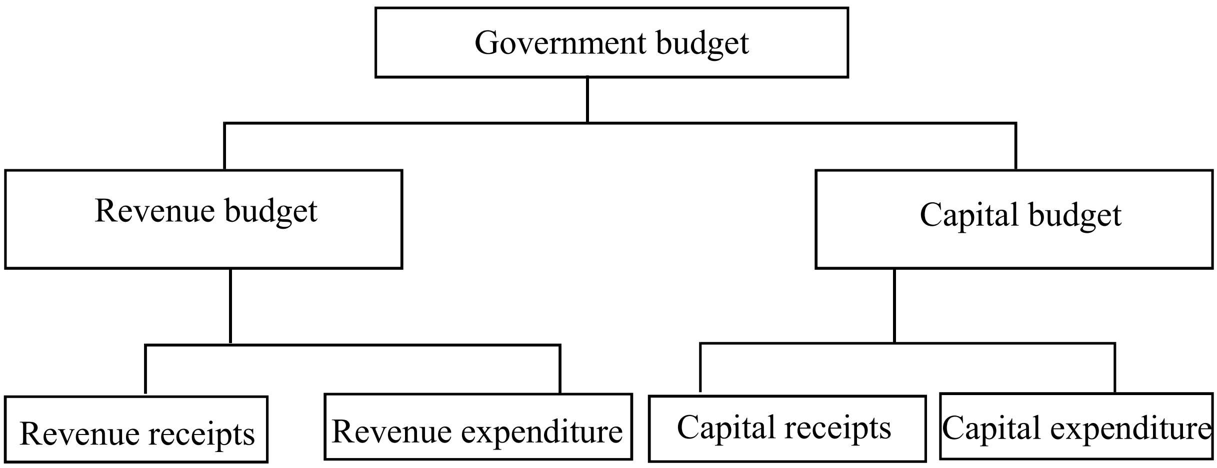
(6) true

C a. objectives of government budget

b. allocation function

c. redistribution function

d. stabilisation function



Chapter 6
Open Economy

At a glance

- The Balance of Payments (BOP) record the transactions of goods and services and assets between residents of a country with the rest of the world, for a specified period - typically a year.
- There are two main accounts in BOP - current account and capital account.
- Current account is the record of trade of goods and services and tranfer payments.
- Transfer payments are the receipts which the residents of a country get for free, without having to provide any goods and services in return.
- Capital account records all international transactions of assets.
- Balance of Trade (BOT) is the difference between the value of exports and value of imports of a country in a given period of time.

Activities

Complete the flow chart.

1. Balance of payments → Record of transactions → Goods and services / (a)

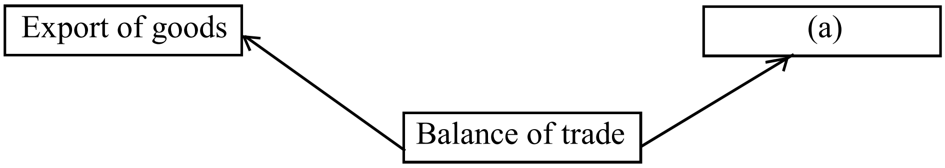
2. Current Account → Trade in ....(a).... / Trade in ......(b)..... / Transfer of payments

3. Cuurent account surplus → Receipts>Payments

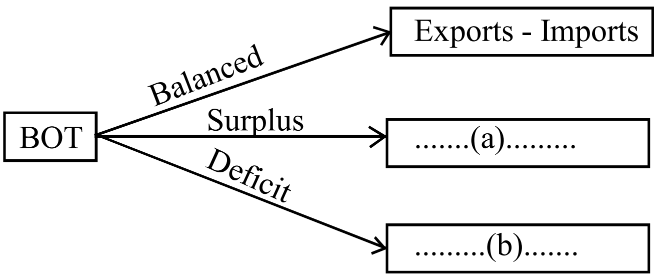
   Balanced current account → ....(a)

   Current account surplus → ....(b).......

4.



5.



6. Complete the following

Capital inflows ....(a)................ capital out flows → Balanced

Capital inflows greater than capital outflows → ....(b)................

Capital inflows less than ....(c)................ → Deficit

Answer Key

1. a) Capital Assets
2. a) Goods b) Services
3. a) Receipts = Payments b) Receipts > Payments
4. a) Import of goods
5. a) Export>import b) Export <import
6. a) Equal to b) Surplus c) Capital Outflow

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MICROECONOMICS

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ECONOMICS

Part 1INTRODUCTORY MICROECONOMICS

Chapter	Topics to be focused
Chapter 1 Introduction	1.1 A SIMPLE ECONOMY 1.2 CENTRAL PROBLEMS OF AN ECONOMY 1.3 ORGANISATION OF ECONOMIC ACTIVITIES 1.3.1 The Centrally Planned Economy 1.3.2 The Market Economy 1.5 MICROECONOMICS AND MACROECONOMICS
Chapter 2 Theory of consumer Behaviour	2.1 UTILITY 2.1.1 Cardinal Utility Analysis 2.1.2 Ordinal Utility Analysis 2.2 THE CONSUMER'S BUDGET 2.2.1 Budget Set and Budget Line 2.3 OPTIMAL CHOICE OF THE CONSUMER 2.4 DEMAND 2.4.1 Demand Curve and the Law of Demand 2.4.3 Normal and Inferior Goods 2.4.4 Substitutes and Complements
Chapter 3 Production and costs	3.1 PRODUCTION FUNCTION 3.2 THE SHORT RUN AND THE LONG RUN 3.3 TOTAL PRODUCT, AVERAGE PRODUCT AND MARGINAL PRODUCT 3.4 THE LAW OF DIMINISHING MARGINAL PRODUCT AND THE LAW OF VARIABLE PROPORTIONS 3.7 COSTS 3.7.1 Short Run Costs
Chapter 4 The Theory of the Firm under Perfect Competition	4.1 PERFECT COMPETITION: DEFINING FEATURES 4.2 REVENUE
Chapter 5 Market Equilibrium	5.1 EQUILIBRIUM, EXCESS DEMAND, EXCESS SUPPLY 5.2 APPLICATIONS
Chapter 6 Non-competitive Markets	6.1 SIMPLE MONOPOLY IN THE COMMODITY MARKET

Chapter 1

Introduction to Microeconomics

Points to remember

- Economics is a social science
- Goods means physical, tangible objects used to satisfy people's wants
- Consumption refers to the process of satisfying human wants using goods and services
- Scarcity—limited supply
- All economic problem arises due to scarcity of resourcs
- Economics is about making choices in the presence of scarcity
- The subject matter of economics is divided into micro economics and macro economics
- Central economic problems
  - What to produce
  - How to produce
  - For whom to produce
- Each economic system has their own mechanism and solutions to deal with central problems
- Capitalism — an economic system where all economic activities are organised through market
- Socialism — an economic system in which public sector and government organises all economic activities
- Mixed economy - an economic system in which both public sector and private sector co-exists
- Production possibility curve shows various combination of two goods that can be produced with available technologies and given resources
- Opportunity cost -cost of foregone alternatives

Activity

1. Categorise the following in to appropriate heads

   [price mechanism, welfare motive, planning, private sector]
2. Give any two reasons for the problem of choice
3. Name any two primary economic agents in a modern society
4. Fill up using the correct option
   a) Father of economics ……….
   b) The economic activities are completed by the government in …………….. economy.
   c) The study of aggregates in an economy is called …………….
   d) Economics is a ……….. science

e) The problem of choice arises because of ………

f) The problem of how to produce is related to …….

(social, macro economics, socialistic, technology, Adam smith, scarcity)

5. Match the following

a) microeconomics	1)	mixture of socialism and capitalism
b) mixed economy	2)	more labour, less capital
c) labour intensive technique	3)	partial equilbrium
d) whom to produce	4)	china
e) socialism	5)	distribution of income

6 Work out the following

a) Another name of capitalist economy

b) Micro economics is also known as

c) Technology which uses more capital and less labour

d) The author of the book " wealth of nations "

e) Physical ,tangible objects used to satisfy people's wants and needs

f) The amount of one good sacrificed to produce another good

7) Refer the table and draw a production possibility curve

Production possibilities	Good 1	Good 2
A	0	15
B	2	14
C	4	12
D	8	5
E	10	0

8) Find the odd one out.

a) India, Ireland, Canada, Australia

b) planning, welfare, socialism, private property

c) production, consumption, distribution, saving

9 Anoop likes to study about national income and unemployment,which branch of economics he would study ?

10 A mother cooking for her family is an ………….. [economic activity, a non economic activity]

11 Which of the following is a micro economic study [general price level, foreign exchange rate, government budget, automobile industry]

12 Economic problem arises due to………….. [limited resources, Resources have alternative uses,unlimited wants, all of the above]

13 Write whether the following statements are true or false

a) Macroeconomics studies economy as a whole

b) Scarcity of resources causes the problem of choice

c) The terms microeconomics and macroeconomics were coined by Ragnar Frisch

d) Production possibility curve is convex to the origin

e) Market price of a commodity comes under the topic of microeconomics

14 Prepare a brief note on central economic problems and how these problems are solved in different economic systems.

Answers

1.

Capitalism	**Socialism**
price mechanism	planning
private sector	welfare motive

2 Unlimited wants, limited resources

3 Producers, Consumers

4 a) Adam smith

b) Socialistic

c) Macroeconomics

d) Social

e) Scarcity

f) Technology

5 a) Partial equilbrium

b) Mixture of socialism and capitalism

c) More labour less capital

d) Distribution of income

e) China

6 a) market economy

b) Price theory

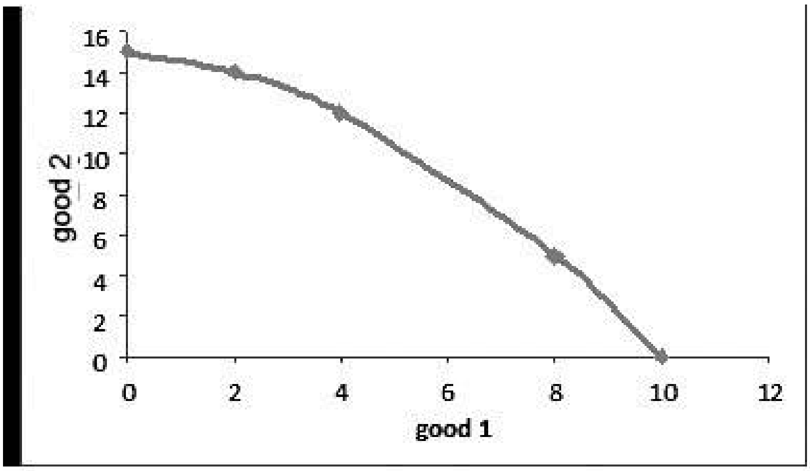
c) Capital intensive

d) Adam smith

e) Goods

f) Opportunity cost

7



8 a) India

b) private property

c) saving

9 Macroeconomics

10 Non economic activity

11 Automobile industry

12 All of the above

13 (A) true (B) true (C) true (D) false (E) true

14 The problem involves taking decisions regarding

- What to produce
- How to produce
- For whom to produce

How these problems are tackled depends on nature of economic system. In capitalism solution is found through the market forces of demand and supply, whereas in socialism it is by the government. But in mixed economy, both government and market forces tries to find solutions to the central problems

Chapter 2
Theory of Consumer Behaviour

Points to remember

Utility : Want satisfying power of commodity.

There are 2 types of utility analysis to explain consumer behaviour.

1. **Cardinal Utility Analysis**

It assumes that level of utility can be expressed in terms of numbers

Measures of Utility

Total Utility (TU): Total amount of utility derived from all units of a commodity.

Marginal Utility (MU): It is the change in TU from the use of an additional unit of a commodity.

MUn=TUn-TUn-1

Law of diminishing marginal utility

Diminishing marginal utility : It states that MU diminishes with increase in the consumption of additional units of the commodity. Therefore consumer will be willing to purchase more commodities only at a lower price.

2. Ordinal utility analysis (Indifference curve analysis)(Consumer's Equilibrium) (Optimal choice of the consumer)

   Utitlity cannot be measured numerically but it can be compared.

- Indifference curve joints all those combination of two goods which given same level of utility to the consumer and therefore consumer is indifferent between them.

Features of indifference curve (IC)

1. Indifference curve slopes downwards from left to right due to Diminishing Marginal Rate of substitution (DMRS)

   It is the rate at which the consumer will substitute one commodity for the other.

2. It is convex to the origin.
3. HIgher IC gives greater level of utility/satisfaction
4. Two ICs do not interest each other

- The optimum choice of the consumer is at a pointwhere the highest possible IC is tangent to the Budget Line (BL).

Consumer's Budget	:	The income available to the consumer to buy goods and services.
Budget Set	:	The set of all bundles available to the consumer.
Budget Constraint	:	The inequality cost less than or equal to his income is called Consumer's budget Constraint.

$$P_1X_1 + P_2X_2 \leq M$$

Budget Line (BL)

It is a graph showing all possible combinations of two goods that can be purchased at a given price for a given budget.

$$P_1X_1 + P_2X_2 = M$$

Slope of the BL $= \dfrac{-P_1}{P_2}$

Demand

It is desire hacked by ability and willingness to pay for a commodity. It is the quantity of the commodity one buyer buys from the market in the given period at a given price.

Budget Line (BL)

Law of Demand	:	Other things remain the same, when price rises, quantity demanded falls and vice versa.
Demand curve	:	It is the graphical representation of the demand schedule.
Normal goods	:	Consumers' Demand for normal goods moves in the same direction as the income of the consumer.
Inerior goods	:	Consumer's demand for inferior goods moves in the opposite direction as the income of the consumer.
Substitute goods	:	Those goods which are substituted in the place of other goods. The demand for a good move in the same direction of the price of its substitutes.
Complementary goods	:	Those goods which are consumed together. Demand for a good move in the opposite direction of the price of its complementary goods.

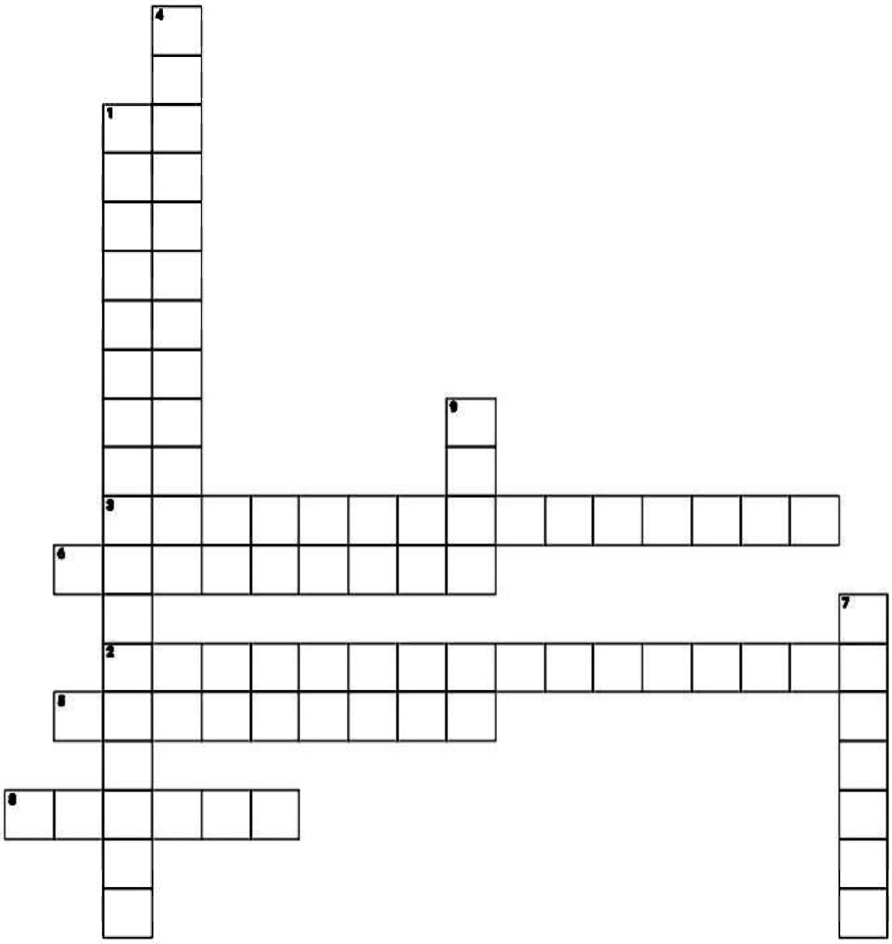
Activity 1 - Cross word puzzle

Across

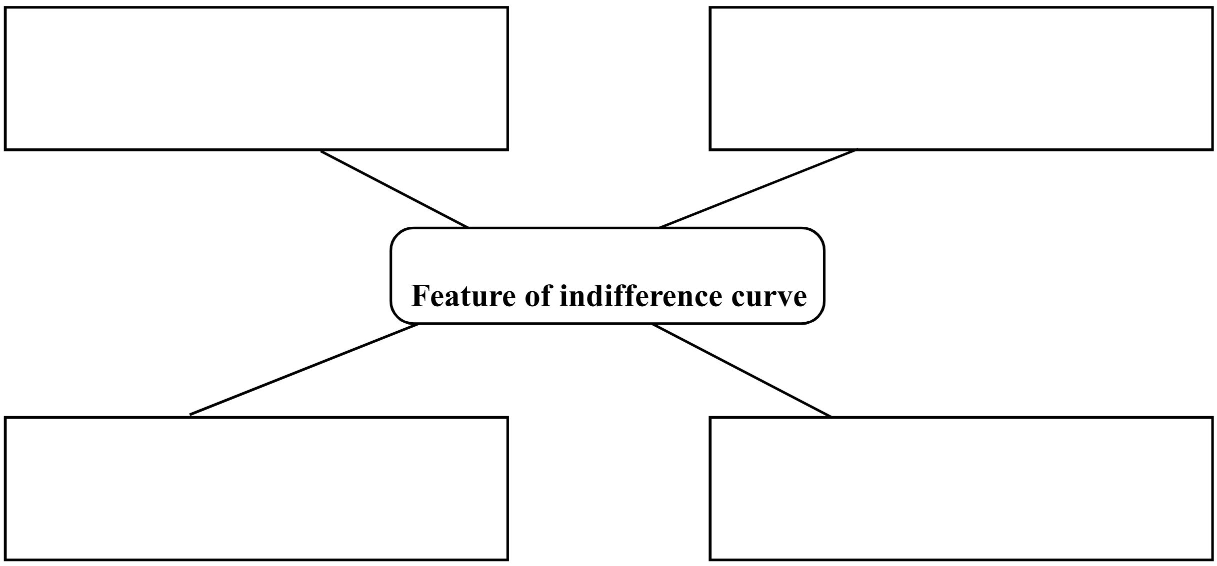
2. The inequality cost less than or equal to his income.
3. A family of indifference curves
5. The set of all bundles available to consumer
6. One who consumes the goods and services
8. Income available to the consumer to buy goods and services.

Down

1. Any combination of two goods and services
2. Buying goods and services to satisfy human wants
7. The want satisfying power of a commodity
9. Slope of an indifference curve.



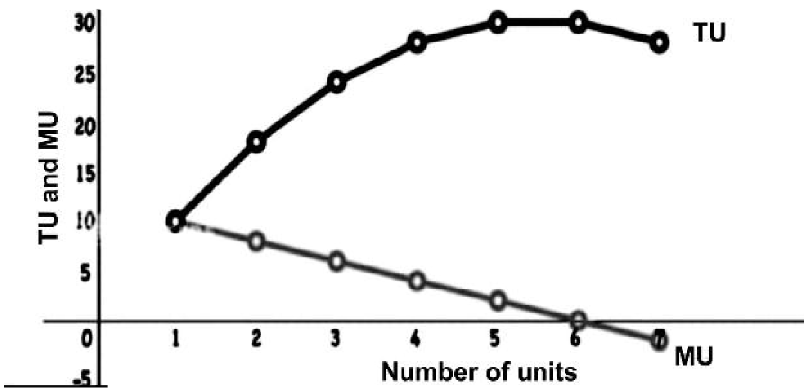
2. Complete the boxes



3. Complete the Utility schedule

No. of units	Total Utility	Marginal Utility
1	10	10
2	18	8
3	24	
4	28	4
5	30	
6	30	
7	28	-2

4. Observe the graph and fill up



1. When TU reaches maxiumum ________ becomes zero
2. When ________ falls MU become negative.

5. Give one word for the following.
   1. The Marginal Utility tends to diminish as more and more units of a commodity are consumed by a consumer.
   2. The rate at which the consumer will substitute one good for the other.
   3. The consumer prefer the bundle which has more of at least one of the goods and no less of other good as compared to the other bundle.
   4. Graph showing all possible combinations of two goods that can be purchased at a given price for a given budget.
   5. The quantity of a commodity that a consumer is willing to buy at a given price.

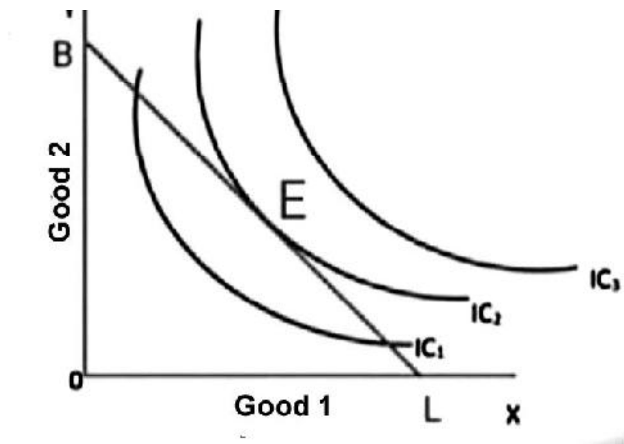
6. Find out Marginal Rate of Subsitution (MRS)

Combinations	Good 1	Good 2	MRS
A	1	15	
B	2	11	
C	3	8	
D	4	6	
E	5	5	

7. Classify the following goods into substitute and complementary goods

Milk and Milk Powder, Shoe and Polish, Ubuntu and Windows, Pen and Book Tea and sugar, Tea and coffee, Shoes and socks, pen and ink.

8. See the diagram given below



a) Identify the Budget Line

b) Write the Budget Line Equation

c) Mark the Consumer's optimum point

d) Write the Consumer's Equilibrium condition.

9. A demand schedule is given below. Understand the schedule and then answer the following.

a) Write the relationship between price of X and Quantity demanded of X

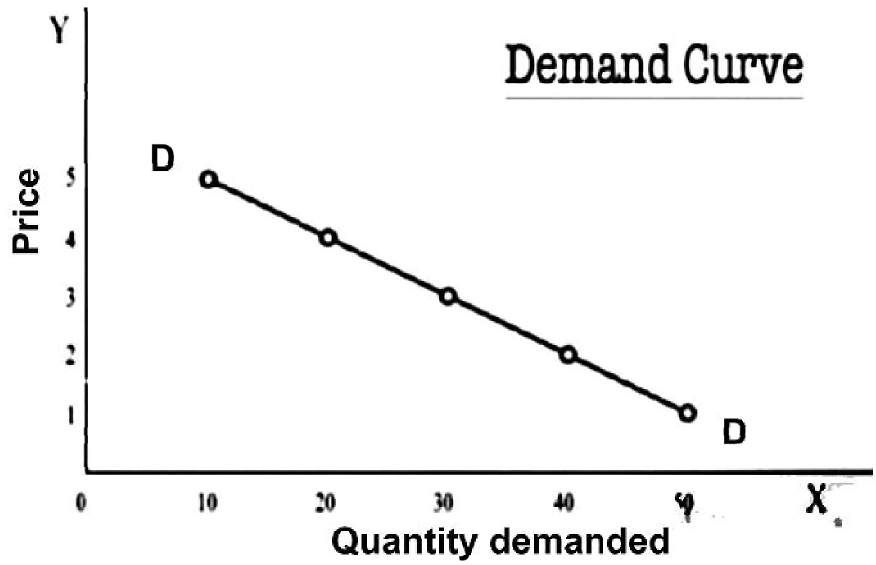
b) Define the law of demand

c) Point out the two effects that explains the negative stope of the demand curve.

Demand Schedule

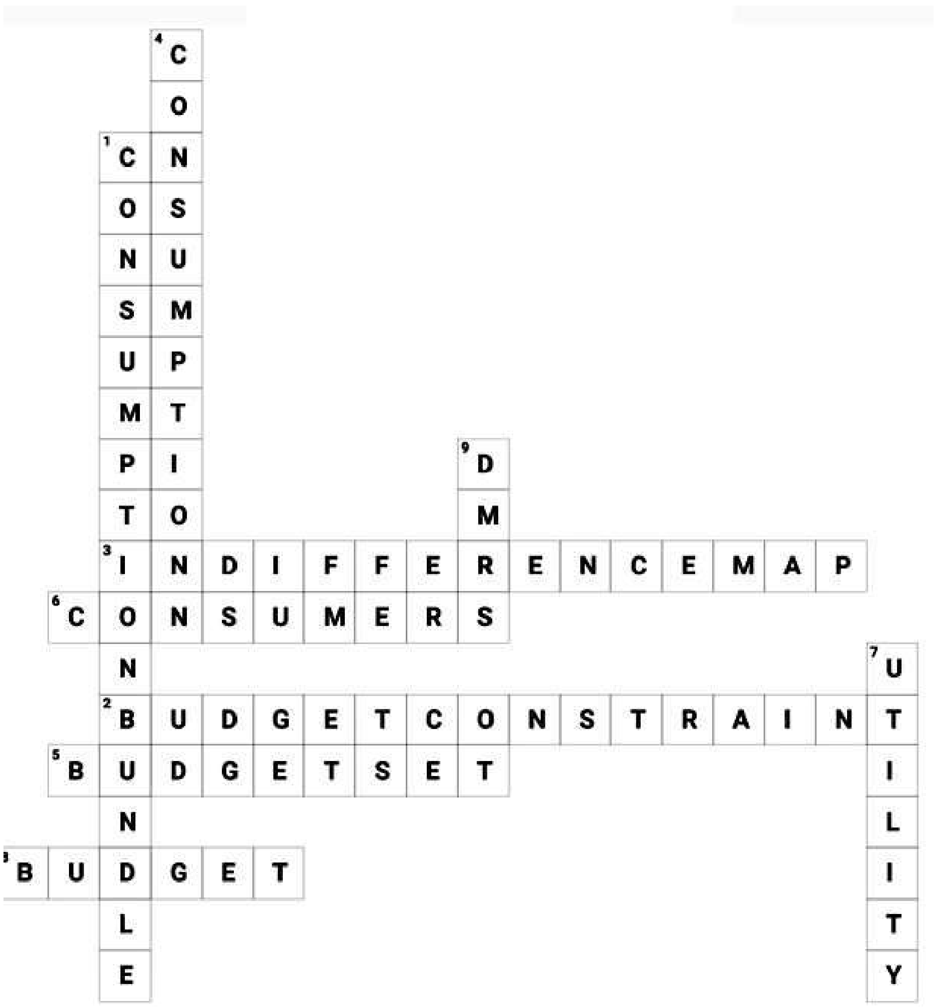
Price of X	Quantity demanded of X
1	50
2	40
3	30
4	20
5	10

10. Demand curve is drawn below. Examine the factors that influence demand for a commodity.



Answers

1.



2. Complete the boxes

IC Stpes from left to right

Two IC never intersect each other

Higher IC gives greater level of utility

IC is convex to the origin

3. Complete the Utility schedule

No. of units	Total Utility	Marginal Utility
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2
6	30	0
7	28	-2

4. Observe the graph and fill up

1. When TU reaches maxiumum **MU** becomes zero
2. When **TU** falls MU become negative.

5.
1. Law of Diminish Marginal Utility
2. Marginal rate of substitution
3. Monotonic preference
4. Budget Line
5. Demand

6. Find out Marginal Rate of Subsitution (MRS)

Combinations	Good 1	Good 2	MRS
A	1	15	-
B	2	11	4:1
C	3	8	3:1
D	4	6	2:1
E	5	5	1:1

7.

Substitute	Complementary
Milk and Milk Powder	Shoe and Polish
Tea and coffee	Pen and Book
Ubuntu and Windows	Tea and sugar
	Shoes and socks

8. a) BL is the Budget Line
   b) P1 X1 + P2 X2 = M
   c) E is the optimum point
   d) Highest possible IC is the tangent to Budget Line
9. a) Inverse relationship between price of X and Quantity demanded of X
   b) Other factors remain the same when price rises. Quantity demanded falls and vice versa.
   c) Income effect and substitution effect
10. a) Price of the commodity
    Income of the consumer (Normal goods, inferior goods)
    Price of related goods (Substitute goods, Complementary goods)

Chapter 3
Production and Cost

Points to remember

- Production : It is the process of transforming inputs into output.
- Production Function : Production function of a firm shows the relationship between the inputs used and output produced by the firm. It tells us that maximum quantity of output (Q) that can be produced by using different combinations of these two factors Labour (L) and Capital (K).

A simple production function can be written as

$$Q = f(L,K)$$

Where Q = Quantity of output

L = Labour

K = Capital

Two types of Factor inputs

- Fixed Factors : The factors which the firm cannot vary in short period. Eg: Land, Capital, Machines, Buildings.
- Variable Factor : The factors which the firm can vary in short period. Eg: Labour, raw materials, power
- The Short Run : A firm cannot vary all the inputs, at least one of the factors, land, labour, or capital cannot be varied.
- The Long Run : All factor inputs can be varied. So in the long run there is no fixed factor.
- The production function in the short run can be explained in terms of Total Product, Average Product and Marginal Product.
- Total product : Total quantity of the commodity produced by using various units of the variable factor along with the fixed factors.
- Average Product : Average product is defined as the output per unit of the variable input.

Average Product = Total Product of Labour/Units of Labour

$$AP_L = TP_L/L$$

- Marinal Product [MP]=Marginal Product of an input is defined as the change in TP per unit change in variable input

Marginal Product = Change in Total Product/Change in Variable in put

$$MP_L = \frac{\Delta TP_L}{\Delta L}$$

- Cost
  - Cost of production is the total cost of using various factors of production.
  - It is the sum of Rent, wages Interest and profit. It depends on price of the factor and Quantity of the factor used.
  - It is derived from production function.

Short Run Costs

- Total Fixed Cost (TFC) : It is defined as the cost that a firm incurs to employ the fixed factors.
- Total Variables Cost (TVC) : It is defined as the cost that a firm incurs to employ the variable factors.
- Total Cost (TC) : It is the sum of Total Fixed Cost and Total Variable Cost

  TC=TFC+TVC
- Short Run Average Cost [SAC] : It is defined as TC per unit of Output.

  SAC = TC/Q

  SAC = AFC+AVC
- Average Variable Cost (AVC) : AVC is defined as TVC per unit of output.

  AVC = TVC/Q
- Average Fixed Cost (AFC) : AFC is defined as TFC per unit of output.

  AFC=TFC/Q

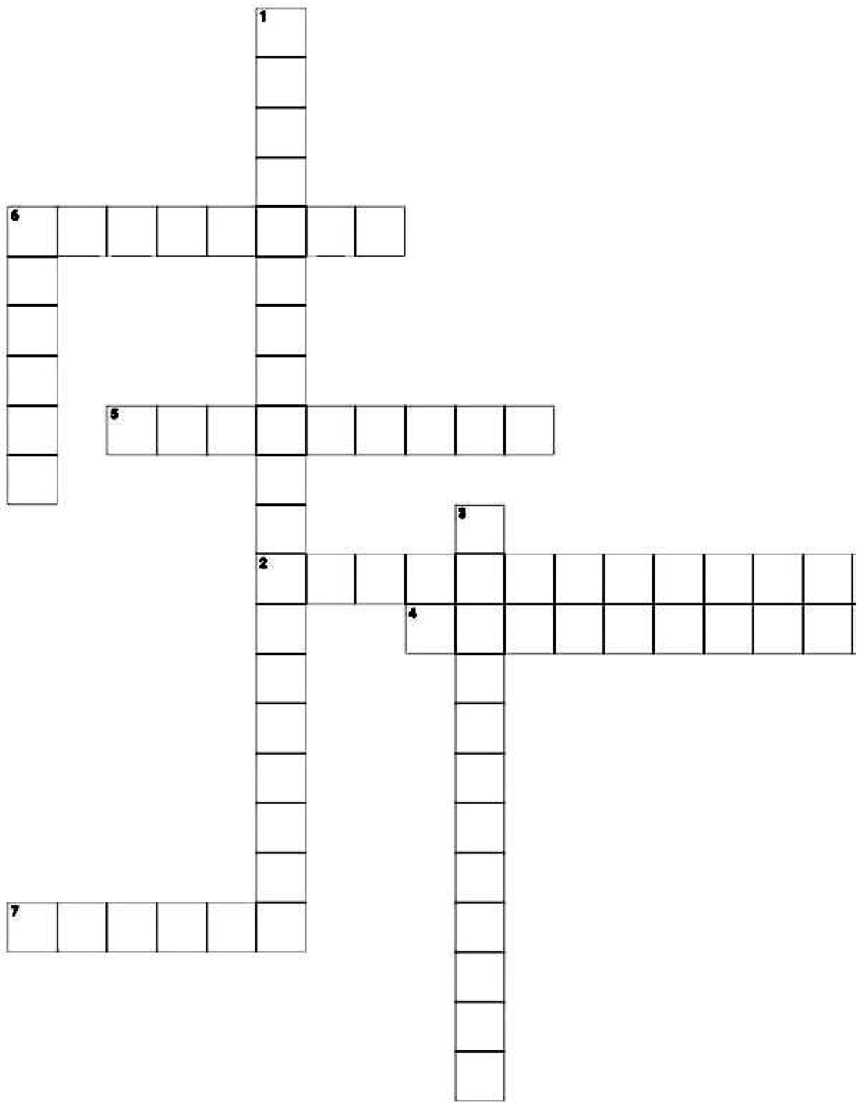
Shapes of the Short Run Cost Curves

- TFC is a horizontal line parallel to X axis. TFC never become zero.
- TVC is an inverse 's' shaped curve starting from the point of origin.
- TC curve is also inverted 's' shape due to the law of variable proportion.
- TC curve is above the TVC curve by the amount of TFC
- The shape of AFC curve will be a rectangular hyperbola.
- AVC curve is 'U' shapped curve.
- SAC curve is U' shaped
- SMC curve is U' shaped.

Relationship between SAC and SMC

- When SMC<SAC, SAC falls
- When SMC=SAC, SAC is the minimum
- When SMC>SAC, SAC rises
- SMC curve cuts the SAC curve from below through the minimum of SAC

Activiy 1



Across

2. Output per unit of variable input
4. Process of transforming inputs into outputs
5. Sum of total fixed cost and total variable cost
6. Combinations of two factors which yield same level of output
7. Combining factor inputs firm produces goods and services.

Down

1 Total variable cost per unit of output
2 Change in total cost per unit of change in output
6 All resources used for production of goods

Activity 2

Match the following

A	B
Factors of production	Form of remuneration
1) Land	a) Wages
2) Labour	b) Rent
3) Capital	c) Profit
4) Enterprise	d) Interest

Activity 3

Complete the Utility schedule

Labour	Total Product	Average Product
0	0	
1	10	
2	24	
3	40	
4	50	
5	56	
6	57	

Activity 4

Schedule A

Capital	Labour	Output
2	0	0
2	1	10
2	2	24
2	3	40
2	4	50
2	5	56
2	6	57

Schedule B

Capital	Labour	Output
2	4	50
3	6	110
4	8	180
5	10	180
6	12	150
7	14	140
8	16	135

Two types of production function schedule (Schedule A, Schedule B) is given above. Choose the short run production function schedule.

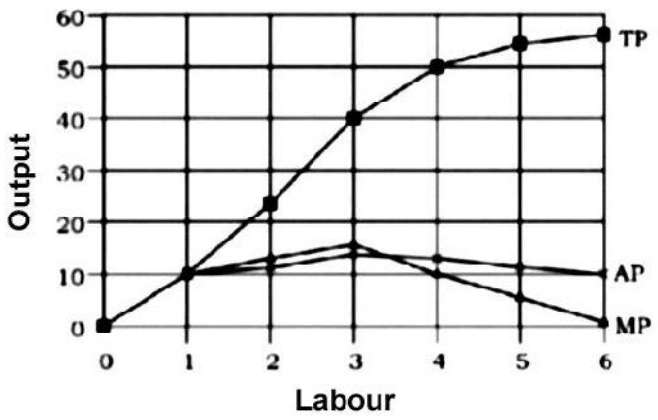
Activity 5

Categorise the following into fixed factor inputs and variable factor inputs.

Land, Labour, Capital, Raw material, Machines, Power, Buildings.

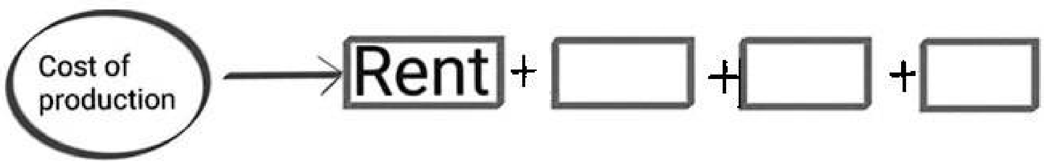
Activity 6

The tendency of the marginal product (MP) is to first increase and then fall is called the law of Diminishing marginal product. By using this information.



Observe the diagram and fill up

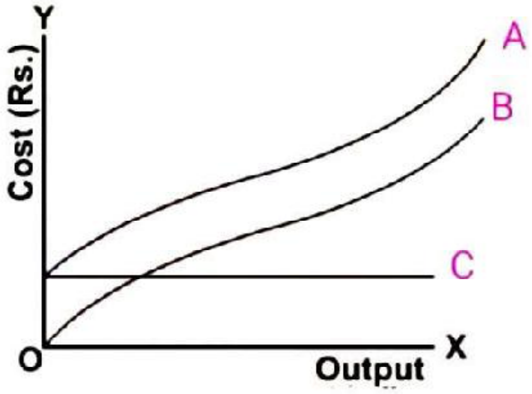
1. In short run, in the initial stages of production ________ increases at an increasing rate then increases at a diminishing rate
2. ________ initially rises, then after a certain level of employment it starts falling.
7. Complete the following



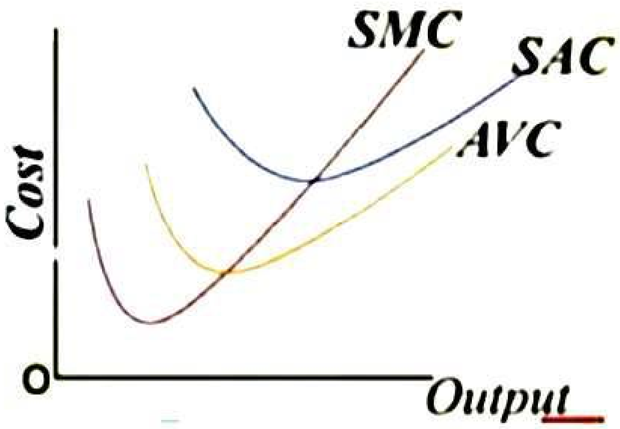
8.

Q	TFC	TVC	TC	AFC	AVC	SAC	SMC
0	20	0					
1	20	10					
2	20	18					
3	20	24					
4	20	23					
5	20	33					
6	20	39					
7	20	47					
8	20	60					
9	20	75					
10	20	95					

9. Short run Total Cost curves are given below. Identify TC, TVC, TFC.



10. Observe the graph.



Complete the following

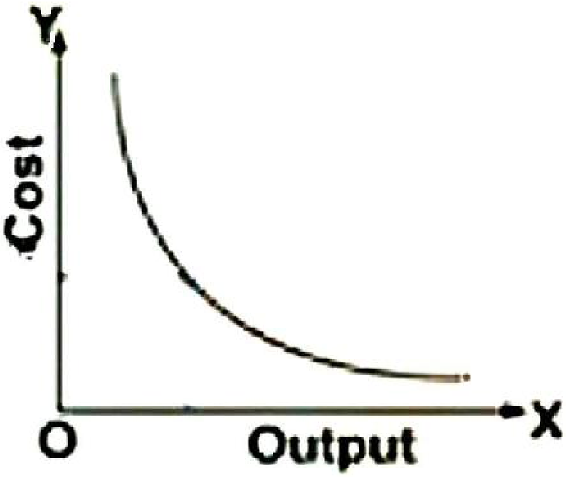
Relationship between SAC and SMC

Cases		Tedency of SAC
When SMC<SAC	a)	SAC falls
When SMC=SAC	b)	....
When SMC>SAC	c)	....

Relationship between AVC and SMC

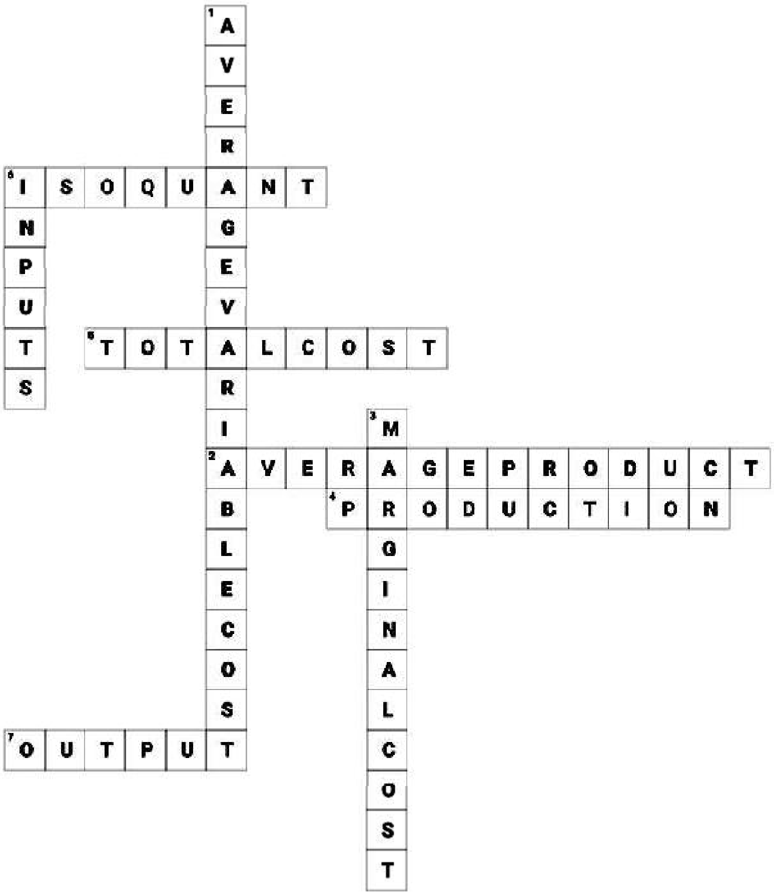
Cases		Tendency of AVC
When SMC < AVC	d)	....
When SMC = AVC	b)	AVC is the minimum
When SMC > AVC	e)	....

11. Identify the cost curve



Answers

1. Cross word puzzle



2. Match the following

A	B
Factors of production	Form of remuneration
1) Land	a) Rent
2) Labour	b) Wages
3) Capital	c) Interest
4) Enterprise	d) Profit

Activity 3

Complete the Utility schedule

Labour	Total Product	Average Product
0	0	-
1	10	10
2	24	12
3	40	13.33
4	50	12.5
5	56	11.2
6	57	9.5

Activity 4

4. Schedule A

Capital	Labour	Output
2	0	0
2	1	10
2	2	24
2	3	40
2	4	50
2	5	56
2	6	57

Schedule B

Capital	Labour	Output
2	4	50
3	6	110
4	8	180
5	10	180
6	12	150
7	14	140
8	16	135

Two types of production function schedule (Schedule A, Schedule B) is given above choose the short run production function schedule

Ans : Schedule A

Activity 5

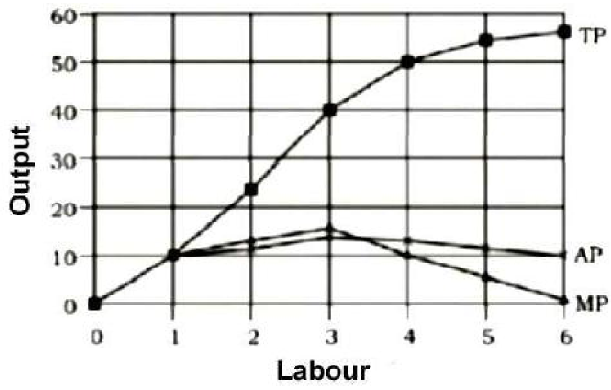
Categorise the following into Fixed factor inputs and variable factor inputs.

Land, Labour, Capital, Raw materials, Machines, Power, Buildings

Fixed Factor Inputs	**Variable Factor Input**
Land	Labour
Capital	Raw material
Machines	Power
Buildings	

Activity 6

The tendency of the marginal product (MP) is to first increase and then fall is called the law of Diminishing marginal product by using this information.



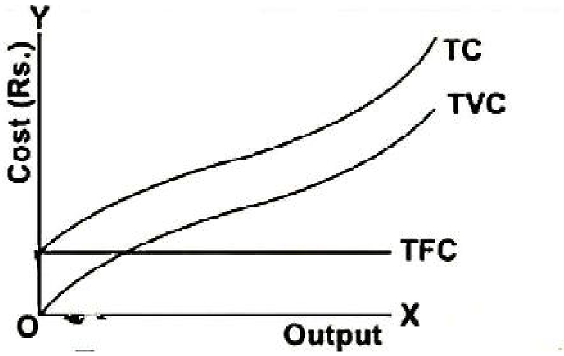
6. Observe the diagram and fill up
   1. In short run, in the initial stages of production **TP** increases at an increasing rate then increases at a diminishing rate
   2. **MP** initially rises, then after a certain level of employment it starts falling.
7. Complete the following

Cost of production → Rent + Wages + Interest + Profit

8. Complete the Table

Q	TFC	TVC	TC	AFC	AVC	SAC	SMC
0	20	0	20	-	-	-	-
1	20	10	30	20	10	30	10
2	20	18	38	10	9	19	8
3	20	24	44	6.67	8	14.67	6
4	20	23	49	5	7.25	12.25	5
5	20	33	53	4	6.6	10.6	4
6	20	39	59	3.33	6.5	9.83	6
7	20	47	67	2.86	6.7	9.57	8
8	20	60	80	2.5	7.5	10	13
9	20	75	95	2.22	8.33	10.55	15
10	20	95	115	2	9.5	11.5	20

9.



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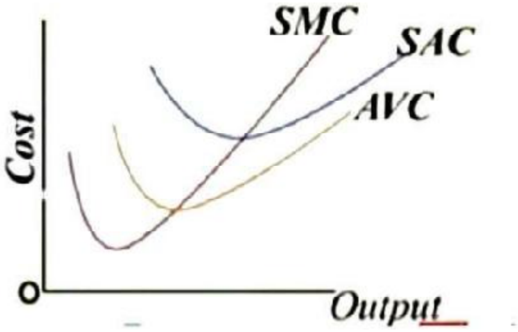


Complete the following

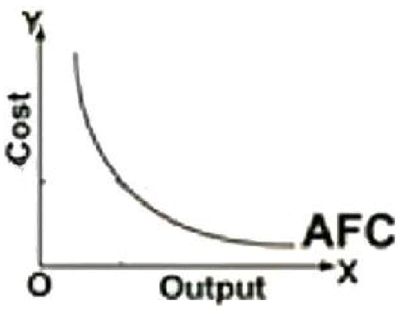
Relationship between SAC and SMC

Cases		Tedency of SAC
When SMC<SAC	a)	SAC falls
When SMC=SAC	b)	SAC is minimum
When SMC>SAC	c)	SAC rises

Relationship between AVC and SMC

Cases		Tendency of AVC
When SMC < AVC	d)	AVC falls
When SMC = AVC	b)	AVC is the minimum
When SMC > AVC	e)	AVC rises

11



Chapter 4

The Theory of a Firm Under Perfect Competition

Points to remember

- Features of perfect competition
    1. Large number of buyers and sellers
    2. Homogenous product
    3. Freedom of entry and freedom of exit
    4. Perfect knowledge about market
    5. No transportation cost
    6. Perfect mobility of factors of production
    7. Price taker

- Revenue is income earned by selling output

  Total revenue is the total amount of money obtained by selling all units of output. TR=pXq
- Marginal revenue is the additional revenue obtained by selling additional units of output. MR=TRn-TR(n-1)
- Average revenue is equal to price and demand curve is the AR curve in perfect competition.

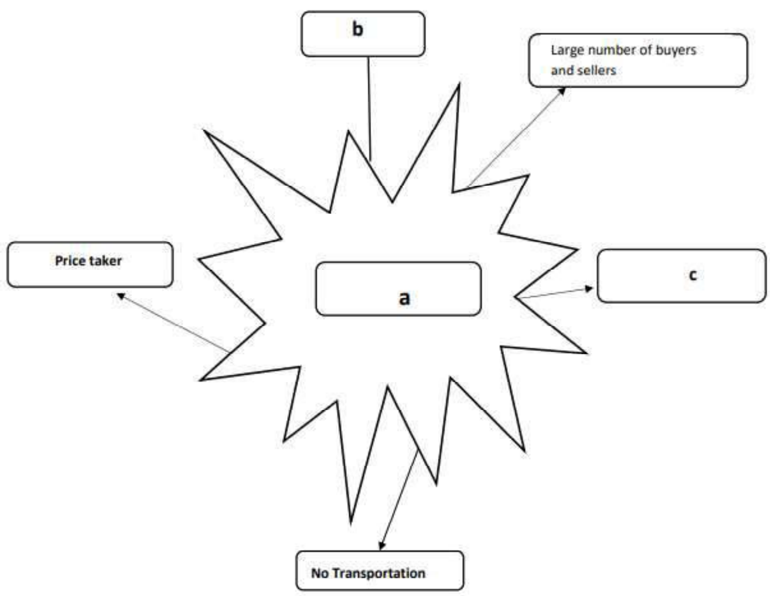
$$AR = \frac{p \times q}{q} = p$$

Average Revenue : Total Revenue per unit of output

$$AR = \frac{TR}{q} = \frac{p \times q}{q} = p$$

Activities

1. Complete and give suitable Title



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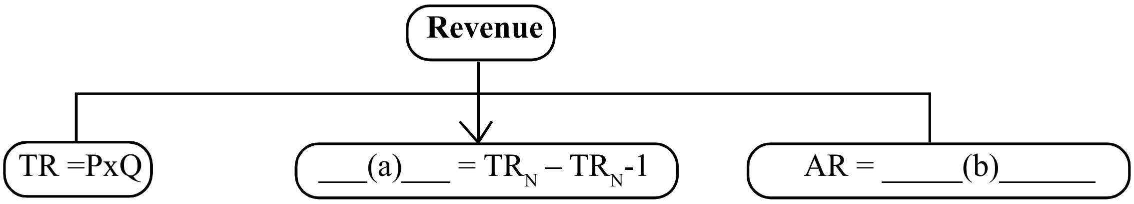


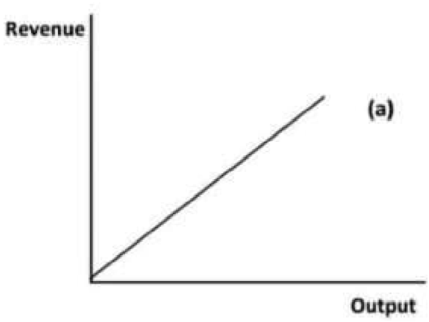
3. Complete the table and answer the following questions :

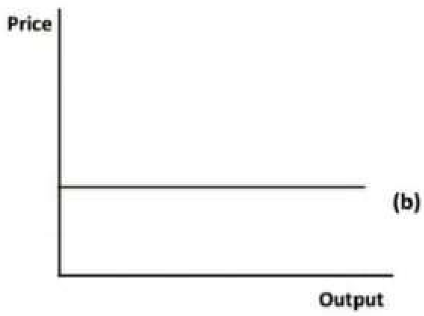
p	q	TR	AR	MR
10	1			
10	2			
10	3			
10	4			
10	5			
10	6			

i) Which type of market is mentioned above?

ii) Is there any relation between AR and p?

4. Two curves of perfect competition are given below. Name the curves.





5. A firm in a perfect competition is a price taker. Why?

Complete :

6. a) Total Revenue Curve - Upward sloping curve

b) Average revenue - ....(a)..........

7. a) Total Revenue - ....(a)..........

b) Marginal Revenue- $\frac{\text{Change in Total Revenue}}{\text{Change in quantity}}$

c) ....(b).......... - $\frac{\text{Total Revenue}}{\text{Quantity}}$

Answer Keys

1. a) Perfect Competition
   b) Homogenous product
   c) free entry and free exit
2. a) MR
   b) $\frac{TR}{q}$

3.

p	q	TR	AR	MR
10	1	10	10	10
10	2	20	10	10
10	3	30	10	10
10	4	40	10	10
10	5	50	10	10
10	6	60	10	10

i) Perfect competition
ii) AR equal to P

4. a) Total Revenue Curve
   b) Price Line
5. Perfect competition is a market where there is perfect knowledge about Market. There is free entry and free exit. So, if a firm in a perfect competition raise the price, it will lose buyers. No firm sells output at a price below market price as it is not economical. As there are large number of buyers and sellers, no individual seller or buyer can influence the market price.
6. (a) Horizontal Straight Line
7. (a) Price x Quantity
   (b) Average Revenue

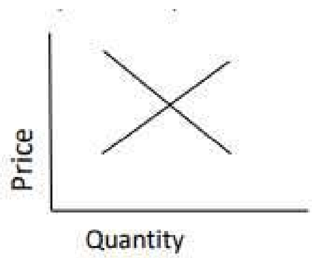
Chapter 5
Market Equilibrium

Points to remember

- In a market there are - Buyers and sellers or consumers and producers. An equilibrium is defined as a situation where the plans of all consumers and the firms in the market match and the market clears.
- In equilibrium market supply equals market demand. That is the aggregate quantity that all firms wish to sell equals the quantity that all the consumers in the market wish to buy.
- Market supply is the total supply of all firms at a given price. Likewise, total demand of a good at a given price is market demand.
- The price at which equilibrium is reached is called equilibrium price and the quantity bought and sold at this price is called equilibrium quantity.
- $qD(P) = qS(P)$ where $q(D)$ =market demand, $q(S)$= market supply, P=price
- If at a price, market supply is greater than market demand we say there is excess supply in the market and when market demand is greater than market supply there is excess demand in the market.
- According to Adam Smith an invisible hand is at play which changes prices whenever there is imbalance.
- Price ceiling and price floor are the two policy instruments used by the government to regulate market.
- The government impose upper limit on the price of goods and services which is called price ceiling.
- The government impose lower limit on the price that may be charged for a particular good or service which is called price floor.
- Price ceiling helps consumers whereas price floor helps producers.

Activities

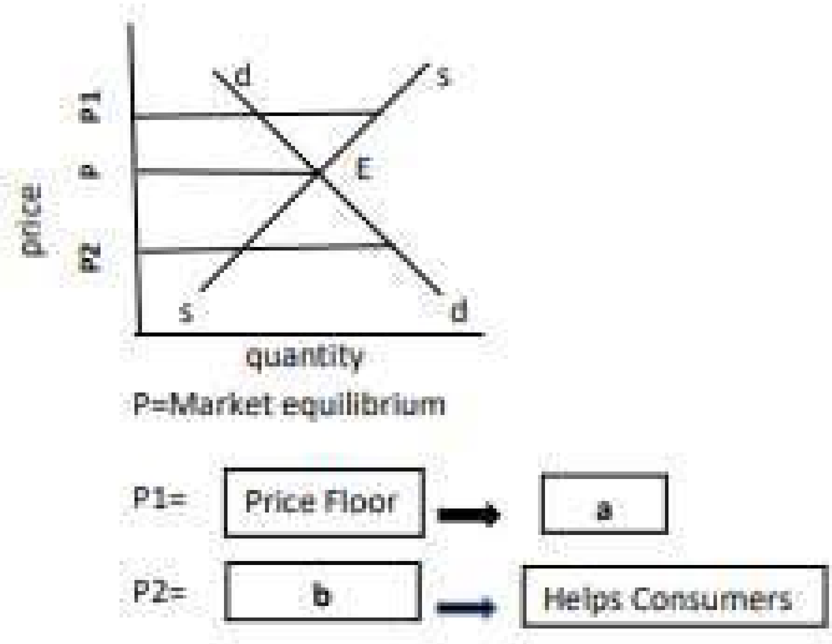
1. Identify the curves in the diagram and mark the equilibrium point, equilibrium price and output.



2. Match the following

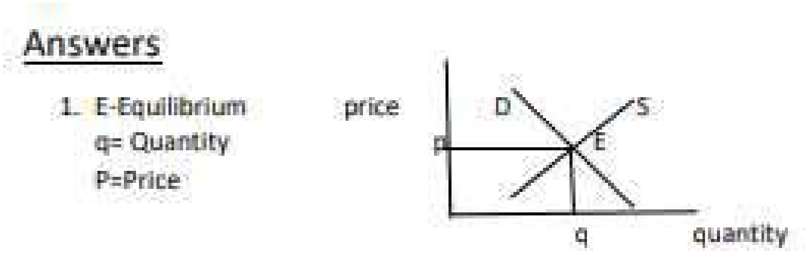
A	B
qd(p) < qs(p)	Equilibrium
qd(p) = qs(p)	Excess demand
qd(p) < qs(p)	Excess supply

3. Fill the blanks
   a) The price at which equilibrium is reached is called…………….
   b) The quantity demanded is greater than quantity supplied is called………….
   c) The quantity bought and sold at the equilibrium price is called…………
   d) The quantity supplied is greater than quantity demanded is called……………
4. Name the two policy instruments used by the government to regulate the market.
5. Name the situation in a perfectly competitive market where there is no excess demand and excess supply.
6. According to classicals …………………is at play which changes prices whenever there is imbalance.
7. Consider the following diagram. Government regulation in market is given. E is the equilibrium point. Fill the blank boxes.



Answers

1.



2.

A	B
qd(p) < qs(p)	Excess supply
qd(p) = qs(p)	Equilibrium
qd(p) < qs(p)	Excess demand

3. a) Equilibrium price
   b) Excess demand
   c) Equilibrium quantity
   e) Excess supply
4. a) Price ceiling
   b) Price floor
5. Market equilibrium
6. Invisible hand
7. a) Helps producers
   b) price ceiling

Chapter 6
Non-Competitive Markets

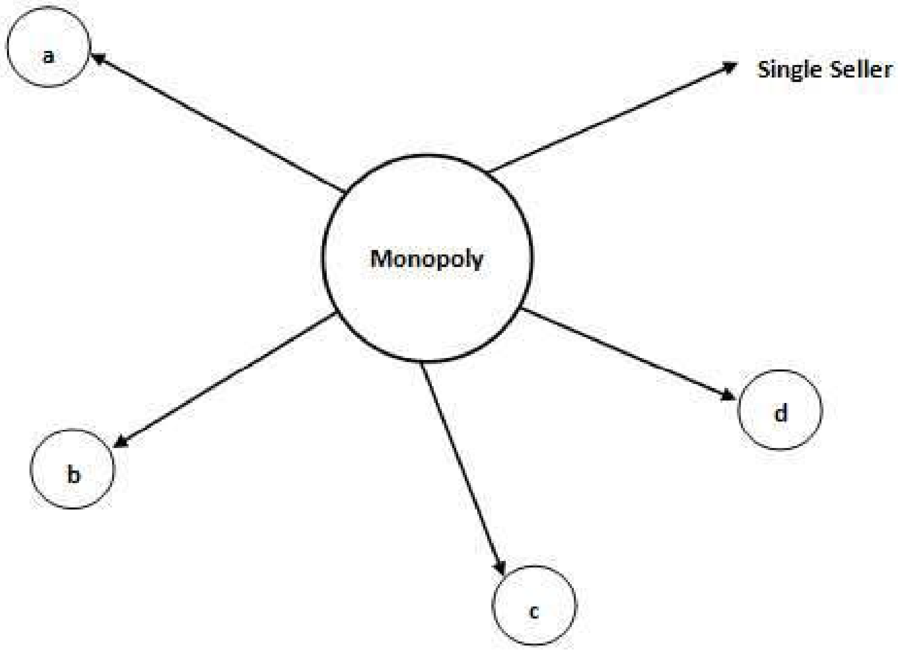
Points to Remember

- Non-competitive Markets – There are monopoly, monopolistic competition and oligopoly
- A Market structure in which there is a single seller is called monopoly

  Features of Monopoly
- Single Seller
- Product has no close substitutes
- Price maker
- Entry of another firm is not allowed
- May practice price discrimination Eg., KSEB, Indian Railway

Activity

1. Complete



2. A Market structure in which there is a single seller is called __________________.
3. Choose correct answer from brackets
   i) Monopoly firm is a ____________________ (price maker / price taker)
   ii) Monopoly firm sells goods which has ____________________ (close substitutes / no close substitutes)

iii) In a monopoly market the entry of the firm is ____________________ (allowed / not allowed)

iv) In a monopoly there exists _____________________ (single seller / large number of sellers) Single Seller Monopoly

Answer Key

1. a. No close substitutes

   b. price maker

   c. Entry of the firm is not allowed

   d. May practice other firms are not allowed

2. Monopoly

3. a. price maker

   b. no close substitutes

   c. not allowed

   d. single seller

GENERAL EDUCATION DEPARTMENT

SAMAGRA SHIKSHA, KERALA