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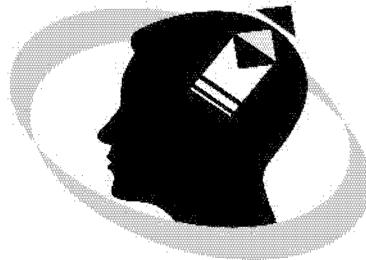

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1. INDIA'S FISCAL POLICY

DIFFERENCES

Q.No.1. Differences between Inflation and Recession Phases of a business cycle. (B)

Inflation(Boom)	Recession
It is an expansionary phase of business cycle	It is a contractionary phase of business cycle
Level of employment, income and general price level increases. Hence excess aggregate demand exists	Level of employment, income and general price level decreases. Hence lesser aggregate demand exists
High taxes are to be levied by the government	Taxes are to be reduced by the government
Government expenditure will be reduced	Government expenditure will be increased
Surplus budget should be prepared	Deficit budget should be prepared
Contractionary fiscal policy is to be implemented	Expansionary fiscal policy is to be implemented

Q.No.2. Differences between Demand side Fiscal policy and Supply side Fiscal policy. (A)

Basis of difference	Demand side Fiscal policy	Supply side Fiscal policy
Scope	Applicable in the **short-run**, to maintain price stability & employment levels	Applicable for **long-run economic growth.**
Focus on	Managing Aggregate **Demand** - to increase demand in case of recession, and to reduce demand in case of Inflation.	Stimulating Aggregate **Supply** in the long-run, to match with increasing Demand, to ensure effective economic growth.
Examples	Expansionary Fiscal Policy in case of recession and Contractionary Policy in case of inflation	• Government spending on Infrastructure, • Govt. providing public goods (Education, R&D, etc.) • Tax incentives for Innovation, Entrepreneurship etc.

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Q.No.3. Differentiate Discretionary Fiscal policy and Non discretionary Fiscal policy. (B)

Basis of difference	Discretionary Fiscal policy	Non-discretionary Fiscal policy (or) Automatic stabilizers
Definition	These are **deliberate policy actions** by the Government, to change the levels of expenditure and taxes, in order to influence the level of National Output, Employment and prices	These are **'Built-in'** fiscal mechanisms that operate automatically to reduce the expansions and contractions of the business cycle.
Other Names	Expansionary fiscal policy and Contractionary fiscal policy	Personal Income Taxes, Corporate Income Taxes and Transfer Payments

Q.No.4. Expansionary Fiscal Policy Vs. Contractionary Fiscal Policy (A)

Basis of difference	Expansionary Fiscal policy	Contractionary Fiscal policy
When used?	When there is an anticipation of a business cycle contraction	When there is anticipation of a business-cycle expansion which is likely to induce inflation.
Applies to	**Recession / Deflation situation,** i.e. low growth rate, with fall in Aggregate Demand	**Inflation,** i.e. high growth rate with inflation and asset bubbles.
Scenario	• Decline in overall economic activity, • Decline in Real GDP, • Higher rates of unemployment, • Fall in Aggregate Demand	• Increase in economic activities of Consumption and Investment, due to higher levels of Disposable Incomes with Households and Firms, • Level of employment increases • Increase in Aggregate Demand , • Higher Factor Prices with higher cost of production
Gap to be addressed	Recessionary gap	Inflationary gap
Operation	**Increases** aggregate demand	**Increases** aggregate demand.
Usage of Policy Tools	• Lower Personal and Corporate Taxes, • High Government Spending, • Reduction in Government Borrowing, and • Higher Budget Deficit or Reduced Surplus	• Higher Personal and Corporate Taxes, • Reduced Government Spending, • Increase in Government Borrowing, and • Smaller Budget Deficit or Higher Surplus.
Impact	• Higher levels of Disposable income and more Government spending increases the Consumption levels of Households. • Lower Corporate Taxes gives more Income for Firms to increase investment. New Firms are attracted to invest, due to lower taxes. • Higher Consumption and Investment, simulates the economy, and increases Aggregate Demand	• Higher Taxes, lower levels of Disposable income and less Government spending reduces the Consumption Levels of Households. • Higher Corporate Taxes leads to less Net Incomes for Firms, and consequently lower investment. New Firms do not enter the field, due to higher taxes. • Lower Consumption and Investment, regulates the economy, and moderates the unsustainable increase in Aggregate Demand.

Q.No.5. Balanced Budget Vs. Surplus Budget Vs. Deficit Budget (A)

Basis of difference	Balanced Budget	Surplus Budget	Deficit Budget
Net Revenue	Revenue = Expenditure	Revenue > Expenditure	Revenue < Expenditure
Leakages and injections	Leakages = injections	Leakages > injections	Leakages< injections
Effect on aggregate demand	No	Negative	Positive
Prepared during	-	Inflation	Deflation/recession

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Q.No.6. Differentiate between Boom, Recession and Depression (A)

Boom	Recession	Depression
It is an expansionary phase of business cycle	It is a Contractionary phase of business cycle	It is a Contractionary phase of business cycle
A boom refers to a period of increased economic activity within either a business, market, industry or economy as a whole	Recession is typically defined as a decline in gross domestic product for a period of time	Depression is a severe and prolonged downturn in economic activity.

SUMMARY

- From a macro-economic perspective, the focus of fiscal policy is on the aggregate economic activity of governments, say, aggregate expenditure, taxes, transfers and issues of government debts and deficits and their effects on aggregate economic variables such as total output total employment, unemployment rate, inflation, overall economic growth etc.
- Laissez-faire approach advocated limited role of government resulting in non-recognition of the significance of fiscal policy as a strategy for achieving certain socio economic objectives till 1930.
- Through the use of budgetary instruments, such as public revenue, public expenditure, public debt and deficit financing, governments intend to favourably influence the level of economic activity of a country.
- The objectives of fiscal policy may vary from country to country, but generally they are: achievement and maintenance of full employment, maintenance of price stability, acceleration of the rate of economic development and equitable distribution of income and wealth.
- Fiscal policy involves the use of government spending, taxation and borrowing to influence both the pattern of economic activity and level of growth of aggregate demand, output and employment.
- Non-discretionary fiscal policy or automatic stabilizers are part of the structure of the economy and are 'built-in' fiscal mechanisms that operate automatically to reduce the expansions and contractions of the business cycle.
- Automatic stabilisation occurs through automatic adjustments in government expenditures and taxes without any deliberate governmental action i.e. by limiting the increase in disposable income during an expansionary phase and limiting the decrease in disposable income during the contraction phase of the business cycle.
- During recession incomes are reduced leading to lower tax payments. Government expenditures increase due to increased transfer payments. These together provide proportionally more disposable income available for consumption spending to household
- When an economy expands, employment increases, incomes rise and the amount of transfer payments decline resulting in proportionally less disposable income available for consumption expenditure.
- Discretionary fiscal policy refers to deliberate policy actions on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment and prices.
- Since GDP = C + I + G + NX, governments can influence economic activity (GDP), by controlling G directly and influencing C, I, and NX indirectly, through changes in taxes, transfer payments and expenditure.
- The Keynesian school is of the opinion that fiscal policy can have very powerful effects in altering aggregate demand, employment and output in an economy when the economy is operating at less than full employment levels and when there is a need to offer stimulus to demand.
- The tools of fiscal policy are taxes, government expenditure, public debt and the budget.

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- Expansionary fiscal policy is designed to stimulate the economy during the contractionary phase of a business cycle and is accomplished by increasing aggregate expenditures and aggregate demand through an increase in all types of government spending and / or a decrease in taxes
- Contractionary fiscal policy is designed to restrain the levels of economic activity of the economy during an inflationary phase by decreasing the aggregate expenditures and aggregate demand through a decrease in all types of government spending and/ or an increase in taxes
- A recession sets in with a period of declining real income, as measured by real GDP and a situation of rising unemployment.
- A recessionary gap, also known as a contractionary gap, is said to exist if the existing levels of aggregate production is less than what would be produced with the full employment of resources
- Government expenditure, an important instrument of fiscal policy, generates incomes and also has indirect effect in the form of working of multiplier.
- Pump priming means that when private spending becomes deficient, certain volumes of public spending will help to revive the economy.
- Compensatory spending is said to be resorted to when the government spending is carried out with the obvious intention to compensate the deficiency in private investment.
- Taxes determine the size of disposable income in the hands of general public which in turn determines aggregate demand and possible inflationary and deflationary gaps
- During recession and depression, the tax policy is framed to encourage private consumption and investment. A general reduction in income taxes, low corporate taxes increase aggregate demand and investments respectively.
- During inflation new taxes can be levied and the rates of existing taxes are raised to reduce disposable incomes and to wipe off the surplus purchasing power
- Borrowing from the public through the sale of bonds and securities curtails the aggregate demand in the economy. Repayments increase the availability of money in the economy and increase aggregate demand.
- Budget is widely used as a policy tool to stimulate or contract aggregate demand as required.
- Fiscal policy also aims to attain long-run economic growth through policies to stimulate aggregate supply. Fiscal policy is a chief instrument available for governments to influence income distribution and plays a significant role in reducing inequality and achieving equity and social justice.
- Contractionary fiscal policy is aimed at eliminating inflationary gaps and to trim down the aggregate demand by decrease in government spending and an increase in personal income taxes and/or business taxes causing less disposable incomes and lower incentives to invest.
- Fiscal policy suffers from limitations such as limitations in respect of choice of appropriate policy, recognition lag, decision lag, implementation lag, impact lag, inappropriate timing, difficulties of forecasting due to uncertainties, possible conflicts between different objectives, possibility of generating disincentives, practical difficulty to reduce government expenditures and the possibility of certain fiscal measures replacing private spending or crowding out private spending.

LIST OF FORMULAE

1. $Y_d = Y - T$

Where, Y_d is the disposable income, Y is the national income and T is the tax rate

2. Change in taxes = $\tau \times \Delta Y$

Where τ = marginal tax rate

ΔY = Change in the national income,

3. Change in disposable income = $\Delta y_d = (\Delta Y - \Delta T)$

4. **Change in consumption (or) Marginal Propensity to Consume:**

$$\Delta c = mpc_d \Delta y_d$$

Δc = Change in consumption

mpc_d = marginal propensity to consume out of disposable income

Δy_d = Change in disposable income

5. **Change in National Income:**

$$\Delta y = \frac{1}{1-mpc} \Delta g$$

Where,

Δy = Change in National Income

Δg = Change in Government Expenditure

6. Change in deficit = $(\Delta g - \Delta t)$

7. **Fiscal policy multiplier:**

$$\Delta C = \frac{mpc_d}{1-mpc_d}(\Delta g - \Delta t)$$

Where,

Δg = Change in Government expenditure,

Δt = Change in taxes

ΔC = Change in consumption

mpc_d = marginal propensity to consume out of disposable income

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8. **Multiplier for Government Expenditure:**

$$\Delta y = \frac{1}{1-mpc} \Delta g$$

Where,

Δy = Change in National Income

Δg = Change in Government Expenditure

ILLUSTRATIONS

1. Suppose that the increase in government spending has been Rs. 5 billion. Assume that the marginal propensity to consume of people is equal to 0.6.
   - i) what will be the government spending multiplier ***(ANS.: 2.5)***
   - ii) What impact would a Rs. 5 billion increase in government expenditure have on equilibrium GDP? ***(ANS.: RS. 12.5 BILLION)***
2. Suppose that the marginal tax rate is τ = 1/3, and the marginal propensity to consume out of disposable income is mpc_d = 9/10.
   - a) If national income rises by one dollar, what will be the change in disposable income and change in consumption or marginal propensity to consume out of national income. ***(ANS.: DISPOSABLE INCOME RISES BY 2/3 AND MPC RISES BY 3/5)***
   - b) Suppose that the government expenditure rises by one dollar. What will be the change in national income, change in consumption and change in taxes? ***(ANS.: NATIONAL INCOME RISES BY 2½; CONSUMPTION RISES BY 1½ AND TAXES RISE BY 5/6)***
3. From the same information of 2nd question, Calculate change in deficit and fiscal multiplier. ***(ANS.: DEFICIT RISES BY 1/6 AND FISCAL MULTIPLIER IS 2 ¼)***

MULTIPLE CHOICE QUESTIONS (MCQ'S)

1. Macroeconomic stabilization may be achieved through
a) Free market economy
b) Fiscal policy
c) Monetary policy d) (b) and (c) above

2. Which of the following policies of the government fulfills the redistribution function
a) Parking the army on the northern borders of the country
b) Supply of medicines at subsidized prices to the poor people
c) Controlling the supply of money through monetary policy
d) None of the above

3. Choose the correct statement
a) Fiscal policy involves the use of changes in taxation and government spending; while monetary policy involves the use of price and profit controls.
b) Fiscal policy involves the use of price and profit controls; while monetary policy involves the use of taxation and government spending.
c) Fiscal policy involves the use of changes in taxation and government spending; while monetary policy involves the use of changes in the supply of money and interest rates.
d) Fiscal policy involves the use of changes in the supply of money and interest rates; while monetary policy involves the use of changes in taxation and government spending.

4. The justification for government intervention is best described by
a) The need to prevent recession and inflation in the economy
b) The need to modify the outcomes of private market actions
c) The need to bring in justice in distribution of income and wealth
d) All the above

5. A recession is characterized by
a) Declining prices and rising employment
b) Declining unemployment and rising prices
c) Declining real income and rising unemployment.
d) Rising real income and rising prices

6. When the government decides to produce fertilizers and supply them to the agriculturists, it aims
a) To achieve equity and fairness to the agriculturists
b) To influence the way resources are allocated in the economy
c) To ensure higher profits to agriculturists
d) To make greater profits for the public sector

7. Read the following statements:

i) The market-generated allocation of resources is usually imperfect and leads to inefficient allocation of resources in the economy

ii) Market failures can at all times be corrected through government intervention

iii) Public goods will not be produced in sufficient quantities in a market economy

Of the three statements above:
a) i), ii) and iii) are correct
b) i) and iii) are correct
c) ii) and iii) are correct
d) iii) alone is correct

8. The allocation and distribution functions are primarily:
a) Micro-economic functions
b) Macro-economic functions
c) both micro as well as macro-economic functions
d) aimed at bringing in price stability and economic growth

9. If Real GDP is continuously declining and the rate of unemployment in the economy is increasing , the appropriate policy should be to
a) Increase taxes and decrease government spending
b) Decrease both taxes and government spending
c) Decrease taxes and increase government spending
d) Either (a) or (c)

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10. Which of the following are likely to occur when an economy is in an expansionary phase of a business cycle?
A. Rising unemployment rate
B. Falling unemployment rate
C. Rising inflation rate
D. Deflation
E. Falling or stagnant wage for workers
F. Increasing tax revenue
G. Falling tax revenue
a) A, B and F are most likely to occur
b) B, C and F and are most likely to occur
c) D, E and F are most likely to occur
d) A, E and G are most likely to occur

11. Fiscal policy refers to
a) use of government spending, taxation and borrowing to influence the level of economic activity
b) government activities related to use of government spending for supply of essential goods
c) use of government spending, taxation and borrowing for reducing the fiscal deficits d) (a) and (b) above

12. During recession fiscal policy of the government should be directed towards
a) Increasing the taxes and reducing the aggregate demand
b) Decreasing taxes to ensure higher disposable income
c) Increasing government expenditure and increasing taxes d) None of the above

13. Automatic stabilizers
a) Work towards stimulating aggregate spending during economic expansion and reducing aggregate spending during the recessionary phase.
b) Provide proportionally more disposable income available for consumption spending to households during expansion
c) Work towards stimulating aggregate spending during the recessionary phase and reducing aggregate spending during economic expansion.
d) Provide proportionally less disposable income available for consumption spending to households during contraction

14. Which of the following policies is likely to shift an economy's aggregate demand curve to the right?
a) Increase in government spending
b) Decrease in taxes
c) A tax cut along with increase in public expenditure d) All the above

15. Keynesian economists believe that
a) fiscal policy can have very powerful effects in altering aggregate demand, employment and output in an economy
b) when the economy is operating at less than full employment levels and when there is a need to offer stimulus to demand fiscal policy is of great use
c) Wages are flexible and therefore business fluctuations would be automatically adjusted
d) (a) and(b) above

16. Discretionary fiscal policy
a) refers to the working of built in stabilizers to change the levels of expenditure and taxes to influence the level of national output, employment and prices
b) refers to how governments may directly as well as indirectly influence the level of taxes to attain export competitiveness
c) refers to deliberate policy actions on the part of the government to change the levels of expenditure and taxes to influence the level of national output, employment and prices
d) refers to deliberate policy actions on the part of the government to change the composition of taxes to influence compliance

17. Identify the incorrect statement
a) A progressive direct tax system ensures economic growth with stability because it distributes the burden of taxes equally
b) A carefully planned policy of public expenditure helps in redistributing income from the rich to the poorer sections of the society.
c) There are possible conflicts between different objectives of fiscal policy such that a policy designed to achieve one goal may adversely affect another
d) An increase in the size of government spending during recessions may possibly 'crowd-out' private spending in an economy.

18. Which of the following may ensure a decrease in aggregate demand during inflation
a) decrease in all types of government spending and/ or an increase in taxes
b) increase in government spending and/ or a decrease in taxes
c) decrease in government spending and/ or an decrease in taxes
d) All the above

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19. Discretionary fiscal policy differs from non-discretionary fiscal policy in which of the following manner?
a) Discretionary fiscal policy is concerned with government spending and non-discretionary fiscal policy deals with tax policy
b) Discretionary fiscal policy is concerned with government spending and non-discretionary fiscal policy deals government revenues
c) Discretionary fiscal policy is concerned with deliberate actions on the part of the government and non-discretionary fiscal policy works automatically
d) Discretionary fiscal policy is built into the system and non-discretionary fiscal policy is concerned with deliberate actions on the part of government

20. Which one of the following is an example of discretionary fiscal policy?
a) A tax cut aimed at increasing the disposable income and spending
b) A reduction in government expenditure to contain inflation
c) An increase in taxes and decrease in government expenditure to control inflation
d) All the above

21. Which of the following would illustrate a recognition lag?
a) The time required to identify the appropriate policy
b) The time required to identify to pass legislation
c) The time required to identify the need for a policy change
d) The time required to establish the outcomes of fiscal policy

22. An expansionary fiscal policy, taking everything else constant, would in the short-run have the effect of
a) A relative large increase in GDP and a smaller increase in price
b) A relative large increase in price , a relatively smaller increase in GDP
c) Both GDP and price will be increasing in the same proportion
d) Both GDP and price will be increasing in a smaller proportion

23. Which statement (s) is (are) correct about crowding out?
I. A decline in private spending may be partially or completely offset the expansion of demand resulting from an increase in government expenditure.
II. Crowding out effect is the negative effect fiscal policy may generate when money from the private sector is 'crowded out' to the public sector.
III When spending by government in an economy increases government spending would be crowded out.
IV. Private investments, especially the ones which are interest –sensitive, will be reduced if interest rates rise due to increased spending by government
a) I and III only b) I, II, and III
c) I, II, and IV d) III only

KEY:

1.	D	2.	B	3.	C	4.	D
5.	C	6.	B	7.	B	8.	A
9.	C	10.	B	11.	A	12.	B
13.	C	14.	D	15.	D	16.	C
17.	A	18.	A	19.	C	20.	D
21.	C	22.	A	23.	C		

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2. MARKET FAILURE AND GOVERNMENT INTERVENTION

DIFFERENCES

Q.No.1. Differentiate between Private cost and Social Cost (A)

Basis of difference	Private Cost	Social Cost
Definition	It is the cost incurred and recognised by the Producer or Consumer directly involved in a transaction.	It is the total Costs to the society on account of a Production or Consumption Activity
Inclusions	Each producing Firm's Private cost comprises Direct Cost of Production (Materials, Labour, and Overheads) only which does **not** include effect of Negative Externalities.	Social Costs = Private Costs (directly borne by the persons involved) + External Costs (Not directly borne by the persons)
Examples	No Pollution - related taxes/ penalties.	

Q.No.2. Differentiate between Rivalrous and Non rivalrous nature of the goods (B)

Rivalrous	Non rivalrous
Consumption by one person reduces the benefit of consumption by another person	Consumption by one person does not reduces the benefit of consumption by another person
Category A and Category C goods are rivalrous	Category B and Category D goods are Non - rivalrous

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Q.No.3. Differentiate between Excludability and Non Excludability of consumption (B)

Excludability	Non Excludability
It is possible to exclude or prevent consumers who have not paid for them from consuming them.	It is not possible to exclude or prevent consumers who have not paid for them from consuming them.
Those who want to consume private goods must buy them at a price from its sellers.	Nonpaying consumers cannot be prevented from accessing it.

Q.No.4. Differentiate between Public good and Private good (C)

Basis of difference	Public good	Private good
Property right	Inadequate Property right	Individual Property right
Nature of Rivalry	Non Rivalrous	Rivalrous
Excludability	Non Excludable	Excludable
Divisibility	Indivisible	Divisible
Free rider problem	Free rider problem exists	No Free rider problem
Additional or marginal resource cost	Zero	Positive

Q.No.5. Differentiate between Club goods and Variable use public goods. (C)

Club goods	Variable use public goods
First studied by Buchanan	First analyzed by Oakland and Sandmo
These goods are replicable i.e. individuals who are excluded from one facility may get similar services from an equivalent provider.	They are not replicable i.e. the facility should be accessible to all potential users. Once they are provided, everybody can use it.
These goods are excludable	These goods can be excludable or non-excludable. If they are excludable, some people can be discouraged from using it frequently and thus the frequency of usage of the public good can be controlled.
Examples are facilities such as swimming pools, fitness centres etc.	Examples are facilities such as roads, bridges etc.

Q.No.6. Capitalist Vs. Socialist Vs. Mixed Economies (C)

Basis of difference	Capitalist Economy	Socialist Economy	Mixed Economy
Origin date and place	1400 A.D. in Europe	1800 A.D. in France	-
Means of production owned by	Private sector	Public sector	Both Private or public sector
Government Interference	No or marginal	Government decides every thing	Less when compared to capitalist economy
Prices determined by	Price mechanism or Market mechanism	Government	Both Price mechanism and Government
Basis Principle	Individual rights	Equality	Both individual and equality

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SUMMARY

- Market failure is a situation in which the free market fails to allocate resources efficiently in the sense that there is either overproduction or underproduction of particular goods and services leading to less than optimal market outcomes.
- The demand-side market failures are said to occur when demand curves do not take into account the full willingness of consumers to pay for a product. The supply -side market failures happen when supply curves do not incorporate the full cost of producing the product.
- The price system and markets work efficiently only if market prices convey information to both producers and consumers.
- There are four major reasons for market failure. They are: market power, externalities, public goods, and incomplete information.
- Excessive market power causes the single producer or small number of producers to produce and sell less output than would be produced and charge a higher price in a competitive market.
- Externalities also referred to as ‘spillover effects’, ‘neighbourhood effects’ ‘third-party effects’, or ‘side-effects’, occur when the actions of either consumers or producers result in costs or benefits that do not reflect as part of the market price.
- Externalities cause market inefficiencies because they hinder the ability of market prices to convey accurate information about how much to produce and how much to buy. Since externalities are not reflected in market prices, they can be a source of economic inefficiency.

- Externalities are initiated and experienced, not through the operation of the price system, but outside the market and therefore, are external to the market.
- Externalities may be unidirectional or reciprocal. Externalities can be positive or negative. Negative externalities occur when the action of one party imposes costs on another party. Positive externalities occur when the action of one party confers benefits on another party.
- The four possible types of externalities are: Negative externality initiated in production which imposes an external cost on others. Positive production externality, less commonly seen, initiated in production that confers external benefits on others. Negative consumption externalities initiated in consumption which produce external costs on others. Positive consumption externality initiated in consumption that confers external benefits on others. Each of the above may be received by another in consumption or in production. The firm or the consumer as the case may be, however, has no incentive to account for the external costs that it imposes on consumers
- Private cost is the cost faced by the producer or consumer directly involved in a transaction and includes direct cost of labour, materials, energy and other indirect overheads and does not incorporate externalities.
- Social cost is the entire cost which the society bears. Social Cost =Private Cost + External Cost.
- When negative production externalities exist, social costs exceed private cost. If producers do not take into account the externalities, there will be overproduction and market failure and unwarranted social consequences.
- When firms do not have to worry about negative externalities associated with their production, the result is excess production and unnecessary social costs.
- A public good (also referred to as a collective consumption good or a social good) is defined as one which all individuals enjoy in common in the sense that each individual's consumption of such a good leads to no subtraction from any other individual's consumption of that good.
- Private goods are 'rivalrous' 'and excludable' and less likely to have the free rider problem. Additional resource costs are involved for providing to another.
- Public goods consumption is indivisible, collective, non-rival, non-excludable and vulnerable to externalities and free rider problems.
- Public goods do not conform to the settings of market exchange and left to the market, they will not be produced at all or will be under produced. This is because the price becomes zero
- A pure public good is non-rivalrous and non-excludable. Impure public goods are partially rivalrous or congestible. Because of the possibility of congestion, the benefit that an individual gets from an impure public good depends on the number of users.
- The provider of an impure public good may be able to control the degree of congestion either by regulating the number of people who may use it, or the frequency with which it may be used or both.
- The quasi-public goods or services, also called a near public good (for e.g. education, health services) possess nearly all of the qualities of the private goods and some of the benefits of public good. They exhibit market failure as incomplete markets.
- Common access resources or common pool resources are a special class of impure public goods which are non-excludable as people cannot be excluded from using them. These are rival in nature and their consumption lessens the benefits available for others.
- Since price mechanism does not apply to 'common resources', producers and consumers do not pay for these resources and therefore, they overuse them and cause their depletion and degradation.
- Economists use the term 'tragedy of the commons' to describe the problem which occurs when rivalrous but non excludable goods are overused to the disadvantage of the entire universe.
- The incentive to let other people pay for a good or service, the benefits of which are enjoyed by an individual is known as the free rider problem.

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- If every individual plays the same strategy of free riding, the strategy will fail because nobody is willing to pay and therefore nothing will be provided by the market.
- Complete information is an essential element of competitive market. But it is not fully satisfied in real world markets for goods or services due to highly complex nature of products.
- Asymmetric information occurs when there is an imbalance in information between buyer and seller i.e. when the buyer knows more than the seller or the seller knows more than the buyer. This can distort choices. With asymmetric information, low-quality goods can drive high-quality goods out of the market.
- Adverse selection is a situation in which asymmetric information about quality eliminates high-quality goods from a market. Buyers expect hidden problems in items offered for sale, leading to low prices and the best items being kept off the market.
- Moral hazard is opportunism characterized by an informed person's taking advantage of a less-informed person through an unobserved action.
- Asymmetric information, adverse selection and moral hazard affect the ability of markets to efficiently allocate resources and therefore, lead to market failure because the party with better information has a competitive advantage.

MULTIPLE CHOICE QUESTIONS

1. 'Market failure' occurs
a) when public goods are not sufficiently provided by public sector
b) the market fails to allocate resources efficiently and therefore market outcomes become inefficient.
c) people are not willing to pay and want to free ride d) (a) and (b) above

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2. Markets fail because
a) externalities are not accounted for in pricing and quantity decisions of firms
b) most often the prerequisites of competition are unlikely to be present in an economy
c) prices fail to reflect the true costs and benefits to the society d) all the above

3. Market power
a) makes price equal marginal cost and produce a positive external benefit on others
b) can cause markets to be inefficient because it keeps price and output away from equilibrium of supply and demand
c) makes the firms price makers and restrict output so as to make allocation inefficient d) (b) and(c) above

4. Markets do not exist
a) for pure public goods
b) for goods which have positive externalities
c) for goods which have negative externalities d) none of the above

5. The unique feature of an externality is that it is
a) initiated and experienced, not through the operation of the price system but affects an external agent
b) initiated and experienced, not through the operation of the price system, but outside the market
c) initiated and experienced by the same entity, but causes decrease in social welfare
d) causes decreases in social welfare through the system of prices prevailing in the market

6. If a textile mill produces large amounts of negative externality, then which one of the following is possible?
a) The output of textile is too little when compared to the socially optimal quantity
b) The output of textile is too large when compared to the socially optimal quantity
c) The output of textile is not socially optimal as it is likely to be a regulated one
d) Any of the above

7. All but one of the following statements is incorrect. Identify the correct statement.
a) When there is a negative externality, the social marginal cost will exceed private marginal cost
b) When there is a positive externality the social marginal cost will exceed private marginal cost
c) Common property resources are non-rival

and non-excludable public goods so that the problem of sustainability becomes grave
d) Goods that are rival in consumption and are non-excludable are known as private goods

8. In case of a positive externality
a) the social marginal cost will exceed private marginal cost
b) the social marginal cost will be equal to private marginal cost
c) the social marginal cost will be less than private marginal cost
d) the social marginal cost has no relation to private marginal cost

9. Which of the following statement is correct in respect of externalities?
a) When social marginal costs are equal to private marginal costs, the level of output will be equal to the socially optimal level
b) When social marginal costs are less than private marginal costs, the level of output will be lower than the socially optimal level
c) When social marginal costs are greater than private marginal costs, the level of output will be higher than the socially optimal level
d) All of the above.

10. Pollution is an instance of market failure
a) Because the equilibrium price is higher than the efficient price
b) Because the equilibrium price is less than the efficient price
c) Because property rights are poorly distributed
d) Because the market does not produce enough of the good

11. An adequate amount of a pure public good will not be provided by the private market because of
a) the existence of negative externalities
b) Governments would any way produce them
c) There are restrictions as well as taxes on the private market
d) The possibility of free riding

12. The free rider problem arises because of
a) Ability of participants to produce goods at zero marginal cost
b) Marginal benefit cannot be calculated due to externalities present
c) The good or service is non-excludable
d) General poverty and unemployment of people

13. Which of the following is an example of an impure public good?
a) A lighthouse provided by government
b) A congested highway during peak hours
c) A polio vaccination program sponsored by the government
d) National Defence and the security offered by it

14. A situation where a pharmaceutical company has full information regarding the risks of a product, but continues to sell it is a case of
a) Asymmetric information
b) Moral hazard
c) Free riding d) and (c) above

15. If an individual tends to drive his car in a dangerously high speed because he has a comprehensive insurance cover, it is a case of
a) free riding b) moral hazard
c) negative externality d) efficiency

16. Read the following statements
I. Common resources are pure public goods which are non-rival
II. Since price mechanism does not apply to common resources, producers and consumers do not pay for these resources
III. Self-interest makes them overuse the common resources and cause their depletion and degradation
IV. The common resources impure public goods which are excludable but non rival
a) Statement I alone is correct
b) Statements I and IV are correct
c) Statements II and III are correct
d) Statements I ,II and III are correct

17. Market failure will never occur in a
a) Socialist economy which is developed
b) Unplanned economy which is under developed
c) Capitalist economy which is developed
d) None of the above

18. A thermal power plant uses coal and creates pollution in an otherwise unpolluted area. Which of the following would ensure that a socially optimal output of electricity is produced?
a) Where marginal private cost equals marginal private benefit.
b) Where marginal private cost equals marginal social benefit.
c) Where marginal social cost equals marginal private benefit.
d) Where marginal social cost equals marginal social benefit.

MASTER MINDS

19. Which of the following statements is true?
I The market-based approaches to control externalities operate through price mechanism
II. When externalities are present, the welfare loss would be eliminated
III. The key is to internalizing an externality is to ensure that those who create the externalities include them while making decisions
a) Both II and III b) I only
c) II only d) Both I and III

20. Which of the following statements is false?
a) Tradable permits provide incentive to innovate
b) A subsidy on a good which has substantial positive externalities would reduce its cost and consequently price
c) Substantial negative externalities are involved in the consumption of merit goods.
d) Merit goods are likely to be under-produced and under consumed through the market mechanism

21. A Pigouvian subsidy
a) cannot be present when externalities are present
b) is a good solution for negative externality as prices will increase
c) is not measurable in terms of money and therefore not practical
d) may help production to be socially optimal when positive externalities are present

22. If governments make it compulsory to avail insurance protection, it is because
a) Insurance companies need to be running profitably
b) Insurance will generate moral hazard and adverse selection
c) Insurance is a merit good and government wants people to consume it
d) None of the above

23. If merit goods are provided free by the government
a) The quantity demanded of merit good will be less than supply
b) The quantity demanded of merit good will be equal to supply
c) The quantity demanded of merit good is likely to be more than supply
d) Any of the above can happen

24. The government should intervene in the marketplace to discourage the production and consumption of ____________.
a) Goods which are not necessary
b) Demerit goods
c) Goods having no externalities
d) Goods which the markets produce less

25. If government produces and supplies a public good
a) It may correct market failure as there will be no externalities
b) It may correct market failure caused by free riding
c) It may correct market failure because people may free ride
d) It may correct market failure because people may not free ride

26. Rules regarding product labeling
a) Seeks to correct market failure due to externalities
b) Is a method of solving the problem of public good
c) May help solve market failure due to information failure
d) Reduce the problem of monopolies in the product market

27. Identify the incorrect statement
a) A minimum support price for agricultural goods is a market intervention method to guarantee steady and assured incomes to farmers.
b) A price ceiling which is set below the prevailing market clearing price will generate excess demand over supply.
c) Excludable public goods can be provided by government and the same can be financed through entry fees.
d) The production and consumption of demerit goods are likely to be less than optimal under free markets

MASTER MINDS

KEY:

1.	B	2.	D	3.	D	4.	B
5.	B	6.	B	7.	A	8.	C
9.	C	10.	B	11.	D	12.	C
13.	B	14.	A	15.	B	16.	C
17.	D	18.	D	19.	D	20.	C
21.	B	22.	C	23.	C	24.	B
25.	C	26.	C	27.	A		

3. MONEY MARKET

DIFFERENCES

Q.No.1. Cash Reserve Ratio and Statutory Liquidity Ratio (B)

Point	Cash Reserve Ratio (CRR)	Statutory Liquidity Ratio
Meaning	Scheduled Commercial Banks should maintain a fraction of the total Net Demand & Time Liabilities (NDTL) as Cash Deposit with RBI.	Scheduled Commercial Banks should maintain a stipulated percentage of their Total / Net DTL in Cash or Gold, or prescribed Investments.
Maintained with-	CRR has to be maintained as Cash with RBI. RBI does not pay any Interest on such balances.	SLR requires holding of Assets in one of the 3 categories (Cash / Gold / Investments) by the Bank itself.

Q.No.2. Liquidity Adjustment Facility (LAF) & Marginal Standing facility (B) (M18 - 3M)

	Liquidity Adjustment Facility (LAF)	Marginal Standing facility
Central Bank's Role	RBI, being a Banker's Bank, provides Liquidity to Banks when it faces shortage of Liquidity	RBI, being a Banker's Bank, acts as a Lender of Last Resort to Commercial Banks, in suitable situations.
Interest	Lower compared to MSF. Repo Rate is changed only through the Monetary Policy Statements of RBI. Reverse Repo Rate will be linked to Repo Rate	MSF rate, being a Penal Rate, gets adjusted to a fixed percent above the Repo Rate. MSF is at present aligned with the Bank Rate.
Availability	LAF is conducted at a fixed time on daily basis on all Working Days in Mumbai (excluding Saturdays). **a) Overnight LAF:** Repo & Reverse Repo **b) Term Repo:** Repos of 14/7 days duration.	Banks can borrow through MSF on all working days (except Saturdays) from 7.00 pm to 7.30 pm, in Mumbai. Minimum amount of MSF is Rs. 1 crore and more will be available in multiples of 1 crore.

MASTER MINDS

Q.No.3. Repo Vs. Reverse Repo: (A)

	Repurchase Transaction (Repo)	Reverse Repurchase (Reverse Repo)
Meaning	Instrument for borrowing Funds by selling Securities with an agreement to re-purchase them on a mutually agreed future date at an agreed price which includes Interest for the Funds borrowed.	Instrument for Lending Funds by purchasing Securities with an agreement to resell them on a mutually agreed future date at an agreed price which includes Interest for the Funds lent.
Process	Repo Operation takes place when other Banks borrow Money from RBI by giving Securities to the RBI.	Reverse Repo Operation takes place when RBI borrows Money from Banks by giving them Securities.
Impact	Repo Operations inject Liquidity into the system.	This operation absorbs the Liquidity in the system.
Interest	Interest Rate charged by RBI for this transaction is called the 'Repo Rate'. Higher than Reverse Repo Rate.	Interest Rate paid by RBI for such transactions is called the 'Reverse Repo Rate'. Less than Repo Rate.
Presently	Repo Rate is 6.25%.	Reverse Repo Rate is 6%.

Q.No.4. Policy rate Vs. Bank Rate (C)

	Policy Rate (Repo Rate)	Bank Rate
Meaning	Fixed Repo Rate quoted for Sovereign Securities in the Overnight Segment of LAF is considered as the Policy Rate. (India has many other Repo Rates in Operation).	It is the Standard Rate at which RBI is prepared to buy or re-discount Bills of Exchange or other Commercial Paper eligible for purchase under the Act. **[RBI Act]**

Q.No.5. Market Stabilisation Scheme (MSS) Vs. Open Market Operations (OMO) (C)

	Market Stabilisation Scheme (MSS)	Open Market Operations (OMO)
Objective	It was introduced following the MoU between RBI and the Government of India with the primary aim of aiding the Sterilization Operations of RBI.	The Objective of this operation is to adjust the Rupee Liquidity Conditions in the Market on a durable basis.
Impact	Government borrows from RBI (additional to its normal Borrowing) and issues Treasury Bills/ Dated Securities for absorbing the excess liquidity from the Market arising from Large Capital Inflows.	During excess liquidity conditions, RBI sells Securities thereby sucking out the Liquidity. During tight Liquidity Conditions, it buys Securities thereby releasing Liquidity.

SUMMARY

MASTER MINDS

- Money refers to assets which are commonly used and accepted as a means of payment or as a medium of exchange or of transferring purchasing power.
- Money is totally liquid and has generalized purchasing power and is generally acceptable in settlement of all transactions and in discharge of other kinds of business obligations including future payments.
- The functions of money are: acting as a medium of exchange to facilitate easy exchanges of goods and services, providing a 'common measure of value' or 'common denominator of value', serving as a unit or standard of deferred payments and facilitating storing of value both as a temporary abode of purchasing power and a permanent store of value.
- Money should be generally acceptable, durable, difficult to counterfeit, relatively scarce, easily transported, divisible without losing value and effortlessly recognizable.
- The demand for money is derived demand and is a decision about how much of one's given stock of wealth should be held in the form of money rather than as other assets such as bonds.
- Both versions of the theory of money namely the classical approach and the neoclassical approach demonstrate that there is strong relationship between money and price level and the quantity of money is the main determinant of the price level or the value of money.
- Keynes' theory of demand for money is known as the 'liquidity preference theory'. 'Liquidity preference', is a term that was coined by John Maynard Keynes in his masterpiece 'The General Theory of Employment, Interest and Money' (1936).
- According to Keynes, people hold money (M) in cash for three motives: the transactions, precautionary and speculative motives.
- The transaction motive for holding cash is directly related to the level of income and relates to 'the need for cash for the current transactions for personal and business exchange.'
- The amount of money demanded under the precautionary motive is to meet unforeseen and unpredictable contingencies involving money payments and depends on the size of the income, prevailing economic as well as political conditions and personal characteristics of the individual such as optimism/ pessimism, farsightedness etc.

- The speculative motive reflects people's desire to hold cash in order to be equipped to exploit any attractive investment opportunity requiring cash expenditure. The speculative demand for money and interest are inversely related.
- So long as the current rate of interest is higher than the critical rate of interest (rc), a typical wealth-holder would hold in his asset portfolio only government bonds while if the current rate of interest is lower than the critical rate of interest, his asset portfolio would consist wholly of cash.
- Baumol (1952) and Tobin (1956) developed a deterministic theory of transaction demand for 'real cash balance', known as Inventory Theoretic Approach, in which money is essentially viewed as an inventory held for transaction purposes.
- People hold an optimum combination of bonds and cash balance, i.e., an amount that minimizes the opportunity cost.
- The optimal average money holding is: a positive function of income Y, a positive function of the price level P, a positive function of transactions costs c, and a negative function of the nominal interest rate i.
- Milton Friedman (1956) extending Keynes' speculative money demand within the framework of asset price theory holds that demand for money is affected by the same factors as demand for any other asset, namely, permanent income and relative returns on assets.
- The nominal demand for money is positively related to the price level, P; rises if bonds and stock returns, rb and re, respectively decline and vice versa; is influenced by inflation; and is a function of total wealth
- The Demand for Money as Behavior toward 'aversion to risk' propounded by Tobin states that money is a safe asset but an investor will be willing to exercise a trade-off and sacrifice to some extent, the higher return from bonds for a reduction in risk
- According to Tobin, rational behaviour induces individuals to hold an optimally structured wealth portfolio which is comprised of both bonds and money and the demand for money as a store of wealth depends negatively on the interest rate.
- The measures of money supply vary from country to country, from time to time and from purpose to purpose.
- The high-powered money and the credit money broadly constitute the most common measure of money supply, or the total money stock of a country.
- High powered money is the source of all other forms of money. The second major source of money supply is the banking system of the country. Money created by the commercial banks is called 'credit money'.
- Measurement of money supply is essential from a monetary policy perspective because it enables a framework to evaluate whether the stock of money in the economy is consistent with the standards for price stability, to understand the nature of deviations from this standard and to study the causes of money growth.
- The stock of money always refers to the total amount of money at any particular point of time i.e. it is the stock of money available to the 'public' as a means of payments and store of value and does not include inter-bank deposits.
- The Reserve money, also known as central bank money, base money or high powered money determines the level of liquidity and price level in the economy.
- The money multiplier approach showing relation between the money stock and money supply in terms of the monetary base or high-powered money, holds that total supply of nominal money in the economy is determined by the joint behaviour of the central bank, the commercial banks and the public.
- M= m X MB; Where M is the money supply, m is money multiplier and MB is the monetary base or high powered money. It shows the relationship between the reserve money and the total money stock.

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- The money multiplier is a function of the currency ratio which depends on the behaviour of the public, excess reserves ratio of the banks and the required reserve ratio set by the central bank.
- The additional units of high-powered money that goes into 'excess reserves' of the commercial banks do not lead to any additional loans, and therefore, these excess reserves do not lead to the creation of deposits.
- When the required reserve ratio falls, there will be greater multiple expansions for demand deposits.
- Excess reserves ratio e is negatively related to the market interest rate i. If interest rate increases, the opportunity cost of holding excess reserves rises, and the desired ratio of excess reserves to deposits falls.
- An increase in time deposit-demand deposit ratio (TD/DD) means that greater availability of free reserves for banks and consequent enlargement of volume of multiple deposit expansion and monetary expansion.
- When the Reserve Bank lends to the governments under WMA /OD it results in the generation of excess reserves (i.e., excess balances of commercial banks with the Reserve Bank).
- Monetary policy refers to the use of monetary policy instruments which are at the disposal of the central bank to regulate the availability, cost and use of money and credit so as to promote economic growth, price stability, optimum levels of output and employment, balance of payments equilibrium, stable currency or any other goal of government's economic policy.
- The monetary policy framework which has three basic components, viz. the objectives of monetary policy, the analytics of monetary policy which focus on the transmission mechanism, and the operating procedure which focuses on the operating targets and instruments.
- Though multiple objectives are pursued, the most commonly pursued objectives of monetary policy of the central banks across the world has become maintenance of price stability (or controlling inflation) and achievement of economic growth.
- The process or channels through which the evolution of monetary aggregates affects the level of production and price level is known as 'monetary transmission mechanism' ie how they impact real variables such as aggregate output and employment.
- There are mainly four different mechanisms, namely, the interest rate channel, the exchange rate channel, the quantum channel, and the asset price channel.
- A contractionary monetary policy-induced increase in interest rates increases the cost of capital and the real cost of borrowing for firms and households who respond by cut back on their investment and consumption respectively.
- The exchange rate channel works through expenditure switching between domestic and foreign goods on account of appreciation / depreciation of the domestic currency with its impact on net exports and consequently on domestic output and employment.
- Two distinct credit channels- the bank lending channel and the balance sheet channel- operate by altering access of firm and household to bank credit and by the effect of monetary policy on the firm's balance sheet respectively.
- Asset prices generate important wealth effects that impact, through spending, output and employment.
- The operating framework of monetary policy relates to all aspects of implementation namely, choosing the operating target, choosing the intermediate target, and choosing the policy instruments.
- The day-to-day implementation of monetary policy by central banks through various instruments is referred to as 'operating procedures'.
- Monetary policy instruments are the various tools that a central bank can use to influence money market and credit conditions and pursue its monetary policy objectives. There are direct instruments and indirect instruments.
- The Cash Reserve Ratio (CRR) refers to the fraction of the total net demand and time liabilities (NDTL) of a scheduled commercial bank in India which it should maintain as cash deposit with the Reserve Bank irrespective of its size or financial position.

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- The Statutory Liquidity Ratio (SLR) is what the scheduled commercial banks in India are required to maintain as a stipulated percentage of their total Demand and Time Liabilities (DTL) / Net DTL (NDTL) in Cash, Gold or approved investments in securities.
- On the basis of the recommendations of Narsimham Committee on banking sector reforms the RBI introduced Liquidity Adjustment Facility (LAF) under which RBI provides financial accommodation to the commercial banks through repos/reverse repos.
- Repurchase Options or in short Repo, is defined as 'an instrument for borrowing funds by selling securities with an agreement to repurchase the securities on a mutually agreed future date at an agreed price which includes interest for the funds borrowed'.
- In India, the fixed repo rate quoted for sovereign securities in the overnight segment of Liquidity Adjustment Facility (LAF) is considered as the 'policy rate'.
- Repo or repurchase option is a collaterised lending because banks borrow money from Reserve bank of India to fulfill their short term monetary requirements by selling securities to RBI with an explicit agreement to repurchase the same at predetermined date and at a fixed rate. The rate charged by RBI for this transaction is called the 'repo rate'.
- Reverse Repo is defined as an instrument for lending funds by purchasing securities with an agreement to resell the securities on a mutually agreed future date at an agreed price which includes interest for the funds lent.
- The Marginal Standing Facility (MSF) refers to the facility under which scheduled commercial banks can borrow additional amount of overnight money from the central bank over and above what is available to them through the LAF window by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit
- Under the Market Stabilisation Scheme (MSS) the Government of India borrows from the RBI (such borrowing being additional to its normal borrowing requirements) and issues treasury-bills/dated securities
- Bank Rate refers to "the standard rate at which the Reserve Bank is prepared to buy or re-discount bills of exchange or other commercial paper eligible for purchase under the Act.
- OMOs is a general term used for market operations conducted by the Reserve Bank of India by way of sale/ purchase of Government securities to/ from the market with an objective to adjust the rupee liquidity conditions in the market on a regular basis.
- The Monetary Policy Committee (MPC) consisting of six members shall determine the policy rate to achieve the inflation target through debate and majority vote by a panel of experts.
- The Monetary Policy Framework Agreement is an agreement reached between the Government of India and the Reserve Bank of India (RBI) to keep the Consumer Price Index CPI) inflation rate between 2 to 6 per cent.
- Choice of a monetary policy action is rather complex in view of the surrounding uncertainties and the need for exercising trade-offs between growth and inflation concerns. Additional complexities arise in the case of an emerging market like India where inflation is influenced by factors such as international petroleum prices and food prices.

MASTER MINDS

AMENDMENTS

Bi-monthly Monetary Policy Statement of 2018-19 by RBI

(As on 1st August, 2018)

Monetary Policy Instrument	Rate
CRR	4%
SLR	19.5%
Reverse repo rate	6%
Repo rate	6.25%
MSF / Bank rate	6.50%
Economic Growth Rate (Target)	7.4%
Consumer Inflation Rate (Target)	4.7% to 5.1%

Note: If any changes prior to the November 2018, It will be announced.

LIST OF FORMULAE

1. Net Demand and Time Liabilities = Demand and Time Liabilities (with the public or other bank) - Deposits in the form of assets held by the other bank.
2. Money Supply = Currency + Deposits
3. Monetary Base = Currency + Reserves
4. Currency ratio (or) Currency deposit ratio *(c)* = $\frac{\text{Currency in the hands of the public}}{\text{Demand Deposits}}$
5. Reserve ratio *(r)* = $\frac{\text{Reserves}}{\text{Demand Deposit}}$
6. Money multiplier (or) Credit multiplier (or) Deposit multiplier = $\frac{1}{\text{Reserve Requirement}}$
7. Money multiplier (Mm) = $\frac{\text{Money Supply (M)}}{\text{Monetary Base (H)}} = \frac{c+1}{c+r}$

   a) M = Mm x H

   b) $M = \left(\frac{c+1}{c+r}\right) \times H$

8. From April 1977, following the recommendations of the Second Working Group on Money Supply (SWG), the RBI published data on four alternative measures of money supply:

M_1 = Currency notes and coins with the people + demand deposits of banks (Current and Saving deposit accounts) + other deposits of the RBI. M_2 = M_1 + savings deposits with post office savings banks. M_3 = M_1 + net time deposits with the banking system.
M_4 = M_3 + total deposits with the Post Office Savings Organization (excluding National Savings Certificates).

MASTER MINDS

9. Following the recommendations of the Working Group on Money (1998), the RBI published a set of four new monetary aggregates as:

Reserve Money = Currency in circulation + Bankers' deposits with the RBI + Other deposits with the RBI, NM_1 = Currency with the public + Demand deposits with the banking system + 'Other' deposits with the RBI, NM_2 = NM_1 +Short-term time deposits of residents (including and up to contractual maturity of one year), NM_3 = NM_2 + Long-term time deposits of residents + Call/Term funding from financial institutions

10. The Liquidity aggregates are

L_1 = NM_3 + All deposits with the post office savings banks (excluding National Savings Certificates). L_2 = L_1 +Term deposits with term lending institutions and refinancing institutions (FIs) + Term borrowing by FIs + Certificates of deposit issued by FIs. L_3 = L_2+ Public deposits of non-banking financial companies

11. Concept of Demand for Money:

    a) Irving Fisher (Classical Approach: The Quantity Theory of Money): MV + M'V' = PT

    b) Cambridge Approach (Neo Classical Approach): $M^d = kPY$

    c) Keynes (Liquidity Preference Theory): $L_r = kY$

ILLUSTRATIONS

1. What would be the impact of each of the following on credit multiplier and money supply?

i) If commercial Banks keep 100 percent reserves.

ii) If commercial Banks do not keep reserves.

iii) If commercial Banks keep excess reserves. ***(M18 - 3M)***

2. In a period Reserve Money is 36,000 and Narrow Money M_1 is Rs. 42,000. If the Total of Currency in Circulation + Other Deposits of RBI is 15,000, Compute (a) Banker's Deposits with RBI, (b) Net Demand Deposits of banks. (assume amounts in Rs. Crores)

(ANS.: (a) RS. 21,000 CRORES; (b) RS. 27,000 CRORES)

3. Compute Reserve Money from the following data published by RBI Components (In billions of Rs.) As on 7th July 2017.

Currency in Circulation	15,428.40
Bankers' Deposits with RBI	4,596.18
'Other' Deposits with RBI	183.30

(SM) (ANS.: RS. 20,207.88)

4. Compute M_3 from the following data published by RBI

Components	(In billions of Rs.) as on 31 March, 2017
Currency with the Public	12,637.1
Demand Deposits with Banks	14,106.3
Time Deposits with Banks	1,01,489.5
'Other' Deposits with Reserve Bank	210.9

(ANS.: RS. 1,28,443.80)

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5. What will be the total credit created by the commercial banking system for an initial deposit of Rs.1000/- for required reserve ratio 0.02, 0.05 and 0.10 percent respectively? Compute credit multiplier. ***(MTP MAR 18) (ANS.: 50,000; 20,000; 10,000)***

6. In the economy, the following statistics describe the money supply:

Currency = $ 1,000 billion, Reserves = $ 125 billion Deposits = $ 4,000 billion

Calculate the amount of the monetary base; Quantity of the money supply; ratio of reserves to deposits; ratio of currency to deposits, money multiplier.

(ANS.: $1,125 BILLION; $5,000 BILLION; 0.0313; 0.25; 4.4444)

7. While clearing debris from a house destroyed by Hurricane Katrina, a group of student helpers discovered a shoe box full of $100 bills--$30,000 in all. The students found the displaced homeowner, who promptly deposited the full amount in the local bank. Suppose the reserve requirement is 25%, and the bank was just meeting its reserve requirement prior to the deposit.

a) How much of this new deposit is this bank required to hold in reserve? How much does the deposit create in excess reserves?

b) What is the value of the monetary multiplier?

c) What is the potential increase in the money supply this new deposit can generate?

d) In an attempt to increase the value of its portfolio, suppose this same bank sells $30,000 in securities to its district Federal Reserve Bank. How much excess reserves will this transaction create for the bank? By how much can the money supply potentially increase as a result of this transaction?

(ANS.: a) REQUIRED RESERVES: $ 7,500 AND EXCESS RESERVES: $ 22,500; b) 4; c) $ 90,000; d) $ 1,20,000)

8. A simplified balance sheet for the local bank is shown below. The required reserve ratio is 20%. All figures are in thousands.

Assets	$	Liabilities and net worth	$
Reserves	1,200	Checkable deposits	5,000
Securities	750	Stock shares	1,000
Loans	3,500		
Property	550		

a) How much is this bank currently required to hold in reserve? How much does the bank currently hold in excess reserves?

b) Suppose the bank lends out the full amount of its excess reserves. Modify the balance sheet to reflect the creation of the loan.

c) By how much has the money supply increased as a result of the loan?

d) Suppose the borrower of the new loan writes a check for the amount of the loan to purchase new equipment for her business. The equipment seller then deposits the check in an out-of-town bank. Show the new balance sheet for this local bank once the check has cleared.

e) Once the check has cleared, does the local bank have any excess reserves?

(ANS.: a) REQUIRED RESERVES: $ 1,000 AND EXCESS RESERVES: $ 200; b) LOANS AND CHECKABLE DEPOSITS BOTH INCREASE BY $200; c) $ 200; d) BOTH RESERVES AND CHECKABLE DEPOSITS FALL BY $200; e) NO)

MULTIPLE CHOICE QUESTIONS (MCQ'S)

1. Choose the incorrect statement
a) Anything that would act as a medium of exchange is money
b) Money has generalized purchasing power and is generally acceptable in settlement of all transactions
c) Money is a totally liquid asset and provides us with means to access goods and services
d) Currency which represents money does not necessarily have intrinsic value

2. Money performs all of the three functions mentioned below, namely
a) Medium of exchange, price control, store of value
b) Unit of account, store of value, provide yields
c) Medium of exchange, unit of account, store of value
d) Medium of exchange, unit of account, income distribution

3. Demand for money is
a) Derived demand b) Direct demand
c) Real income demand
d) Inverse demand

4. Higher the __________, higher would be __________ of holding cash and lower will be the _____
a) Demand for money, opportunity cost, interest rate
b) Price level, opportunity cost, interest rate
c) Real income, opportunity cost, demand for money
d) Interest rate, opportunity cost, demand for money

5. The quantity theory of money holds that
a) Changes in the general level of commodity prices are caused by changes in the quantity of money
b) There is strong relationship between money and price level and the quantity of money is the main determinant of the price
c) Changes in the value of money or purchasing power of money are determined first and foremost by changes in the quantity of money in circulation
d) All the above

6. The Cambridge approach to quantity theory is also known as
a) Cash balance approach
b) Fisher's theory of money
c) Classical approach
d) Keynesian Approach

7. Fisher's approach and the Cambridge approach to demand for money consider
a) Money's role in acting as a store of value and therefore, demand for money is for storing value temporarily.
b) Money as a means of exchange and therefore demand for money is termed as for liquidity preference
c) Money as a means of transactions and therefore, demand for money is only transaction demand for money.
d) None of the above

8. Real money is
a) Nominal money divided by price level
b) Real national income
c) Money demanded at given rate of interest
d) Nominal GNP divided by price level

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9. The precautionary money balances people want to hold
a) As income elastic and not very sensitive to rate of interest
b) As income inelastic and very sensitive to rate of interest
c) Are determined primarily by the level of transactions they expect to make in the future.
d) Are determined primarily by the current level of transactions

10. Speculative demand for money
a) Is not determined by interest rates
b) Is positively related to interest rates
c) Is negatively related to interest rates
d) Is determined by general price level

11. According to Keynes, if the current interest rate is high
a) People will demand more money because the capital gain on bonds would be less than return on money
b) People will expect the interest rate to rise and bond price to fall in the future.
c) People will expect the interest rate to fall and bond price to rise in the future.
d) Either a) or b) will happen

12. The inventory-theoretic approach to the transactions demand for money
a) Explains the negative relationship between money demand and the interest rate.
b) Explains the positive relationship between money demand and the interest rate.
c) Explains the positive relationship between money demand and general price level
d) Explains the nature of expectations of people with respect to interest rates and bond prices

13. According to Baumol and Tobin's approach to demand for money, the optimal average money holding is:
a) A positive function of income Y and the price level P
b) A positive function of transactions costs c,
c) A negative function of the nominal interest rate i d) All the above

14. ___________ considered demand for money is as an application of a more general theory of demand for capital assets
a) Baumol b) James Tobin
c) J M Keynes d) Milton Friedman

15. The nominal demand for money rises if
a) The opportunity costs of money holdings - i.e. bonds and stock returns, Rb and Re, respectively- decline and vice versa
b) The opportunity costs of money holdings - i.e. bonds and stock returns, Rb and Re, respectively- rises and vice versa
c) The opportunity costs of money holdings - i.e. bonds and stock returns, Rb and Re, respectively remain constant
d) b) and c) above

16. Reserve money is also known as
a) Central bank money
b) Base money
c) High powered money
d) All the above

17. Choose the correct statement from the following
a) Money is deemed as something held by the public and therefore only currency held by the public is included in money supply.
b) Money is deemed as something held by the public and therefore inter-bank deposits are included in money supply.
c) Since inter-bank deposits are not held by the public, therefore inter-bank deposits are excluded from the measure of money supply.
d) Both a) and c) above.

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18. Reserve Money is composed of
a) Currency in circulation + demand deposits of banks (Current and Saving accounts) + Other deposits with the RBI.
b) Currency in circulation + Bankers' deposits with the RBI + Other deposits with the RBI.
c) Currency in circulation + demand deposits of banks + Other deposits with the RBI.
d) Currency in circulation + demand and time deposits of banks + Other deposits with the RBI.

19. M_1 is the sum of
a) Currency and coins with the people + demand deposits of banks (Current and Saving accounts) + other deposits of the RBI.
b) Currency and coins with the people + demand and time deposits of banks (Current and Saving accounts) + other deposits of the RBI.
c) Currency in circulation + Bankers' deposits with the RBI + Other deposits with the RBI
d) None of the above

20. Under the 'minimum reserve system' the central bank is
a) Empowered to issue currency to any extent by keeping an equivalent reserve of gold and foreign securities.
b) Empowered to issue currency to any extent by keeping only a certain minimum reserve of gold and foreign securities.
c) Empowered to issue currency in proportion to the reserve money by keeping only a minimum reserve of gold and foreign securities.
d) Empowered to issue currency to any extent by keeping a reserve of gold and foreign securities to the extent of Rs. 350 crores

21. The primary source of money supply in all countries is
a) The Reserve Bank of India
b) The Central bank of the country
c) The Bank of England
d) The Federal Reserve

22. The supply of money in an economy depends on
a) The decision of the central bank based on the authority conferred on it.
b) The decision of the central bank and the supply responses of the commercial banking system.
c) The decision of the central bank in respect of high powered money.
d) Both a) and c) above.

23. Banks in the country are required to maintain deposits with the central bank
a) To provide the necessary reserves for the functioning of the central bank
b) To meet the demand for money by the banking system
c) To meet the central bank prescribed reserve requirements and to meet settlement obligations.
d) To meet the money needs for the day to day working of the commercial banks

24. If the behaviour of the public and the commercial banks is constant, then
a) The total supply of nominal money in the economy will vary directly with the supply of the nominal high-powered money issued by the central bank
b) The total supply of nominal money in the economy will vary directly with the rate of interest and inversely with reserve money
c) The total supply of nominal money in the economy will vary inversely with the supply of high powered money
d) All the above are possible

25. Under the fractional reserve system
a) The money supply is an increasing function of reserve money (or high powered money) and the money multiplier.
b) The money supply is an decreasing function of reserve money (or high powered money) and the money multiplier.
c) The money supply is an increasing function of reserve money (or high powered money) and a decreasing function of money multiplier.
d) None of the above as the determinants of money supply are different

26. The money multiplier and the money supply are
a) Positively related to the excess reserves ratio e.
b) Negatively related to the excess reserves ratio e.
c) Not related to the excess reserves ratio e.
d) Proportional to the excess reserves ratio e.

27. The currency ratio represents
a) The behaviour of central bank in the issue of currency.
b) The behaviour of central bank in respect cash reserve ratio.
c) The behaviour of the public.
d) The behaviour of commercial banks in the country.

28. The size of the money multiplier is determined by
a) The currency ratio (c) of the public,
b) The required reserve ratio (r) at the central bank, and
c) The excess reserve ratio (e) of commercial banks.
d) All the above

29. ___________ tells us how much new money will be created by the banking system for a given increase in the high-powered money.
a) The currency ratio
b) The excess reserve ratio (e)
c) The credit multiplier
d) The currency ratio (c)

30. The money multiplier will be large
a) For higher currency ratio (c), lower required reserve ratio (r) and lower excess reserve ratio (e)
b) For constant currency ratio (c), higher required reserve ratio (r) and lower excess reserve ratio (e)
c) For lower currency ratio (c), lower required reserve ratio (r) and lower excess reserve ratio (e)
d) None of the above

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31. The ratio that relates the change in the money supply to a given change in the monetary base is called the
a) Required reserve ratio.
b) Money multiplier.
c) Deposit ratio.
d) Discount rate.

32. For a given level of the monetary base, an increase in the required reserve ratio will denote
a) A decrease in the money supply.
b) An increase in the money supply.
c) An increase in demand deposits.
d) Nothing precise can be said

33. For a given level of the monetary base, an increase in the currency ratio causes the money multiplier to _____ and the money supply to _____.
a) Decrease; Increase
b) Increase; Decrease
c) Decrease; Decrease
d) Increase; Increase

34. If commercial banks reduce their holdings of excess reserves
a) The monetary base increases.
b) The monetary base falls.
c) The money supply increases.
d) The money supply falls.

35. Which of the following is the function of monetary policy?
a) Regulate the exchange rate and keep it stable
b) Regulate the movement of credit to the corporate sector
c) Regulate the level of production and prices
d) Regulate the availability, cost and use of money and credit

36. The main objective of monetary policy in India is _______:
a) Reduce food shortages to achieve stability
b) Economic growth with price stability
c) Overall monetary stability in the banking system
d) Reduction of poverty and unemployment

37. The monetary transmission mechanism refers to
a) How money gets circulated in different sectors of the economy post monetary policy
b) The ratio of nominal interest and real interest rates consequent on a monetary policy
c) The process or channels through which the evolution of monetary aggregates affects the level of product and prices
d) None of the above

38. A contractionary monetary policy-induced increase in interest rates
a) Increases the cost of capital and the real cost of borrowing for firms
b) Increases the cost of capital and the real cost of borrowing for firms and households
c) Decreases the cost of capital and the real cost of borrowing for firms
d) Has no interest rate effect on firms and households

39. During deflation
a) The RBI reduces the CRR in order to enable the banks to expand credit and increase the supply of money available in the economy
b) The RBI increases the CRR in order to enable the banks to expand credit and increase the supply of money available in the economy
c) The RBI reduces the CRR in order to enable the banks to contract credit and increase the supply of money available in the economy
d) The RBI reduces the CRR but increase SLR in order to enable the banks to contract credit and increase the supply of money available in the economy

40. Which of the following statements is correct?
a) The governor of the RBI in consultation with the Ministry of Finance decides the policy rate and implements the same
b) While CRR has to be maintained by banks as cash with the RBI, the SLR requires holding of approved assets by the bank itself
c) When repo rates increase, it means that banks can now borrow money through open market operations (OMO)
d) None of the above

41. RBI provides financial accommodation to the commercial banks through repos/reverse repos under
a) Market Stabilisation Scheme (MSS)
b) The Marginal Standing Facility (MSF)
c) Liquidity Adjustment Facility (LAF).
d) Statutory Liquidity Ratio (SLR)

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42. ________________ is a money market instrument, which enables collateralized short term borrowing and lending through sale/purchase operations in debt instruments.
a) OMO b) CRR
c) SLR d) Repo

43. In India, the term 'Policy rate' refers to
a) The bank rate prescribed by the RBI in its half yearly monetary policy statement
b) The CRR and SLR prescribed by RBI in its monetary policy statement
c) The fixed repo rate quoted for sovereign securities in the overnight segment of Liquidity Adjustment Facility (LAF)
d) The fixed repo rate quoted for sovereign securities in the overnight segment of Marginal Standing Facility (MSF)

44. Reverse repo operation takes place when
a) RBI borrows money from banks by giving them securities
b) Banks borrow money from RBI by giving them securities
c) Banks borrow money in the overnight segment of the money market
d) RBI borrows money from the central government

45. The Monetary Policy Framework Agreement is on
a) The maximum repo rate that RBI can charge from government
b) The maximum tolerable inflation rate that RBI should target to achieve price stability.
c) The maximum repo rate that RBI can charge from the commercial banks
d) The maximum reverse repo rate that RBI can charge from the commercial banks

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46. An open market operation is an instrument of monetary policy which involves buying or selling of ________from or to the public and banks
a) Bonds and bills of exchange
b) Debentures and shares
c) Government securities
d) None of these

47. Which statement (s) is (are) true about Monetary Policy Committee?
I. The Reserve Bank of India (RBI) Act, 1934 was amended on June 27, 2016, for giving a statutory backing to the Monetary Policy Framework Agreement and for setting up a Monetary Policy Committee
II. The Monetary Policy Committee shall determine the policy rate through debate and majority vote by a panel of experts required to achieve the inflation target.
III. The Monetary Policy Committee shall determine the policy rate through consensus from the governor of RBI
IV. The Monetary Policy Committee shall determine the policy rate through debate and majority vote by a panel of bankers chosen for eth purpose
a) I only b) I and II only
c) III and IV d) III only

KEY:

1.	A	2.	C	3.	A	4.	D	5.	D
6.	A	7.	C	8.	A	9.	A	10.	C
11.	C	12.	A	13.	D	14.	D	15.	A
16.	D	17.	C	18.	B	19.	A	20.	B
21.	B	22.	B	23.	C	24.	A	25.	A
26.	B	27.	C	28.	D	29.	C	30.	C
31.	B	32.	A	33.	C	34.	C	35.	D
36.	B	37.	C	38.	B	39.	A	40.	B
41.	C	42.	D	43.	C	44.	A	45.	B
46.	C	47.	B						

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4. INTERNATIONAL CAPITAL MOVEMENTS

DIFFERENCES

Q.No.1.Distinguish between Foreign Direct Investment and Foreign Institutional Investment. (A) (SM)

Foreign Direct Investment (FDI) VS Foreign Portfolio Investment (FPI):

Foreign Direct Investment	Foreign Portfolio Investment
1. Investment involves creation of physical assets	**1.** Investment is only in financial assets
2. Has a long term interest and therefore remain invested for long	**2.** Only short term interest and generally remain invested for short periods.
3. Relatively difficult to withdraw	**3.** Relatively easy to withdraw
4. Not inclined to be speculative	**4.** Speculative in nature
5. Often accompanied by technology transfer	**5.** Not accompanied by technology transfer
6. Direct impact on employment of labour and wages	**6.** No direct impact on employment of labour and wages
7. Enduring interest in management and control	**7.** No abiding interest in management and control
8. Securities are held with significant degree of influence by the investor on the management of the enterprise	**8.** Securities are held purely as a financial investment and no significant degree of influence on the management of the enterprise.

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Q.No.2. Distinguish between Foreign Direct Investment and Foreign Portfolio Investment. (B) (SM, MTP APR 18)

Foreign direct investment (FDI)	Foreign portfolio investment (FPI)
Direct investments are real investments in factories, assets, land, inventories etc. and involve foreign ownership of production facilities and typically occurs through acquisition of more than 10 percent of the shares of the target asset.	Portfolio capital, in general, moves to investment in financial stocks, bonds and other financial instruments and is effected largely by individuals and institutions through the mechanism of capital market.
Not inclined to be speculative and has a long term interest and therefore, relatively difficult to withdraw	Speculative in nature and has only short term interest and therefore, relatively easy to withdraw
Often accompanied by technology transfer	Not accompanied by technology transfer
Direct impact on employment of labour and wages	No direct impact on employment of labour and wages
Since there is enduring interest in management and control, securities are held with significant degree of influence by the investor on the management of the enterprise	Since there is no abiding interest in management and control, securities are held purely as financial investment and no significant degree of influence on the management of the enterprise

SUMMARY

- Foreign capital may flow into an economy in different ways, such as foreign aid, grants, borrowings, deposits from non-resident Indians, investments in the form of foreign portfolio investment (FPI) and foreign direct investment (FDI)

- Foreign direct investment is defined as a process whereby the resident of one country (i.e. home country) acquires ownership of an asset in another country (i.e. the host country) and such movement of capital involves ownership, control as well as management of the asset in the host country.
- Direct investments are real investments in factories, assets, land, inventories etc. and have three components, viz., equity capital, reinvested earnings and other direct capital in the form of intra-company loans. FDI may be categorized as horizontal, vertical or conglomerate.
- Foreign portfolio investment is the flow of 'financial capital' with stake in a firm at below 10 percent, and does not involve manufacture of goods or provision of services, ownership management or control of the asset on the part of the investor.
- The main reasons for foreign direct investment are profits, higher rate of return, possible economies of large-scale operation, risk diversification, retention of trade patents, capture of emerging markets, lower host country environmental and labour standards, by passing of non-tariff and tariff barriers, cost–effective availability of needed inputs and tax and investment incentives.
- Foreign direct investment takes place through opening of a subsidiary or associate company, equity injection, acquiring a controlling interest, mergers and acquisitions (M&A), joint venture and green field investment.
- Benefits of foreign direct investment include positive outcomes of competition such as cost-reducing and quality-improving innovations, higher efficiency, huge variety of better products and services at lower prices, welfare for consumers, multiplier effects on employment, output and income, relatively higher wages, better access to foreign markets, control of domestic monopolies and betterment of balance of payments position.
- Potential problems of foreign direct investment include use of inappropriate capital- intensive methods in a labour-abundant country, increase in regional disparity, crowding-out of domestic investments, diversion of capital resulting in distorted pattern of production and investment, instability in the balance of payments and exchange rate and indiscriminate repatriation of the profits.
- FDIs are also likely to indulge in anti-ethical market distortions, off–shoring or shifting of jobs, overexploitation of natural resources causing environmental damage, exercising monopoly power, decrease competitiveness of domestic companies, potentially jeopardize national security and sovereignty, worsen commodity terms of trade and cause emergence of a dual economy
- FDI in India, mostly a post reform phenomenon, is a major source of non-debt financial resource for economic development. The government has, at different stages, liberalized FDI by increasing sectoral caps, bringing in more activities under automatic route and easing of conditions for foreign investment.
- Overseas direct investments by Indian companies, made possible by progressive relaxation of capital controls and simplification of procedures for outbound investments from India, have undergone substantial changes in terms of size, geographical spread and sectoral composition. Outward Foreign Direct Investment (OFDI) from India stood at US$ 1.86 billion in the month of June 2016.

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MULTIPLE CHOICE QUESTIONS (MCQ'S)

1. Which of the following statements is incorrect?
a) Direct investments are real investments in factories, assets, land, inventories etc. and involve foreign ownership of production facilities.
b) Foreign portfolio investments involve flow of 'financial capital'
c) Foreign direct investment (FDI) is not concerned with either manufacture of goods or with provision of services.
d) Portfolio capital moves to a recipient country which has revealed its potential for higher returns and profitability.

2. Which of the following is a component of foreign capital?
a) Direct inter government loans
b) Loans from international institutions (e.g. World Bank, IMF, ADB)
c) Soft loans for e.g. from affiliates of World Bank such as IDA
d) All the above

3. Which of the following would be an example of foreign direct investment from Country X?
a) A firm in Country X buys bonds issued by a Chinese computer manufacturer.

b) A computer firm in Country X enters into a contract with a Malaysian firm for the latter to make and sell to it processors
c) Mr. Z a citizen of Country X buys a controlling share in an Italian electronics firm
d) None of the above

4. Which of the following types of FDI includes creation of fresh assets and production facilities in the host country?
a) Brownfield investment
b) Merger and acquisition
c) Greenfield investment
d) Strategic alliances

5. Which is the leading country in respect of inflow of FDI to India?
a) Mauritius b) USA
c) Japan d) USA

6. An argument in favour of direct foreign investment is that it tends to
a) Promote rural development
b) Increase access to modern technology
c) Protect domestic industries
d) Keep inflation under control

7. Which of the following is a reason for foreign direct investment?
a) Secure access to minerals or raw materials
b) Desire to capture of large and rapidly growing emerging markets
c) Desire to influence home country industries
d) (a) and (b) above

8. A foreign direct investor
a) May enter India only through automatic route
b) May enter India only through government route
c) May enter India only through equity in domestic enterprises
d) Any of the above

9. Foreign investments are prohibited in
a) Power generation and distribution
b) Highways and waterways
c) Chit funds and Nidhi company
d) Airports and air transport

10. Which of the following statement is false in respect of FPI?
a) Portfolio capital in general, moves to investment in financial stocks, bonds and other financial instruments about foreign portfolio investment?
b) Is effected largely by individuals and institutions through the mechanism of capital market
c) Is difficult to recover as it involves purely long term investments and the investors have controlling interest
d) Investors also do not have any intention of exercising voting power or controlling or managing the affairs of the company

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KEY:

1.	C	2.	D	3.	C	4.	C	5.	A
6.	B	7.	D	8.	D	9.	C	10.	C

5. EXCHANGE RATE AND ITS ECONOMIC EFFECTS

DIFFERENCES

Q.No.1. Differentiate exchange rate regimes (B) (SM)

	Soft peg	Hard peg	Float
Meaning	A soft peg refers to an exchange rate policy under which the exchange rate is generally determined by the market, but if the exchange rate tends to be move speedily in one direction, the central bank will intervene in the market.	With a hard peg exchange rate policy, the central bank sets a fixed and unchanging value for the exchange rate.	It is a regime where the currency price is set by the forex market based on supply and demand compared with other currencies.

Regimes	crawling narrow band, crawling peg, pegged within bands, crawling broad bands and fixed peg crawling narrow band, crawling peg, pegged within bands, crawling broad bands and fixed peg	Currency Board and Currency Union Dollarization	Independent float; Light managed float and Managed Float
Exchange Rate Volatility	Medium	Low	High

Q.No.2. Depreciation Vs. Devaluation (A) (SM)

	Depreciation	Devaluation
a) Meaning	Depreciation is a decrease in a currency's value (relative to another currency) due to **market forces** in a Floating Exchange Rate Regime	Devaluation is a **deliberate downward adjustment** in the value of a Country's Currency relative to another currency, group of currencies or standard
b) Cause	Depreciation is caused due to increase in Demand, with Supply remaining constant.	Devaluation is caused by the action of the Government / Central Bank/ Monetary Authority policy actions.
c) Regime	Applicable for a Floating Exchange Rate Regime	Applicable for a relative Fixed Exchange Rate Regime
d) Scope	It is due to the interaction of market forces.	It is a monetary policy tool to make an official reduction in the par value of a currency

Note: The terms **"Appreciation"** and **"Revaluation"** are used to denote the opposite of the above two terms "Depreciation" and "Devaluation" respectively.

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Q.No.3. Effect of Exchange Rate Fluctuations (B) (SM)

	Home currency Depreciation	Home Currency Appreciation
Exports	Depreciation lowers the relative price of a Country's exports. Foreigners find that the country's exports are cheaper, and Export Demand increases.	Depreciation increases the relative price of a Country's exports. Foreigners pay more for the country's products, Export Demand decreases.
Imports	Domestic Residents and Importers have to pay more Home Currency on importing products. Demand for Imports decreases.	Domestic Consumers pay less for foreign products. The demand for Imports increases.
Domestic Inflation	If Imported Goods are a significant portion of the domestic consumption, there will be Inflation. If Imported Inputs are used in production of Final Goods, there will be Cost Push Inflation.	If Imported Goods are a significant portion of the domestic consumption, there will be reduction in Inflation levels.

Q.No.4. Direct vs. Indirect Quote (B) (SM)

Point	Direct Quote	Indirect Quote
Meaning	A Direct Quote is the number of units of a Local Currency exchangeable for one unit of a Foreign Currency	An Indirect Quote is the number of units of a Foreign Currency exchangeable for one unit of a Local Currency
Example	Rs. 72/ US $ means Rs. 72 is required to buy 1 US $.	$ 0.0139 per Rupee means Rs. 1 is obtained by selling $ 0.0139
Base Currency	Local Currency (i.e. Rupee in the above case)	Foreign Currency (i.e. US $ in the above case)

Counter Currency	Foreign Currency (i.e. US $ in the above case)	Local Currency (i.e. Rupee in the above case)
Also called	**European** Currency Quotation	**American** Currency Quotation

SUMMARY

- Exchange rate is the rate at which the currency of one country exchanges for the currency of another country
- A direct quote (European Currency Quotation) is the number of units of a local currency exchangeable for one unit of a foreign currency. For example, Rs 65/US$
- An indirect quote (American Currency Quotation).is the number of units of a foreign currency exchangeable for one unit of local currency; for example: $ 0.0151 per rupee.
- In a direct quotation, the foreign currency is the base currency and the domestic currency is the counter currency. In an indirect quotation, the domestic currency is the base currency and the foreign currency is the counter currency
- The rate between Y and Z which is derived from the given rates of another set of two pairs of currency (say, X and Y, and, X and Z) is called cross rate.
- An exchange rate regime is the system by which a country manages its currency in respect to foreign currencies.
- There are two major types of exchange rate regimes at the extreme ends; namely floating exchange rate regime, (also called a flexible exchange rate) and fixed exchange rate regime.
- Under floating exchange rate regime the equilibrium value of the exchange rate of a country's currency is market determined i.e. the demand for and supply of currency relative to other currencies determines the exchange rate.
- A fixed exchange rate, also referred to as pegged exchanged rate, is an exchange rate regime under which a country's government announces, or decrees, what its currency will be worth in terms of either another country's currency or a basket of currencies or another measure of value, such as gold.
- A central bank may implement soft peg policy under which the exchange rate is generally determined by the market, or a hard peg where the central bank sets a fixed and unchanging value for the exchange rate
- A fixed exchange rate avoids currency fluctuations and eliminates exchange rate risks and transaction costs, enhances international trade and investment and lowers the levels of inflation. But, the central bank has to maintain an adequate amount of reserves and be always ready to intervene in the foreign exchange market.
- A floating exchange rate allows a government to pursue its own independent monetary policy and there is no need of market intervention or maintenance of reserves. But, volatile exchange rates generate a lot of uncertainties in relation to international transactions,
- The 'real exchange rate' incorporates changes in prices and describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country.
- Real Effective Exchange Rate (REER) is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of various foreign currencies) divided by a price deflator or index of costs.
- The wide-reaching collection of markets and institutions that handle the exchange of foreign currencies is known as the foreign exchange market. Being an over-the-counter market, it is not a physical place; rather, it is an electronically linked network bringing buyers and sellers together and has only very narrow spreads

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- On account of arbitrage, regardless of physical location, at any given moment, all markets tend to have the same exchange rate for a given currency. Arbitrage refers to the practice of making risk-less profits by intelligently exploiting price differences of an asset at different dealing places.
- There are two types of transactions in a forex market: current transactions which are carried out in the spot market and contracts to buy or sell currencies for future delivery which are carried out in forward and futures markets
- Usually, the supply of and demand for foreign exchange in the domestic foreign exchange market determine the external value of the domestic currency, or in other words, a country's exchange rate.
- Changes in exchange rates portray depreciation or appreciation of one currency. The terms, 'currency appreciation' and 'currency depreciation' describe the movements of the exchange rate.
- Currency appreciates when its value increases with respect to the value of another currency or a basket of other currencies. On the contrary, currency depreciates when its value falls with respect to the value of another currency or a basket of other currencies.
- Devaluation is a deliberate downward adjustment by central bank in the value of a country's currency relative to another currency, group of currencies or standard.
- An appreciation of a country's currency cause changes in import and export prices will lead to changes in import and export volumes, causing resulting in import spending and export earnings
- Exchange rate depreciation lowers the relative price of a country's exports, raises the relative price of its imports, increases demand both for domestic import-competing goods and for exports, leads to output expansion, encourages economic activity, increases the international competitiveness of domestic industries, increases the volume of exports and improves trade balance.
- Currency appreciation raises the price of exports, decrease exports; increase imports, adversely affect the competitiveness of domestic industry, cause larger deficits and worsens the trade balance.

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LIST OF FORMULAE

1. Direct Quote = $\frac{1}{\text{Indirect Quote}}$

2. Indirect Quote = $\frac{1}{\text{Direct Quote}}$

3. Cross Rate = $\frac{\text{Exchange Rate of A}}{\text{Exchange Rate of B}} \times \frac{\text{Exchange Rate of B}}{\text{Exchange Rate of C}}$

4. Real Exchange Rate = $\frac{\text{Nominal Exchange Rate x Domestic Price}}{\text{Foreign Price}}$

ILLUSTRATIONS

1. Identify Whether the following quotes offered by a Kolkata Bank, are in direct or indirect format, and provide the corresponding indirect or direct quotes.

S.No.	Currency	Rate	Quote
a)	Rand (ZAR)	5.8781	Rupees per Rand
b)	Krona (SEK)	0.1040	Krona per Rupee
c)	Pound (GBP)	101.808	Rupees per pound
d)	Saudi Riyal (SAR)	0.0607	Riyal per Rupee

(ANS.: A) DIRECT, 0.710 ZAR/INR, B) INDIRECT, 9.675 INR/SEK, C) DIRECT, 0.010 GBP/INR, D) INDIRECT, 16.474 INR/SR)

2. For the following information you are required to specify the direct or indirect format of quote, and to convert the rates into the other format

S.No.	Place of Quote	Product	Price	Rate
a)	London	Sterling	Dollar	1.65189
b)	Tokyo	CHF	Yen	118
c)	Geneva	UAE Dirham	CHF	0.242
d)	Singapore	Malay Ringits (MYR)	SGD	0.38477

(ANS.: A) INDIRECT, 0.605 POUND/USD, B) DIRECT, 0.008 CHF/YEN, C) DIRECT, 4.132 AED/CHF, D) DIRECT, 2.599 MYR/SGD)

3. Consider the following and determine the cross rates, as indicated

i) INR/NOK = 10.14	ii) USD/AUD = 0.8925
INR/GBP = 101.80	INR/AUD = 55.00
NOK/GBP = ?	a) USD/INR & b) INR/USD = ?

(ANS.: I) 10.04; II) A) USD/INR = 0.02, B) INR/USD = 1.120)

4. UTI bank quotes Rs.26.45 for Australian dollar. Show what they would quote if it were an indirect quote. ***(ANS.: RS. 1 = AUD 0.0378)***

5. The following rates appear in the foreign exchange market:

	Spot rate	2 months Forward
Rs./US $	Rs.45.80/46.05	Rs.46.50/47.00

a) How many dollars should a firm sell to get Rs. 5crores after 2 months?

(ANS.: RS. 1 = $ 0.0215, FOR RS. 5 CRORES = $ 10,75,000)

b) How many rupees is the firm required to pay obtain US$ 2,00,000 in the spot market?

(ANS.: RS. 92,10,000)

c) Assume the firm has US$ 50,000. How many rupees does the firm in exchange of US$?

(ANS.: RS. 22,90,000)

6. The exchange rate for Mexican peso was 0.1086 in December 2004 and 0.0913 in November 2004, against dollar. Which currency has depreciated and by how much?

(ANS.: $ HAS DEPRECIATED BY 15.89% AGAINST MEXICAN PESO.)

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7. The following direct quotes have been observed from the forex market:

Rs. / $: 43.70

DM/$: 1.578(overseas)

Find cross rates for Rs. /DM ***(ANS.: RS. / DM = 27.6933)***

8. Determine if there is a spot arbitrage opportunity among each of the following two sets of spots rates. Next, show how an investor can take advantage of it, if there is one. Assume that the dollar is your home currency.

a) $/pound = $ 1.65

b) $/DM = $ 0.554

c) DM/POUND = DM 3

(ANS.: $ 0.072 AS A PART OF ARBITRAGE TRANSACTION. FOR $ 1,000,000 = $ 7,200 ON THE SPOT)

9. Exchange rate between U.S. dollar and the British pound = 2. The exchange rate between the U.S. dollar and the Euro = 1.25. The exchange rate between the pound and Euro would be:

(ANS.: 1.6)

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To **MASTER MINDS**, Guntur

6. INTERNATIONAL TRADE

DIFFERENCES

Q.No.1. Compare the theory of comparative costs and modern theory. (A)

Theory of Comparative Costs	Modern Theory
The basis is the difference between countries is comparative costs.	Explains the causes of difference in comparative costs as differences in factor endowments.
Based on labour theory of value.	Based on money cost which is more realistic.
Considered labour as the sole factor of production and presents a one-factor (labour) model.	Widened the scope to include labour and capital as important factors of production. This is two-factor model and can't be extended to more factors.
Treats international trade as quite distinct from domestic trade.	International trade is only a special case of inter-regional trade.
Studies only comparative costs of the goods concerned.	Considers the relative prices of the factors which influence the comparative costs of the goods.
Attributes the differences in comparative advantage to differences in productive efficiency of workers.	Attributes the differences in comparative advantage to the differences in factor endowments.
Does not take into account the factor price differences.	Considers factor price differences as the main cause of commodity price differences.
Does not provide the cause of differences in comparative advantage.	Explains the differences in comparative advantage in terms of differences in factor endowments.
Normative; tries to demonstrate the gains from international trade.	Positive; concentrates on the basis of trade.

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SIMILAR QUESTION:

1. **Describe the reasons for the superiority of Hecksher Ohlin theory of international trade over the classical theory of international trade.**

A. Refer above answer

Q.No.2. Explain the differences between GATT and WTO. (B) (SM)

BASIS FOR COMPARISON	GATT	WTO
Meaning	GATT can be described as a set of rules, multilateral trade agreement that came into force, to encourage international trade and remove cross-country trade barriers.	WTO is an international organization that came into existence to oversee and liberalize trade between countries.
Institution	It does not have any institutional existence, but have a small secretariat.	It has permanent institution along with a secretariat.
Participant nations	Contracting parties	Members
Commitments	Provisional	Full and Permanent
Application	The rules of GATT are only for trade in goods.	The rules of WTO includes services and aspects of intellectual property along with the goods.

Agreement	Their agreements are originally multilateral, but plurilateral agreements are added to it later.	Its agreements are purely multilateral.
Domestic Legislation	Allowed to continue	Not allowed to continue
Dispute Settlement System	Slow and ineffective	Fast and effective

Q.No.3. Differentiate Unilateral, Bilateral, Multilateral and Plurilateral agreements (C) (SM)

Unilateral agreement	Bilateral agreement	Multilateral agreement	Plurilateral agreement
An agreement that one country reduces its import restrictions without any formal agreement for reciprocation from its trade partners.	An exchange agreement between two nations or trading groups that gives each party favored trade status pertaining to certain goods obtained from the signatories. The agreement sets purchase guarantees, removes tariffs and other trade barriers.	An agreement involves three or more countries who wish to regulate trade between the nations without discrimination. They are usually intended to lower trade barriers between participating countries and, increase the degree of economic integration between the participants.	A plurilateral agreement is a multi-national legal or trade agreement between countries. In economic jargon, it is an agreement between more than two countries, but not a great many, which would be multilateral agreement.

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SUMMARY

- International trade is the exchange of goods and services as well as resources between countries and involves greater complexity compared to internal trade
- Trade can be a powerful stimulus to economic efficiency, contributes to economic growth and rising incomes, enlarges manufacturing capabilities, ensures benefits from economies of large scale production, and enhances competitiveness and profitability by adoption of cost reducing technology and business practices.
- Efficient deployment of productive resources to their best uses, productivity gains, decrease the likelihood of domestic monopolies, cost effective sourcing of inputs and components internationally, innovative products at lower prices, wider choice in products and services for consumers are also claimed as benefits of trade
- Enhanced foreign exchange reserves, increased scope for mechanization and specialisation, research and development, creation of jobs, reduction in poverty, augmenting factor incomes, raising standards of livelihood, increase in overall demand for goods and services and greater stimulus to innovative services are other benefits
- There are also other possible positive outcomes in the form of prospects of employment generating investments, improvement in the quality of output, superior products, labour and environmental standards, broadening of productive base, export diversification, stability in prices and supply of goods, human resource development and strengthening of bonds between nations.
- The arguments against trade converge on negative labour market outcomes, economic exploitation, profit-driven exhaustion of natural resources, shift towards a consumer culture, risky dependence, shortages resulting in inflation, disregard for welfare of people, quick transmission of trade cycles, rivalries and risks in trade associated with changes in governments' policies of participating countries.
- Mercantilism advocated maximizing exports in order to bring in more precious metals and minimizing imports through the state imposing very high tariffs on foreign goods.
- According to Adam Smith's Absolute Cost Advantage theory, a country will specialize in the production and export of a commodity in which it has an absolute cost advantage.

- Ricardo's theory of comparative advantage states that a nation should specialize in the production and export of the commodity in which its absolute disadvantage is smaller (this is the commodity of its comparative advantage) and import the commodity in which its absolute disadvantage is greater (this is the commodity of its comparative disadvantage).
- Haberler resolved the issue of dependence on labour alone in the case of theory of comparative advantage when he introduced the opportunity cost concept. Opportunity cost which is the value of the forgone option.
- The Heckscher-Ohlin theory of trade, also referred to as Factor-Endowment Theory of Trade or Modern Theory of Trade, states that comparative advantage in cost of production is explained exclusively by the differences in factor endowments
- A country tends to specialize in the export of a commodity whose production requires intensive use of its abundant resources and imports a commodity whose production requires intensive use of its scarce resources.
- Accordingly, a capital abundant country will produce and export capital intensive goods relatively more cheaply and a labour-abundant country will produce and export labour-intensive goods relatively more cheaply than another country
- The Factor-Price Equalization Theorem states that international trade equalizes the factor prices between the trading nations. Therefore, with free trade, wages and returns on capital will converge across the countries.
- NTT is the latest entrant to explain the rising proportion of world trade in the developed world and bigger developing economies (such as BRICS) which trade in similar products. These countries constitute more than 50% of world trade.
- Trade policy encompasses all instruments that governments may use to promote or restrict imports and exports.
- Trade policies are broadly classified into price-related measures such as tariffs and non-price measures or non-tariff measures (NTMs)
- Tariff, also known as customs duty is defined as a financial charge in the form of a tax, imposed at the border on goods going from one customs territory to another. Tariffs are the most visible and universally used trade measures.
- A specific tariff is an import duty that assigns a fixed monetary tax per physical unit of the good imported whereas an ad valorem tariff is levied as a constant percentage of the monetary value of one unit of the imported good.
- Mixed tariffs are expressed either on the basis of the value of the imported goods (an ad valorem rate) or on the basis of a unit of measure of the imported goods (a specific duty), depending on desired yields.
- Compound Tariff or a compound duty is a combination of an ad valorem and a specific tariff and is calculated on the basis of both the value of the imported goods (an ad valorem duty) and a unit of measure of the imported goods
- Tariff rate quotas (TRQs) combine two policy instruments namely quotas and tariffs.
- MFN tariffs are what countries promise to impose on imports from other members of the WTO, unless the country is part of a preferential trade agreement (such as a free trade area or customs union).
- Preferential tariff occurs when a country gives another country's products lower tariffs than its MFN rate.
- The bound rate is specific to individual products and represents the maximum level of import duty that can be levied on a product imported by that member.
- An 'applied tariff' is the duty that is actually charged on imports on a most favoured nation (MFN) basis.
- Escalated tariff structure refers to the system wherein the nominal tariff rates on imports of manufactured goods are higher than the nominal tariff rates on intermediate inputs and raw materials, i.e. the tariff on a product increases as that product moves through the value-added chain.

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- A prohibitive tariff is one that is set so high that no imports will enter.
- Trigger-price mechanisms are quick responses of affected importing countries up on confirmation of trade distortion to offset the distortion. E.g. Anti-dumping duties.
- Dumping occurs when manufacturers sell goods in a foreign country below the sales prices in their domestic market or below their full average cost of the product. It hurts domestic producers.
- Anti-dumping measures are additional import duties so as to offset the foreign firm's unfair price advantage.
- Countervailing duties are tariffs to offset the artificially low prices charged by exporters who enjoy export subsidies and tax concessions offered by the governments in their home country.
- Tariff barriers create obstacles to trade, reduce the prospect of market access, make imported goods more expensive, increase consumption of domestic goods, protect domestic industries and increase government revenues
- Non-tariff measures (NTMs) are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods, changing quantities traded or prices or both
- Technical Barriers to Trade (TBT) are 'Standards and Technical Regulations' that define the specific characteristics that a product should have, such as its size, shape, design, labelling / marking / packaging, functionality or performance and production methods, excluding measures covered by the SPS Agreement.
- Non-technical measures relate to trade requirements; for example; shipping requirements, custom formalities, trade rules, taxation policies, etc.
- SPS measures are applied to protect human, animal or plant life from risks arising from additives, pests, contaminants, toxins or disease-causing organisms and to protect biodiversity
- An import quota is a direct restriction which specifies that only a certain physical amount of the good will be allowed into the country during a given time period, usually one year.
- The objective of financial measures is to increase import costs by regulating the access to and cost of foreign exchange for imports and to define the terms of payment.
- Government procurement policies may interfere with trade if they involve mandates that the whole of a specified percentage of purchases should be from domestic firms rather than from foreign firms
- In the case of investments, local content requirements that mandate that a specified fraction of a final good be produced domestically may act as a trade barrier.
- Rules of origin are the criteria needed by governments of importing countries to determine the national source of a product.
- Safeguard measures are initiated by countries to temporarily restrict imports of a product if its domestic industry while an embargo is a total ban imposed by government on import of export of some or all commodities to particular country or regions for a specified or indefinite period.
- An export tax is a tax collected on exported goods and may be either specific or ad valorem and an export subsidy includes financial contribution to domestic producers in the form of grants, loans, equity infusions or some form of income or price support. Both distort trade.
- Voluntary Export Restraints (VERs) refer to a type of informal quota administered by an exporting country voluntarily restraining the quantity of goods that can be exported out of that country during a specified period of time, imposed based on negotiations to appease the importing country and to avoid the effects of possible trade restraints
- International trade negotiations, especially the ones aimed at formulation of international trade rules, are complex interactive processes engaged in by countries having competing objectives.
- Regional Trade Agreements (RTAs) are defined as groupings of countries (not necessarily belonging to the same geographical region) which are formed with the objective of reducing barriers to trade between member countries.

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- Trade negotiations result in different types of agreements, namely: unilateral trade agreements, bilateral agreements, regional preferential trade agreements, trading bloc, free-trade area, customs union, common market and economic and monetary union
- The General Agreement on Tariffs and Trade (GATT) provided the rules for much of world trade for 47 years, from 1948 to 1994
- Eight multilateral negotiations known as "trade rounds" held under the auspices GATT resulted in substantial international trade liberalization.
- The eighth of the Uruguay Round of 1986-94, was the last and most consequential of all rounds and culminated in the birth of WTO and a new set of agreements replacing the General Agreement on Tariffs and Trade (GATT).
- The principal objective of the WTO is to facilitate the flow of international trade smoothly, freely, fairly and predictably.
- The WTO does its functions by acting as a forum for trade negotiations among member governments, administering trade agreements, reviewing national trade policies, cooperating with other international organizations and assisting developing countries in trade policy issues through technical assistance and training programmes.
- The WTO activities are supported by the Secretariat located in Geneva, headed by a Director General. It has a three-tier system of decision making. The top level decision-making body is the Ministerial Conference, followed by councils namely, the General Council and the Goods Council, Services Council and Intellectual Property (TRIPS) Council.
- The WTO, accounting for about 95% of world trade, currently has 164 members, of which 117 are developing countries or separate customs territories.
- The major guiding principles of the WTO are trade without discrimination, most-favoured-nation treatment(MFN), the national treatment principle (NTP), freer trade, predictability, general prohibition of quantitative restrictions, greater competitiveness, tariffs as legitimate measures for protection, transparency in decision making, progressive liberalization, market access and a transparent, effective and verifiable dispute settlement mechanism.
- The important agreements under WTO are on agriculture, (SPS) measures, textiles and clothing, technical barriers to trade (TBT), trade-related investment measures (TRIMs), anti-dumping, customs valuation, pre-shipment inspection (PSI), rules of origin, import licensing procedures, subsidies and countervailing measures, safeguards, trade in services (GATS), intellectual property rights (TRIPS), settlement of disputes (DSU), trade policy review mechanism (TPRM) and plurilateral trade agreements on trade in civil aircraft and government procurement.
- The Doha Round, formally the Doha Development Agenda, which is the ninth round since the Second World War was officially launched at the WTO's Fourth Ministerial Conference in Doha, Qatar, in November 2001.
- The major issues related to the WTO are in respect of slow progress of multilateral negotiations, uncertainties resulting from regional trade agreements, inadequate or negligible trade liberalisation, and those which are specific to the developing countries, namely, protectionism and lack of willingness among developed countries to provide market access, difficulties that they face in implementing the present agreements ,apparent north-south divide, exceptionally high tariffs, tariff escalation, erosion of preferences and difficulties with regard to adjustments.

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ADDITIONAL INFORMATION

1. **UNCTAD:** United Nations Conference on Trade and Development (194 member States)
2. **OECD:** Organisation for Economic Co-operation and Development (34 member countries): Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

3. **List of European Union Countries (28):**

Austria, Italy, Belgium, Latvia, Bulgaria, Lithuania, Croatia, Luxembourg, Cyprus, Malta, Czech Republic, Netherlands, Denmark, Poland, Estonia, Portugal, Finland, Romania, France, Slovakia, Germany, Slovenia, Greece, Spain, Hungary, Sweden, Ireland and United Kingdom

4. **List of OPEC Countries (15):**

Algeria. Angola. Congo. Ecuador. Equatorial Guinea. Gabon. Iran. Iraq. Kuwait. Libya. Nigeria. Qatar. Saudi Arabia. United Arab Emirates and Venezuela.

5. Examples of free trade areas:

i) **EFTA:** European Free Trade Association consists of Norway, Iceland, Switzerland and Liechtenstein

ii) **NAFTA:** United States, Mexico and Canada (being renegotiated)

iii) **SAFTA:** South Asian Free Trade Area comprising Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka

iv) **IFTA:** Some of the Existing agreements are: Bangkok agreement, India Sri Lanka FTA, India Thailand FTA, India Mauritius PTA etc.

v) **ASEAN:** Myanmar, Vietnam, Laos, Thailand, Cambodia, Philippines, Malaysia, Singapore, Indonesia, Brunei Darussalam

vi) **MERCOSUR:** It is now a full customs union and a trading bloc. **It** is an economic and political bloc comprising Argentina, Brazil, Paraguay, and Uruguay.

vii) **Pacific Alliance:** Chile, Colombia, Mexico and Peru

viii) **Arab League:** The 22 members of the Arab League as of 2018 were Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates and Yemen.

6. GATT AND WTO TRADE ROUNDS

Name	Start	Duration	Countries	Subjects covered	Achievements
Geneva, (Switzerland)	April 1947	7 months	23	Tariffs	Signing of GATT, 45,000 tariff concessions affecting $10 billion of trade
Annecy, (France)	April 1949	5 months	34	Tariffs	Countries exchanged some 5,000 tariff concessions
Torquay, (England)	September 1950	8 months	34	Tariffs	Countries exchanged some 8,700 tariff concessions, cutting the 1948 tariff levels by 25%
Geneva, (Switzerland)	January 1956	5 months	22	Tariffs, admission of Japan	$2.5 billion in tariff reductions
Dillon, (Geneva, Switzerland)	September 1960	11 months	45	Tariffs	Tariff concessions worth $4.9 billion of world trade
Kennedy, (Geneva, Switzerland)	May 1964	37 months	48	Tariffs, Anti-dumping	Tariff concessions worth $40 billion of world trade

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Tokyo, (Japan)	September 1973	74 months	102	Tariffs, non-tariff measures, "framework" agreements	Tariff reductions worth more than $300 billion achieved
Uruguay	September 1986	87 months	123	Tariffs, non-tariff measures, rules, services, intellectual property, dispute settlement, textiles, agriculture, creation of WTO, etc.	The round led to the creation of WTO, and extended the range of trade negotiations, leading to major reductions in tariffs (about 40%) and agricultural subsidies, an agreement to allow full access for **textiles** and clothing from developing countries, and an extension of intellectual property rights.
Doha, (Quatar)	November 2001	?	159	Tariffs, non-tariff measures, agriculture, labor standards, environment, competition, investment, transparency, patents etc.	The round has not yet concluded. Bali Package signed on the 7th December 2013.

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List of EXIM Codes

Exim Code	Item Description	Policy
050710.10	Ivory	Prohibited
100190.20	Wheat (not seed) for human consumption	State Trading
152110.01	Edible wax for waxing Fresh fruits and vegetables	Free
251511.00	Marble and travertine Crude or roughly trimmed	Restricted
261210.00	Uranium ores and Concentrates	Free
380810.13	Calcium Cyanide	Free
85291009.20	Antenna for communication jamming equipment static / mobile /non portable	Restricted

Negative List of Exports.

Title	Types of Goods
Prohibited Goods	Wild life, exotic birds, wild flora, beef, human skeletons, tallow, fat, oils of animal origin etc., wood and wood products etc.,
Exports Permitted subject to licensing	Cattle, Camel, Coconut and copra, chloroquin phosphate, fur of domestic animals, hides and skins, industrial leathers, uranium, plutonium etc., radium ores etc., milk, pulses, rice bran, raw silk, military stores etc., seeds, vegetable oils, sea weeds, silk worms etc.
Exports permitted subject to quantitative ceilings	Natural rubber, handicrafts made of peacock tail feathers, iodised salt, wheat straw, brown sea weeds, sunflower seeds etc.

Exports permitted through Canalising Agencies	Petroleum Products, Mineral ores and concentrates, mica waste, niger seeds, onions, powder milk etc.
Items which may be exported without a license but subject to terms and conditions specified in the Handbook of Procedures	Arms and ammunition, Basmati rice, De-oiled groundnut cake, grains and flour of wheat, rice etc., handicrafts made of sandalwood, raw cotton, sesame seeds, textiles subject to quotas, acetic anhydride, cotton waste, silk goods etc.

LIST OF FORMULAE

1. Terms of Trade = $\frac{\text{Index of Export Prices}}{\text{Index of Import Prices}} \times 100 = \frac{P_x}{P_m} \times 100$

ILLUSTRATIONS

1. The price index for exports of Country A in year 2012 (2000 base-year), was 116.1 and the price index for Country A's imports was 120.2 (2000 base-year)
   - i) What do these figures mean? ***(ANS.: REFER QUESTION)***
   - ii) Calculate the index of terms of trade for Country A ***(ANS.: 120.2)***
   - iii) How do you interpret the index of terms of trade for Country A? ***(ANS.: TERMS OF TRADE: 96.6)***

2. The table below shows the number of labour hours required to produce wheat and cloth in two countries X and Y.

Commodity	Country X	Country Y
1 unit of cloth	4	1.0
1 unit of wheat	2	2.5

   - i) Compare the productivity of labour in both countries in respect of both commodities
   - ii) Which country has absolute advantage in the production of wheat? ***(ANS.: COUNTRY X)***
   - iii) Which country has absolute advantage in the production of cloth? ***(ANS.: COUNTRY Y)***
   - iv) If there is trade, which commodity should these countries produce? ***(ANS.: COUNTRY X: WHEAT; COUNTRY Y: CLOTH)***
   - v) What are the opportunity costs of each commodity?

3.

		Hats		Bicycles
Delta		1200		300
Epsilon		600		300
AA Hats =	AA Bicycles =	CA Hats =		CA Bicycles =

Trade can occur: ____ hats for ____ bicycles ***(ANS.: 3 HATS FOR 1 BICYCLE)***

4.

		Fish		Wheat
Alpha		10 labor hours		20 labor hours
Beta		20 labor hours		80 labor hours
AA Fish =	AA Wheat =	CA Fish =		CA Wheat =

Trade can occur: _____ fish for ____ wheat ***(ANS.: 3 WHEAT FOR 1 FISH)***

5.

		Cloth		Food
Gamma		10		2
Kappa		10		1
AA Cloth =	AA Food =	CA Cloth =		CA Food =

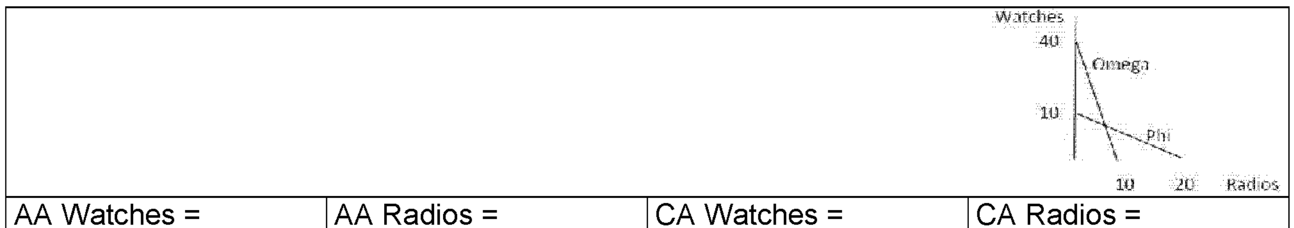
Trade can occur: ____ cloth for ____ food ***(ANS.: 6, 7, 8 OR 9 CLOTH FOR 1 FOOD)***

6.

		Cars		Tractors
Lambda		30		10
Mu		20		40
AA Cars =	AA Tractors =	CA Cars =	CA Tractors =	

Trade can occur: ____ cars for ____ tractors ***(ANS.: 1 CAR FOR 1 TRACTOR)***

7.



AA Watches =	AA Radios =	CA Watches =	CA Radios =

Trade can occur: ____ watches for ____ radios ***(ANS.: 1 WATCH FOR 1 RADIO)***

8.

		Minutes needed to produce 1 radio		Minutes needed to produce 1 bushel of wheat
Ted		20 minutes		5 minutes
Nancy		30 minutes		15 minutes
AA Radios =	AA Wheat =	CA Radios =	CA Wheat =	

Trade can occur: ____ radios for ____ wheat ***(ANS.: 1 RADIO FOR 3 WHEAT)***

MULTIPLE CHOICE QUESTIONS (MCQ'S)

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1. The theory of absolute advantage states that
a) National wealth and power are best served by increasing exports and decreasing imports
b) Nations can increase their economic well-being by specializing in the production of goods they produce more efficiently than anyone else
c) That the value or price of a commodity depends exclusively on the amount of labour going into its production and therefore factor prices will be the same
d) Differences in absolute advantage explains differences in factor endowments in different countries

2. Which of the following theories advocates that countries should produce those goods for which it has the greatest relative advantage?
a) Modern theory of international trade
b) The factor endowment theory
c) The Heckscher-Ohlin Theory
d) None of the above

3. Which of the following does not represent a difference between internal trade and international trade?
a) Transactions in multiple currencies
b) Homogeneity of customers and currencies
c) Differences in legal systems
d) None of the above

4. Which of the following holds that a country can increase its wealth by encouraging exports and discouraging imports?
a) Capitalism b) Socialism
c) Mercantilism d) Laissez faire

5. Given the number of labour hours to produce cloth and grain in two countries, which country should produce grain?

Labour cost (hours) for production of one unit

	Country A	Country B
Cloth	40	80
Grain	80	40

a) Country A b) Country B
c) Neither A nor B d) Both A and B

6. According to the theory of comparative advantage
a) Trade is a zero-sum game so that the net change in wealth or benefits among the participants is zero.
b) Trade is not a zero-sum game so that the net change in wealth or benefits among the participants is positive
c) Nothing definite can be said about the gains from trade
d) Gains from trade depends upon factor endowment and utilization

7. Given the number of labour hours to produce wheat and rice in two countries and that these countries specialise and engage in trade at a relative price of 1:1 what will be the gain of country X?

Labour cost (hours) for production of one unit

	Wheat	Rice
Country X	10	20
Country Y	20	10

a) 20 labour hours
b) 10 labour hours
c) 30 labour hours
d) Does not gain anything

8. Assume India and Bangladesh have the unit labour requirements for producing tables and mats shown in the table below. It follows that:

Labour cost (hours) for production of one unit

	India	Bangladesh
Tables	3	8
Mats	2	1

a) Bangladesh has a comparative advantage in mats
b) India has a comparative advantage in tables
c) Bangladesh has an absolute advantage in mats
d) All the above are true

9. Comparative advantage refers to
a) A country's ability to produce some good or service at the lowest possible cost compared to other countries
b) A country's ability to produce some good or service at a lower opportunity cost than other countries.
c) Choosing a productive method which uses minimum of the abundant factor
d) (a) and (b) above

10. Ricardo explained the law of comparative advantage on the basis of
a) Opportunity costs
b) The law of diminishing returns
c) Economies of scale
d) The labour theory of value

11. A specific tariff is
a) A tax on a set of specified imported good
b) An import tax that is common to all goods imported during a given period
c) A specified fraction of the economic value of an imported good
d) A tax on imports defined as an amount of currency per unit of the good

12. A tariff on imports is beneficial to domestic producers of the imported good because
a) They get a part of the tariff revenue
b) It raises the price for which they can sell their product on the domestic market
c) It determines the quantity that can be imported to the country
d) It reduces their producer surplus, making them more efficient

13. A tax applied as a percentage of the value of an imported good is known as
a) Preferential tariff
b) Ad valorem tariff
c) Specific tariff
d) Mixed or compound tariff

14. Escalated tariff refers to
a) Nominal tariff rates on raw materials which are greater than tariffs on manufactured products
b) Nominal tariff rates on manufactured products which are greater than tariffs on raw materials
c) A tariff which is escalated to prohibit imports of a particular good to protect domestic industries
d) None of the above

15. Voluntary export restraints involve:
a) An importing country voluntarily restraining the quantity of goods that can be exported into the country during a specified period of time
b) Domestic firms agreeing to limit the quantity foreign products sold in their domestic markets
c) An exporting country voluntarily restraining the quantity of goods that can be exported out of a country during a specified period of time
d) Quantitative restrictions imposed by the importing country's government.

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16. Anti-dumping duties are
a) Additional import duties so as to offset the effects of exporting firm's unfair charging of prices in the foreign market which are lower than production costs
b) Additional import duties so as to offset the effects of exporting firm's increased competitiveness due to subsidies by government
c) Additional import duties so as to offset the effects of exporting firm's unfair charging of lower prices in the foreign market
d) (a) and (c) above

17. A countervailing duty is
a) A tariff that aim to offset artificially low prices charged by exporters who enjoy export subsidies and tax concessions in their home country
b) Charged by importing countries to ensure fair and market oriented pricing of imported products
c) Charged by importing countries to protect domestic industries and firms from unfair price advantage arising from subsidies
d) All the above

18. Which of the following is an outcome of tariff?
a) Create obstacles to trade and increase the volume of imports and exports
b) Domestic consumers enjoy consumer surplus because consumers must now pay only a lower price for the good
c) Discourage domestic consumers from consuming imported foreign goods and encourage consumption of domestically produced import substitutes
d) Increase government revenues of the importing country by more than value of the total tariff it charges

19. SPS measures and TBTs are
a) Permissible under WTO to protect the interests of countries
b) May result in loss of competitive advantage of developing countries
c) Increases the costs of compliance to the exporting countries
d) All the above

20. Which of the following is not a non-tariff barrier?
a) Complex documentation requirements
b) Import quotas on specific goods
c) Countervailing duties charged by importing country
d) Pre shipment product inspection and certification requirements

21. Under tariff rate quota
a) Countries promise to impose tariffs on imports from members other than those who are part of a preferential trade agreement
b) A country permits an import of limited quantities at low rates of duty but subjects an excess amount to a much higher rate
c) Lower tariff is charged from goods imported from a country which is given preferential treatment
d) None of the above

22. Non -tariff barriers (NTBs) include all of the following except:
a) Import quotas
b) Tariffs
c) Export subsidies
d) Technical standards of products

23. Which of the following culminated in the establishment of the World Trade Organization?
a) The Doha Round
b) The Tokyo Round
c) The Uruguay Round
d) The Kennedy Round

24. Choose the correct statement
a) The GATT was meant to prevent exploitation of poor countries by richer countries
b) The GATT dealt with trade in goods only, while, the WTO covers services as well as intellectual property.
c) All members of the World Trade Organization are required to avoid tariffs of all types
d) All the above

25. The 'National treatment' principle stands for
a) The procedures within the WTO for resolving disagreements about trade policy among countries
b) The principle that imported products are to be treated no worse in the domestic market than the local ones
c) Exported products are to be treated no worse in the domestic market than the local ones
d) Imported products should have the same tariff, no matter where they are imported from

26. 'Bound tariff' refers to
a) Clubbing of tariffs of different commodities into one common measure
b) The lower limit of the tariff below which a nation cannot be taxing is imports

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c) The upper limit on the tariff that a country can levy on a particular good, according to its commitments under the GATT and WTO.
d) The limit within which the country's export duty should fall so that there is cheaper exports

27. The essence of 'MFN principle' is
a) Equality of treatment of all member countries of WTO in respect of matters related to trade
b) Favour one, country, you need to favour all in the same manner
c) Every WTO member will treat all its trading partners equally without any prejudice and discrimination
d) All the above

28. The World Trade Organization (WTO)
a) Has now been replaced by the GATT
b) Has an inbuilt mechanism to settle disputes among members
c) Was established to ensure free and fair trade internationally.
d) b) and c) above

29. The Agreement on Agriculture includes explicit and binding commitments made by WTO Member governments
a) On increasing agricultural productivity and rural development
b) Market access and agricultural credit support
c) Market access, domestic support and export subsidies
d) Market access, import subsidies and export subsidies

30. The Agreement on Textiles and Clothing
a) Provides that textile trade should be deregulated by gradually and the tariffs should be increased
b) Replaced the Multi-Fiber Arrangement (MFA) which was prevalent since 1974
c) Granted rights of textile exporting countries to increase tariffs to protect their domestic textile industries
d) Stipulated that tariffs in all countries should be the same

31. The Agreement on Trade-Related Aspects of Intellectual Property Rights
a) Stipulates to administer a system of enforcement of intellectual property rights.
b) Provides for most-favored-nation treatment and national treatment for intellectual properties
c) Mandates to maintain high levels of intellectual property protection by all members
d) All the above

32. The most controversial topic in the yet to conclude Doha Agenda is
a) Trade in manufactured goods
b) Trade in intellectual property rights based goods
c) Trade in agricultural goods
d) Market access to goods from developed countries

33. The WTO commitments
a) Affect developed countries adversely because they have comparatively less agricultural goods
b) Affect developing countries more because they need to make radical adjustments
c) Affect both developed and developing countries equally
d) Affect none as they increase world trade and ensure prosperity to all

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KEY:

1.	B	2.	D	3.	B	4.	C	5.	B
6.	B	7.	B	8.	D	9.	B	10.	D
11.	D	12.	B	13.	B	14.	B	15.	C
16.	D	17.	D	18.	C	19.	D	20.	C
21.	B	22.	B	23.	C	24.	B	25.	B
26.	C	27.	D	28.	D	29.	C	30.	B
31.	D	32.	C	33.	B				

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7. NATIONAL INCOME

DIFFERENCES

Q.No.1. Distinguish between Nominal GDP and Real GDP (or) Draw the basis of distinction between GDP at current and constant prices (or) Distinguish between GDP current and constant prices. What purpose does Real GDP serve? (B) (SM, RTP M18, MTP 2 M18 - 2M)

Nominal GDP	Real GDP
i) GDP in terms of current market prices is termed as 'Nominal GDP' or 'GDP at current prices'.	**i)** GDP in terms of constant prices of a chosen base year is termed as 'real GDP' or 'GDP at constant prices'.
ii) Nominal GDP which is essentially a quantity measure is sensitive to changes in the average price level.	**ii)** Real GDP changes only when production changes.
iii) Nominal GDP rise without any real increase in physical output.	**iii)** The real GDP when available by industry of origin, give a measure of the structural changes in the pattern of production in the country is vital for economic analysis.

Inference: If prices rise, GDP measured at market prices will also rise without any real increase in physical output. This is misleading because it does not reflect the changes in the actual volume of output. To correct this i.e. to eliminate the effect of prices, in addition to 'Nominal GDP', 'Real GDP' is introduced.

Q.No.2. What is the difference between GDP and GNP. (C) (SM)

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The two concepts GNP and GDP differ in their treatment of international transactions.

GROSS NATIONAL PRODUCT (GNP)	GROSS DOMESTIC PRODUCT (GDP)
i) The term 'national' refers to normal residents of a country who may be within or outside the domestic territory	**i)** The term 'domestic' refers to the domestic territory of the country.
ii) GNP is a broader concept than **GDP**	**ii)** GDP is a narrower concept than **GNP**
iii) GNP includes NFIA such as earnings of Indian corporations in overseas and Indian residents working in overseas	**iii)** GDP excludes NFIA (Net Factor Income from Abroad).
iv) GNP excludes earnings from current production in India that accrue to foreign residents or foreign-owned firms	**iv)** GDP includes earnings from current production in India that accrue to foreign residents or foreign-owned firms

For instance, profits earned by Company 'Y', an Indian company in UK would be excluded from GDP, but included in GNP. Similarly, profits earned in India by 'X' Company, a foreign-owned firm, would be included in GDP but not in GNP.

Q.No.3. Distinguish between 'Intermediate goods' and 'Final goods'. (B) (SM)

Intermediate goods used to produce other goods rather than being sold to final purchasers are not counted as it would involve double counting whereas final goods are those that meant for final consumption.

Q.No.4. Distinguish between non-economic activities and economic activities. (B) (SM)

Economic activities include all human activities which create goods and services that can be valued at market price.

Non-economic activities are those which produce goods and services, but they are not exchanged in a market transaction. So, that do not command any market value.

Q.No.5. What is the difference between 'national' and 'domestic'? (B) (SM)

The term 'national' refers to normal residents of a country who may be within or outside the domestic territory of a country and is a broader concept compared to the term 'domestic' which refers to the domestic territory of the country.

National - Domestic = Net Factor Income from Abroad

Q.No.6. What is the difference between the concepts 'market price' and 'factor cost' in national income accounting? (B) (SM)

The basis of distinction between market price and factor cost is net indirect taxes (i.e., Indirect taxes - Subsidies).

Market Price = Factor Cost + Net Indirect Taxes = Factor Cost + Indirect Taxes - Subsidies

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Q.No.7. Differentiate between 'taxes on production' and 'product taxes'. (B) (SM)

Both Product taxes and taxes on production are indirect taxes.

PRODUCT TAXES: Product taxes are related to the quantum of production and are levied by the government on goods and services like excise duties, customs, sales tax, service tax etc.

TAXES ON PRODUCTION: taxes on production are to be paid to the local authorities, such as, factory license fee, pollution tax etc. which are unrelated to the quantum of production.

Q.No.8. How does Personal Income differ from Disposable Personal Income? (C) (SM, MTP 1 M18 - 2M)

Personal Income: It is a measure of actual current income receipts of persons from all sources which may or may not be earned from productive activities during a given period of time.

PI = NI + income received but not earned – Income earned but not received.

Disposable Personal Income (DPI): Disposable personal income is what is available for their consumption or savings and is derived from personal income by subtracting the direct taxes paid by individuals and other compulsory payments made to the government.

DPI = PI - Personal Income Taxes (or)
DPI = Consumption + Savings

SUMMARY

- National income accounts are extremely useful for analyzing and evaluating the performance of an economy, knowing the composition and structure of the national income, income distribution, economic forecasting and for choosing economic policies and evaluating them.
- Gross domestic product (GDP_{MP}) is a measure of the market value of all final economic goods and services, gross of depreciation, produced within the domestic territory of a country during a given time period gross of depreciation.

- Capital goods (business plant and equipment purchases) and inventory investment - the net change in inventories of final goods awaiting sale or of materials used in the production are counted in GDP
- To eliminate the effect of prices, in addition computing GDP in terms of current market prices, termed 'nominal GDP' or GDP at current prices, the national income accountants also calculate 'real GDP 'or GDP at constant prices which is the value of domestic product in terms of constant prices of a chosen base year.
- Net Domestic Product at Factor Cost (NDP_{FC}) is defined as the total factor incomes earned by the factors of production.
- Personal income is a measure of the actual current income receipt of persons from all sources. Disposable Personal Income (DI) that is available for their consumption or savings DI = PI - Personal Income Taxes
- Circular flow of income refers to the continuous interlinked phases in circulation of production, income generation and expenditure involving different sectors of the economy.
- Product Method or Value Added Method is also called Industrial Origin Method or Net Output Method and entails the consolidation of the production of each industry less intermediate purchases from all other industries.
- Under income method, national income is calculated by summation of factor incomes paid out by all production units within the domestic territory of a country as wages and salaries, rent, interest, and profit. Transfer incomes are excluded.
- Under the expenditure approach, also called Income Disposal Approach, national income is the aggregate final expenditure in an economy during an accounting year composed of final consumption expenditure, gross domestic capital formation and net exports.

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LIST OF FORMULAE

1. Gross - Net = Depreciation

2. Domestic + NFIA = National

3. Net Indirect Taxes = Indirect taxes - Subsidies

4. Market Price = Factor Cost + Net Indirect Taxes

5. Factor Cost = Market Price - Net Indirect Taxes

6. Real + Inflation = Nominal

7. Real - Deflation = Nominal

8. GDP_{MP} = Value of Output in the Domestic Territory - Value of Intermediate Consumption

= $\sum$ Value Added

9. Gross Domestic Product at Factor Cost (GDP_{FC}) = GDP_{MP} - Indirect Taxes + Subsidies

10. Gross Domestic Product at Factor Cost (GDP_{FC}) = Compensation of employees + Operating Surplus (rent + interest + profit) + Mixed Income of Self-employed + Depreciation

11. GNP_{MP} = GDP_{MP} + Net Factor Income from Abroad

12. GDP_{MP} = GNP_{MP} - Net Factor Income from Abroad

13. NDP_{MP} = GDP_{MP} - Depreciation = NNP_{MP} - Net Factor Income from Abroad

14. NDP_{FC} = NDP_{MP} - Net Indirect Taxes.

15. NDP_{FC} = Compensation of employees + Operating Surplus (rent + interest + profit) + Mixed Income of Self-employed

16. NNP_{MP} = GNP_{MP} - Depreciation = NDP_{MP} + Net Factor Income from Abroad

17. NNP_{MP} = GDP_{MP} + Net Factor Income from Abroad – Depreciation

18. NNP_{FC} = National Income = FID (Factor income earned in domestic territory) + NFIA.

19. PI = NI + income received but not earned - income earned but not received.

20. DI = PI - Personal Income Taxes = Consumption + Savings

21. Per capita Income $= \frac{\text{National Income}}{\text{Total Population}}$

CALCULATION OF NATIONAL INCOME UNDER PRODUCT METHOD:

22. Gross value added (GVA_{MP}) = Value of output - Intermediate consumption

= (Sales + change in stock) - Intermediate consumption

Net value added (NVA_{MP}) = $\sum$ (GVA_{MP}) - Depreciation

Net Domestic Product (NVA_{FC}) = Net value added (NVA_{MP}) - Net Indirect taxes

National Income (NNP_{FC}) = Net Domestic Product (NVA_{FC}) + (NFIA)

CALCULATION OF NATIONAL INCOME UNDER INCOME METHOD:

23. NNP_{FC} or National Income = Compensation of employees

+ Operating Surplus (rent + interest + profit)

+ Mixed Income of Self-employed

+ Net Factor Income from Abroad

CALCULATION OF NATIONAL INCOME UNDER EXPENDITURE METHOD:

24. GDP_{MP} = Final consumption expenditure + Gross domestic capital formation + Net exports.

GNP_{MP} = GDP_{MP} + NFIA

GNP_{FC} = GNP_{MP} - Net indirect taxes

National income or NNP_{FC} = GNP_{FC} - Depreciation

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ILLUSTRATIONS

1. Compute National income.

Consumption	750
Investment	250
Government Purchases	100
Exports	100
Imports	200

(SM) (ANS.: Y = RS. 1,000)

2. Calculate Gross Domestic Product at market Prices (GDP_{MP}) and derive national income from the following data (in Crores of Rupees).

Inventory Investment	100
Exports	200
Indirect taxes	100
Net factor income from abroad	50
Personal consumption expenditure	3500
Gross residential construction investment	300
Depreciation	50
Imports	100
Government purchases of goods and services	1000
Gross public investment	200
Gross business fixed investment	300

(SM) (ANS.: NNP_{FC} = RS. 5,300 CRORES)

3. Find GDP_{MP} and GNP_{MP} from the following data (in Crores of Rs.) using income method. Show that it is the same as that obtained by expenditure method.

Personal Consumption	7,314
Depreciation	800
Wages	6,508
Indirect Business Taxes	1,000
Interest	1,060
Domestic Investment	1,482
Government Expenditures	2,196
Rental Income	34
Corporate Profits	682
Exports	1,346
Net Factor Income from Abroad	40
Mixed Income	806
Imports	1,408

(SM, MTP 1 M18 - 3M) (ANS.: GNP_{MP} = RS. 10,930)

4. From, the following data calculate the Gross National Product at Market Price using Value Added method

Items	(Rs.in Crores)
Value of output in primary sector	500
Net factor income from abroad -	20
Value of output in tertiary sector	700
Intermediate consumption in secondary sector	400
Value of output in secondary sector	900
Government Transfer Payments	600
	700
Intermediate consumption in tertiary sector	300
Intermediate consumption in primary sector	250
Value of output in secondary sector	900
Intermediate consumption in secondary sector	300

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(ANS.: GNP_{MP} = RS. 1,250 CRORES)

5. Calculate Net value added at market price of a firm

Items	(Rs. in thousand)
i) Sale	700
ii) Change in stock	40
iii) Depreciation	80
iv) Net in direct taxes	100
v) Purchase of machinery	250
vi) Purchase of intermediate product.	400

(ANS.: RS. 260 THOUSAND)

6. Calculate Net value added at market price of a firm:

Items	(Rs. in lakhs)
i) Value of output	400
ii) Change in stock	50
iii) Depreciation	20
iv) Net in direct taxes	25
v) Intermediate cost	200
vi) Export	10

(ANS.: RS. 180 LAKHS.)

7. Calculate Personal Disposable Income from the given data:

Items	(Rs. in Crores)
i) Net current transferred from rest of the world.	3
ii) Private income	200
iii) Personal taxes	30
iv) National debt interest	5
v) Corporate profit tax	20
vi) Undistributed profit of corporation	10

(ANS.: RS. 140 CRORES)

8. Calculate Net value added at market price of a firm:

Items	(Rs. in lakhs)
i) Sale in domestic market.	250
ii) Opening stock.	20
iii) Closing in stock	50
iv) Depreciation	15
v) Net in direct taxes	25
vi) Intermediate cost	200
vii) Export	10

(ANS.: RS. 160 LAKHS)

9. Calculate Gross National Disposable income and Personal income:

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Items	(Rs. in Crores)
i) Net factor income from abroad.	(-)50
ii) Net indirect taxes	110
iii) Current Transferred by the government	40
iv) Corporate taxes	60
v) Net domestic product at market price	800
vi) National debt interest	80
vii) NCT from abroad.	10
viii) Consumption of fixed capital	50
ix) Domestic product accruing to govt.	70
x) Retain earning of Private Corporation.	10

(ANS.: GNDI RS. 900 CRORES; PI = 720 RS.)

10. From the following data calculate (a) Gross domestic product at MP and Factor income from abroad:

Items	(Rs. in Crores)
i) Gross National product at factor cost.	6150
ii) Net Export.	-50
iii) Compensation of employee	3000
iv) Rent	800
v) Interest	900
vi) Profit	1300
vii) NIT	300
viii) Net domestic capital formation.	800
ix) Gross fixed capital formation	850
x) Change in stock.	50
xi) Dividend	300
xii) Factor Income from Abroad	80

(ANS.: RS. 6,400 CRORES (B) RS. 130 CRORES)

11. Calculate Gross National product at Market Price' by the production method and Income method:

Items	(Rs. in Crores)
i) Value of output of the primary sector	1000
ii) Indirect taxes	200

iii) Compensation of employee	780
iv) Net factor income from abroad.	100
v) Intermediate purchase by all the sector	2900
vi) Rent	300
vii) Value of output by secondary sector	2000
viii) Subsidies	50
ix) Interest	600
x) Consumption of fixed capital.	120
xi) Value of output of the secondary sector	3000
xii) Profit	320
xiii) Mixed income of self employed	830

(ANS.: 3,000 CRORES)

12. From the following data, compute the Gross National Product at Market Price (GNP_{MP}) using value added method.

	(Rs. in Crores)
Value of output in secondary Sector	1000
Intermediate consumption in primary sector	300
Value of output in Tertiary Sector	3000
Intermediate consumption in secondary sector	400
Net factor income from abroad	(-) 100
Value of output in Primary Sector	800
Intermediate consumption in Tertiary sector	900

(M18 (N) - 3M) (ANS.: GNP_{MP} = 3,100 CRORES)

13. You are given the following data on an economy **(In millions)**

Consumer Expenditure (inclusive of indirect taxes)	110
Investment	20
Government Expenditure (inclusive of transfer payments)	70
Exports	20
Imports	50
Net Property Income from abroad	10
Transfer payments	20
Indirect taxes	30
Population	0.5

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i) Calculate the Gross Domestic Product at market prices.

ii) Calculate the Gross National Income at market prices.

iii) Calculate the Gross Domestic Product at factor cost.

iv) Calculate the per capita Gross National Income at factor cost.

(RTP M18) (ANS.: i) 150 MILLION; ii) 160 MILLION; iii) 120 MILLION; iv) 260)

MULTIPLE CHOICE QUESTIONS

1. The concept of 'resident unit' involved in the definition of GDP denotes
a) A business enterprise which belongs to a citizen of India with production units solely situated in India
b) the unit having predominant economic interest in the economic territory of the country for one year or more irrespective of the nationality or legal status

c) A citizen household which had been living in India during the accounting year and one whose economic interests are solely in India

d) Households and business enterprises composed of citizens of India alone living in India during the accounting year

2. Read the following statements and answer the following question.

   I. Intermediate consumption consists of the value of the goods and services consumed as inputs by a process of production,

   II. Intermediate consumption excludes fixed assets whose consumption is recorded as consumption of fixed capital.

   a) Only I is true b) Both I and II are true

   c) Only II is true d) Neither I nor II is true

3. Gross Domestic Product (GDP) of any nation
   a) Excludes capital consumption and intermediate consumption
   b) Is inclusive of capital consumption or depreciation
   c) Is inclusive of indirect taxes but excludes subsidies d) None of the above

4. While computing Gross Domestic Product (GDP), intermediate goods
   a) Are counted as part of final consumption expenditure
   b) Are counted on a value added basis but excluded from gross output
   c) Are not counted as it would involve double counting
   d) Are treated as stock in trade and therefore included in computation

5. Read the following statements

   I. 'Value added' refer to the difference between value of output and purchase of intermediate goods.

   II. 'Value added' represent the contribution of labour and capital to the production process.

   a) Statements I and II are incorrect
   b) Statements I and II are correct
   c) Statement I is correct and II is incorrect
   d) Statement II is correct and I is incorrect

6. Non-economic activities are
   a) Those activities whose value is excluded from national income calculation as it will involve double counting
   b) Those which produce goods and services, but since these are not exchanged in a market transaction they do not command any market value
   c) Those which do not involve production of goods and services as they are meant to provide hobbies and leisure time activities
   d) Those which result in production for self-consumption and therefore not included in national income calculation

7. Which of the following does not enter into the calculation of national income?
   a) Exchange of previously produced goods
   b) Exchange of second hand goods
   c) Exchange of stocks and bonds
   d) All the above

8. Which of the following enters into the calculation of national income?
   a) The value of the services that accompany the sale
   b) Additions to inventory stocks of final goods and materials
   c) Stocks and bonds sold during eth current year
   d) (a) and (b) above

9. Nominal GDP is
   a) GDP at current prices
   b) GDP at constant prices
   c) Real GDP
   d) (a) and (c) above

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10. Gross National Product at market prices GNP_{MP} is
   a) GDP_{MP} + Net Factor Income from Abroad b) GDP_{MP} - Net Factor Income from Abroad
   c) GDP_{MP} – Depreciation
   d) GDP_{MP} + Net Indirect Taxes

11. Choose the correct statement
   a) GNP includes earnings of Indian corporations overseas and Indian residents working overseas; but GDP does not include these
   b) NNP_{FC} = National Income = FID (factor income earned in domestic territory) -NFIA.
   c) Capital goods and inventory investment are excluded from computation of GDP
   d) $NDP_{MP} = GDP_{MP}$ + Depreciation

12. The basis of distinction between market price and factor cost is
   a) Net factor income from abroad
   b) Net indirect taxes (i.e., Indirect taxes - Subsidies)
   c) Net indirect taxes (i.e., Indirect taxes + Subsidies)
   d) Depreciation (consumption of fixed capital)

13. If net factor income from abroad is positive, then

a) National income will be greater than domestic factor incomes.
b) National income will be less than domestic factor incomes.
c) Net exports will be negative
d) Domestic factor incomes will be greater than national income

14. The GDP per capita is
a) A measure of a country's economic output per person
b) Actual current income receipts of persons
c) National income divided by population
d) (a) and (c) above

15. The new series of national accounts in India, is published revising the base year from
a) 2004-05 to 2011-12
b) 2004-05 to 2010-11.
c) 2004-05 to 2014-15.
d) None of the above

16. Which of the following is an example of transfer payment?
a) Old age pensions and family pensions
b) Scholarships given to deserving diligent students.
c) Compensation given for loss of property due to floods
d) All the above

17. Mixed income of the self -employed means
a) Net profits received by self -employed people
b) Outside wages received by self-employed people
c) Combined factor payments which are not distinguishable,
d) Wages due to non- economic activities

18. Demand for final consumption arises in
a) Household sector only
b) Government sector only
c) Both household and government sectors
d) Neither household nor government sector

19. GDP per capita is a completely inadequate measure of welfare because
a) It reflects only incomes accrued not earned
b) It does not reflect distribution of income among people
c) It is usually low in underdeveloped countries
d) Net factor income from abroad is not included in it

20. Which of the following is added to national income while calculating personal income?
a) Transfer payments to individuals
b) Undistributed profits of corporate
c) Transfer payments made to foreigners
d) Mixed income of self employed

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KEY:

1.	B	2.	B	3.	B	4.	C	5.	B
6.	B	7.	D	8.	D	9.	A	10.	A
11.	A	12.	B	13.	A	14.	D	15.	A
16.	D	17.	C	18.	C	19.	B	20.	A

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8. THE KEYNESIAN THEORY OF DETERMINATION OF NATIONAL INCOME

DIFFERENCES

Q.No.1. Differentiate Leakages and injections in a circular flow of income stated by J.M. Keynes. (B) (M18 - 2M)

Basis of difference	Leakages	Injections
Definition	A leakage is an outflow or withdrawal of income from the circular flow.	An injection is non-consumption expenditure.
Scope	Leakages are money leaving the circular flow and therefore, not available for spending on currently produced goods and services.	It is an expenditure on goods and services produced within the domestic territory but not used by the domestic household for consumption purposes.
Effects	Leakages reduce the flow of income.	Injections are exogenous additions to the circular flow and add to the total volume of the basic circular flow.
Examples	Savings, Imports and Taxes	Investment, Government Spending (Government Expenditure), Exports etc.

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Q.No.2. Distinguish Consumption Function and Saving Function. (B) (SM)

Basis of difference	Consumption Function	Saving Function
Definition	The Consumption Function expresses the positive relationship between Consumption Expenditure and Total Disposable Income (Y)	Income not spent on Consumption is saved. Thus, Saving Function denotes the balance after the impact of Consumption.
Function / Relationship	The relationship between Consumption and Income is given by the linear relationship C = a+bY, where **C** = Aggregate Consumption Expenditure, **Y** = Total Disposable Income **a** = a Constant which represents the positive value of Consumption at Zero Level of Disposable Income, **b** = Slope of Consumption Function (or) Marginal Propensity to Consume, i.e. $\frac{\Delta C}{\Delta Y}$.	Savings is that part of Total Income that is not "spent". So, Saving Function is given by the relationship S = Y - C, where **S** = Aggregate Saving, **Y** = Total Disposable Income **C** = Aggregate Consumption Expenditure

Q.No.3. Differentiate Marginal Propensity to Consume and Marginal Propensity to Save. (C) (SM)

Basis of difference	Marginal Propensity to Consume (MPC)	Marginal Propensity to Save (MPS)
Meaning	MPC is the increase in Consumption, for every unit of increase in	MPS is the increase in Saving, for every unit of increase in Disposable

	Disposable Income.	Income.
Formula	MPC = **b** = $\frac{\Delta C}{\Delta Y}$	MPS = $\frac{\Delta S}{\Delta Y}$ (or) [1-MPC] (or) [1-b]
Nature	As Income (Y) increases, Consumption (C) also tends to increase, however, the increase in Consumption will be less than the increase in Income. Hence, "b" lies between 0 and 1. (0 < b < 1).	As Income (Y) increases, Saving (S) also tends to increase. Also, since MPS+MPC = 1, it is inferred that MPC lies between 0 and 1. (0 < MPS < 1).

Note: MPS "b" is a constant for all levels of Income and Consumption. Hence, MPC is also a constant.

Q.No.4. Distinguish Average Propensity to Consume and Average Propensity to Save. (C) (SM)

Basis of difference	Average Propensity to Consume (APC)	Average Propensity Save (APS)
Formula	APC = $\frac{C}{Y} = \frac{\text{Total Consumption}}{\text{Total Income}}$	APS = $\frac{S}{Y} = \frac{\text{Total Saving}}{\text{Total Income}}$
Nature	APC shows a **decreasing** trend, as Income increases	APS shows an **increasing** trend, as Income decreases.

SUMMARY

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- John Maynard Keynes in his masterpiece 'The General Theory of Employment Interest and Money' published in 1936 put forth a comprehensive theory to explain the determination of equilibrium aggregate income and output in an economy.
- The equilibrium analysis is best understood with a hypothetical simple a two sector economy which has only households and firms with all prices (including factor prices), supply of capital and technology constant; the total income produced Y, accrues to the households and equals their disposable personal income.
- The equilibrium output occur when the desired amount of output demanded by all the agents in the economy exactly equals the amount produced in a given time period.
- In the two-sector economy aggregate demand (AD) or aggregate expenditure consists of only two components: aggregate demand for consumer goods and aggregate demand for investment goods, I being determined exogenously and constant in the short run.
- Consumption function expresses the functional relationship between aggregate consumption expenditure and aggregate disposable income, expressed as C = f (Y). The specific form consumption function, proposed by Keynes C = a + bY
- The value of the increment to consumer expenditure per unit of increment to income (b) is termed the Marginal Propensity to Consume (MPC).
- The Keynesian assumption is that consumption increases with an increase in disposable income (b > 0), but that the increase in consumption will be less than the increase in disposable income (b < 1).
- The propensity to consume refers to the proportion of the total and the marginal incomes which people spend on consumer goods and services.
- The proportion or fraction of the total income consumed is called 'average propensity to consume' (APC) = Total Consumption /Total Income
- Since Y = C + S, consumption and saving functions are counterparts of each other. The condition for national income equilibrium can thus be expressed as C + I = C + S

- Changes in income are primarily from changes in the autonomous components of aggregate demand, especially from changes in the unstable investment component.
- The investment multiplier k is defined as the ratio of change in national income (ΔY) due to change in investment (ΔI)
- The marginal propensity to consume (MPC) is the determinant of the value of the multiplier. The higher the marginal propensity to consume (MPC) the greater is the value of the multiplier.
- The more powerful the leakages are, the smaller will be the value of multiplier.
- Aggregate demand in the three sector model of closed economy (neglecting foreign trade) consists of three components namely, household consumption(C), desired business investment demand(I) and the government sector's demand for goods and services(G).
- The government sector imposes taxes on households and business sector, effects transfer payments to household sector and subsidy payments to the business sector, purchases goods and services and borrows from financial markets.
- In equilibrium, it is also true that the (S + T) schedule intersects the (I + G) horizontal schedule.
- The four sector model includes all four macroeconomic sectors, the household sector, the business sector, the government sector, and the foreign sector and in equilibrium, we have Y = C + I + G + (X-M)
- The domestic economy trades goods with the foreign sector through exports and imports.
- Imports are subtracted from exports to derive net exports, which is the foreign sector's contribution to aggregate expenditures. If net exports are positive ($X > M$), there is net injection and national income increases. Conversely, if $X<M$, there is net withdrawal and national income decreases.
- The autonomous expenditure multiplier in a four sector model includes the effects of foreign transactions and is stated as $\frac{1}{(1-b+v)}$ against $\frac{1}{(1-b)}$ in a closed economy.

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- The greater the value of v, the lower will be the autonomous expenditure multiplier.
- An increase in the demand for exports of a country is an increase in aggregate demand for domestically produced output and will increase equilibrium income just as would an increase in government spending or an autonomous increase in investment.

LIST OF FORMULAE

Sector Model	Aggregate Demand (Y)	Aggregate Supply (Y)	Inference	
			Leakages	Injections
Two	AD = C + I	AS = C + S	S	I
Three	AD = C + I + G	AS = C + S + T	S, T	I, G
Four	AD = C + I + G + (X - M)	AS = C + S + T + M	S, T, M	I, G, X

1. C = a + bY

   Where, C = Consumption; a = Constant, b = Slope of Consumption (or) Marginal Propensity to Consume and Y = Personal Disposable Income.

2. Y = C+S,

   Where, Y = Personal Disposable Income, C = Consumption, S = Savings.

3. $APC = \frac{\text{Total Consumption}}{\text{Total Income}} = \frac{C}{Y}$

4. $APS = \frac{\text{Total Saving}}{\text{Total Income}} = \frac{S}{Y}$

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5. $MPC = \frac{\Delta C}{\Delta Y} = b$

6. $MPS = \frac{\Delta S}{\Delta Y} = 1 - b$

7. MPC + MPS = 1

8. Investment Multiplier = $k = \frac{\Delta Y}{\Delta I} = \frac{1}{MPS} = \frac{1}{1 - MPC} = \frac{1}{1 - b}$

9. Multiplier in an open economy = $\frac{1}{(1 - b + v)}$ (Where, v = Marginal Propensity to import)

10. Multiplier in a closed economy = $\frac{1}{(1 - b)}$

ILLUSTRATIONS

1. Calculate the Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS) from the following data: ***(ANS.: MPC = 0.75; MPS = 0.25)***

Income (Y)	Consumption (C)	Level
Rs. 8,000	Rs. 6,000	Initial level
Rs. 12,000	Rs. 9,000	Changed level

2. Suppose in an economy:

Consumption Function	C = 150 + 0.75 Yd
Investment spending	I = 100
Government spending	G= 115
Tax	T_x = 20 + 0.20 Y
Transfer Payments	T_r = 40
Exports	X = 35
Imports	M = 15 + 0.1 Y

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Where, Y and Y_d are National Income and Personal Disposable Income respectively. All figures are in rupees.

Find:

i) The equilibrium level of National Income **ii)** Consumption at equilibrium level

iii) Net Exports at equilibrium level

(M18 (N) - 5M) (ANS.: i) RS. 800; ii) RS. 645; iii) Rs.(60) (ADVERSE BALANCE OF TRADE)

3. In a two sector economy, the business sector produces 7000 units at an average price of Rs. 5.
   - **a)** What is the money value of output? ***(ANS.: RS. 35,000)***
   - **b)** What is the money income of households? ***(ANS.: RS. 35,000)***
   - **c)** If households spend 80 percent of their income, what is the total consumer expenditure? ***(ANS.: RS. 28,000)***
   - **d)** What is the total money revenues received by the business sector? ***(ANS.: RS. 28,000)***
   - **e)** What should happen to the level of output? ***(ANS.: EXPECTED TO DECREASE OUTPUT)***

4. Assume that an economy's consumption function is specified by the equation C = 500 + 0.80Y.
   - **a)** What will be the consumption when disposable income (Y) is Rs. 4,000, Rs. 5,000, and Rs. 6,000? ***(ANS.: RS. 3,700; RS. 4,500; 5,300)***
   - **b)** Find saving when disposable income is Rs. 4,000, Rs. 5,000, and Rs. 6,000. ***(ANS.: RS. 300; RS. 500; RS. 700)***
   - **c)** What amount of consumption for consumption function C is autonomous? ***(ANS.: RS. 500 FOR ALL LEVELS OF INCOME)***

d) What amount is induced when disposable income is Rs. 4,000? Rs. 5,000? Rs. 6,000?

(ANS.: RS. 3,200; RS. 4,000; 4,800)

5. Find the value of the multiplier when (a) MPC is 0.2 (b) MPC is 0.5 (c) MPC is 0.8

(ANS.: A) 1.25; B) 2; C) 5)

6. For the linear consumption function is C = 700 + 0.8Y; I is Rs. 1200 and Net exports X-M = 100. Find equilibrium output? ***(ANS: Y = RS. 10,000)***

7. Given the empirical consumption function C= 100+0.75 Y and I = 1500, calculate equilibrium level of national income. What would be the consumption expenditure at equilibrium level national income?

(ANS.: Y = RS. 4,900)

8. Suppose that the economy is characterized by the following structural Equations:

C = 160 + 0.6 (Y - T) I = 150; G = 150; T = 100.

Where C is consumption, I is investment, G is Government expenditure, T is income tax and Y is income or output.

a) Determine the equilibrium output level. ***(ANS.: Y = 1,000)***

b) If G rises to 200, what is the new equilibrium level of output? What is the Value of the govt. expenditure multiplier? Interpret the results. ***(ANS.: NEW EQUILIBRIUM: 1125; GOVT. EXP. MULTIPLIER: 2.5 TIMES)***

c) If tax falls to 50, by how much will equilibrium output rise? What is the value of tax multiplier?

(ANS.: NEW EQUILIBRIUM: 1075; TAX MULTIPLIER: 1.5 TIMES)

9. Given the values of Marginal Propensity to Consume (MPC) = 0.60 and Marginal Propensity to Import = 0.10. The value of Foreign Trade Multiplier (FTM) is ***(ANS.: 2)***

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MULTIPLE CHOICE QUESTIONS (MCQ'S)

1. In the Keynesian model, equilibrium aggregate output is determined by
a) Aggregate demand
b) Consumption function
c) The national demand for labor
d) The price level

2. Keynes believed that an economy may attain equilibrium level of output
a) Only at the full-employment level of output
b) Below the full-employment level of output
c) Only if prices were inflexible
d) a) and c) above

3. According to Keynes, consumption expenditure is determined by
a) The level of interest rates
b) Extent of government taxes and subsidies
c) Disposable income
d) Autonomous investment expenditure

4. The marginal propensity to consume (MPC) can be defined as
a) A change in spending due to a change in income
b) A change in income that is saved after consumption
c) Part of income that is spent on consumption.
d) Part of income that is not saved.

5. If the consumption function is expressed as C = a + bY then b represents
a) Autonomous consumer expenditure when income is zero
b) The marginal propensity to consume.
c) The expenditure multiplier when consumption is increased
d) Part of disposable income

6. If the consumption function is expressed as C = a + bY then a represents
a) Autonomous consumer expenditure.
b) The marginal propensity to consume.
c) The consumption income relationship
d) Non- linear consumption function

7. If the consumption function is C = 20 + 0.5YD, then an increase in disposable income by Rs. 100 will result in an increase in consumer expenditure by Rs._______.
a) 25 b) 70

c) 50. d) 100

8. If the autonomous consumption equals Rs. 2,000 and the marginal propensity to consume equals 0.8. If disposable income equals Rs. 10,000, then total consumption will be Rs.________.

a) 8,000 b) 6,000

c) 10,000 d) None of the above

9. In the Keynesian cross diagram, the point at which the aggregate demand function crosses the 45 degree line indicates the

a) Level of full employment income.

b) Less than full employment level of income.

c) Equilibrium level of income which may or may not be full employment level of income

d) Autonomous level of income which may not be full employment level of income

10. In a closed economy, aggregate demand is the sum of

a) Consumer expenditure, demand for exports , and government spending.

b) Consumer expenditure, planned investment spending, and government spending.

c) Consumer expenditure, actual investment spending, government spending, and net exports.

d) Consumer expenditure, planned investment spending, government spending, and net exports.

11. In an open economy, aggregate demand is the sum of

a) C+I+G b) C+I

c) C+I+G+(X-M) d) None of the above

12. Aggregate output and autonomous consumer expenditure are ________ related

a) Negatively b) Positively

c) Proportionately d) Collectively

13. The slope of the consumption function is called

a) Autonomous consumption when income is zero

b) Average propensity to consume.

c) Marginal propensity to consume.

d) None of the above

14. The saving function shows

a) The incremental saving caused by incremental disposable income

b) The level of saving at each level of disposable income

c) Position where saving is equal to investment

d) Change in saving due to autonomous investment

15. Which of the following statement is true

a) Saving is an increasing function of the level of income and MPS is positive

b) Since the Marginal Propensity to Consume (MPC) is always less than unity, but greater than zero, i.e., 0 < b < 1

c) MPC + MPS = 1 and MPS 0 < b < 1.

d) All the above

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KEY:

1.	A	2.	B	3.	C	4.	A	5.	B
6.	A	7.	C	8.	C	9.	C	10.	B
11.	C	12.	B	13.	C	14.	B	15.	D

THE END