

ISC Solved Paper 2018

Economics

Class-XII

(Maximum Marks : 80)

(Time allowed : Three hours)

Answer all questions in Section A, Section B and Section C.

Section A consists of objective / very short answer questions.

Section B consists of short answer questions.

Section C consists of long answer questions.

The intended marks for questions or parts of questions are given in brackets [].

PART- I

[20 Marks]

Answer all the questions.

1. Answer briefly each of the question (i) to (x). [10×2]

- (i) Define deficit financing.
- (ii) Differentiate between Current Account and Capital Account of Balance of Payment.
- (iii) What is meant by price discrimination in monopoly market?
- (iv) Define total utility. How is marginal utility derived from total utility?
- (v) Explain the overdraft facility given by banks.
- (vi) Define implicit cost. How it is different from explicit cost?
- (vii) Why is price per unit equal to AR and MR under perfect competition?
- (viii) Explain the meaning of the following:
 - (a) Full employment
 - (b) Involuntary unemployment
- (ix) Explain two differences between factor income and transfer income.
- (x) With the help of diagrams, show how equilibrium price and quantity of a commodity are affected when:
 - (a) Demand is perfectly elastic and supply decreases.
 - (b) Supply is perfectly elastic and demand increases.

- (iii) Price discrimination refers to the charging of different prices by the monopolies for the same product. The difference in the product may be on the basis of brand, wrapper etc. This policy of the monopolies is called price discrimination. A monopolies sell the same product to different buyers in monopoly at different prices at same or different time periods.
- (iv) Total utility is the sum total of utility derived from the consumption of all units of a particular commodity.

$$TU = MU_1 + MU_2 + MU_3 + \dots + MU_n$$

Marginal utility is derived from Total Utility as :

$$MU = TU_n - TU_{(n-1)} \text{ or } MU = \frac{\Delta TU}{\Delta Q}$$

- (v) Overdraft facility is a financial facility by which banker allows his reliable customers to draw over and above the money actually deposited by them in their accounts. This facility is allowed through cheque only to the current account holders, but only to those who have good financial and credit standing.
- (vi) Implicit costs are the opportunity cost of resources already owned by the firm and used in business and it is the opposite of an explicit cost, which is borne directly. Explicit costs are those cash payments which firms make to outsiders for their services and goods.
- (vii) Under perfect competition, all the units are sold at the same price. As a result, the Average Revenue comes equal to the price per unit of the commodity. Also, each additional unit is also sold at the same price per unit which makes Marginal Revenue also

Ans. (i) Deficit financing is a process of filling the gap between government revenue and government expenditure in a government budget by borrowing funds from central bank or public. It includes printing more money or issuing bonds.

(ii)

Basis	Current Account	Capital Account
Balance of Payment	It deals with the payments of currently produced goods and services.	It deals with international sales and purchases of assets.
Influence	It directly influences on level of national income.	It influences volume of assets which a country holds.

equal to the price per unit of the commodity. Under perfect competition, AR is constant for a firm. Hence, $AR = MR$.

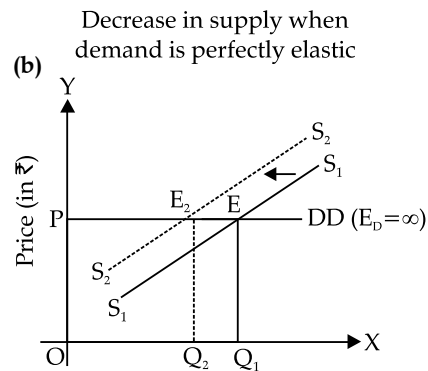
- (viii) (a) Full employment refers to the situation where all those workers who are able to work and willing to work get employment at prevailing wage rate.
- (b) Involuntary unemployment refers to an unemployment in which all those people, who are unemployed despite being willing to work at the existing salary/wage rate, do not get work.

(ix)

Factor Income	Transfer Income
These are incomes received by the owners of factors of production for rendering their factor services to the producers.	These are all those unilateral payments meaning these incomes are not received for buying and selling of goods and services.
These are bilateral.	These are unilateral.
These add value to economy and national income.	These do not add value to economy and national income.

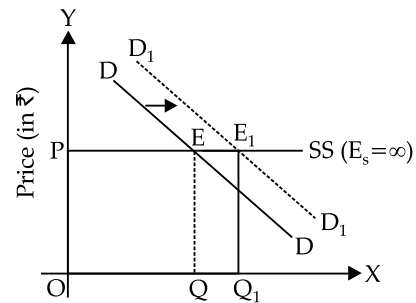
(Any two points)

(x) (a)



Quantity demanded and supplied (in units)

Increase in demand when supply is perfectly elastic



Quantity demanded and supplied (in units)

PART- II

[60 Marks]

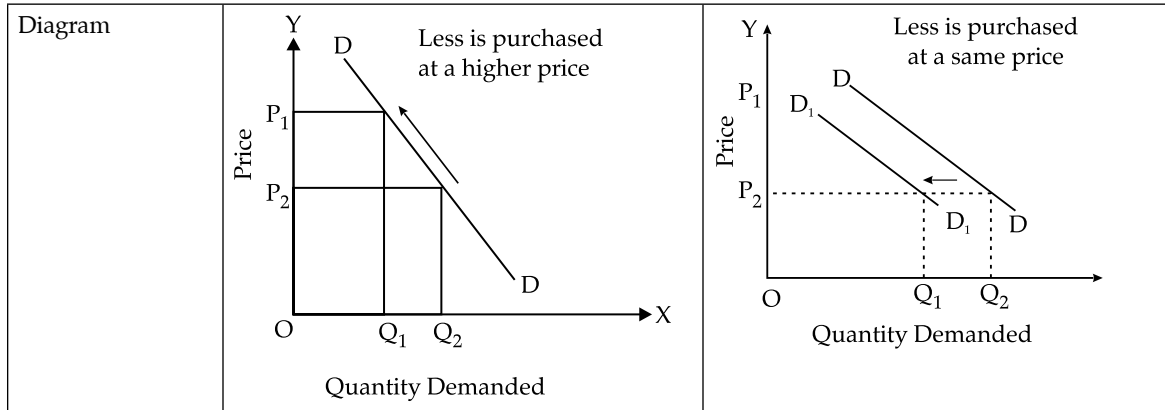
Answer any five questions

2. (a) Differentiate between *contraction of demand* and *decrease in demand* using diagrams. [3]
- (b) "The supply curve of labour is an exception to the law of supply." Justify the statement using a diagram. [3]
- (c) A consumer consumes goods X and Y. Given below is his marginal utility schedule for goods X and Y. [6]
Suppose the price of X is ₹ 2, Y is ₹ 1 and income ₹ 12, state the law of equimarginal utility and explain how the consumer will attain equilibrium.

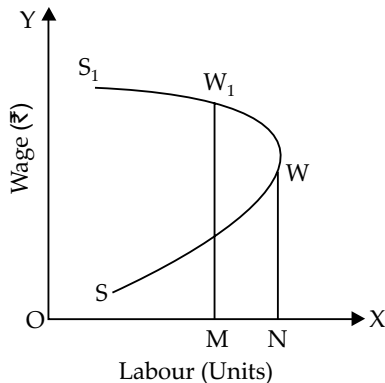
Units	1	2	3	4	5	6
MU_X	16	14	12	10	8	6
MU_Y	11	10	9	8	7	6

Ans. (a) Difference between contraction of demand and decrease in demand are :

Basis	Contraction of Demand	Decrease in Demand
Meaning	When the quantity demanded falls due to an increase in price, other factors remain constant, it is known as contraction in demand.	Decrease in demand refers to a fall in the demand of a commodity due to any factor other than own price of the commodity.
Effect on demand curve	There is an upward movement along the same demand curve.	There is a leftward shift in the demand curve.



(b) The supply of labour is an exception to the law of supply. Initially, the supply of labour follows the law of supply, that is, with an increase in wage rate, there is an increase in supply of labour. But beyond a certain wage rate, the labour prefers to have some relaxed hours. The workers can maintain the same standard of living by working for few hours at higher wage rates. As a result, beyond that wage rate, the supply of labour starts falling. As a result, the supply curve of labour is backward bending.



(c) The law of equimarginal utility states that the consumer will distribute his money income between the goods in such a way that the utility derived from the last rupee spent on each good is equal.

Units of X	MU of X	$\frac{MU_x}{P_x}$	Units of Y	MU of Y	$\frac{MU_y}{P_y}$
1	16	8	1	11	11
2	14	7	2	10	10
3	12	6	3	9	9
4	10	5	4	8	8
5	8	4	5	7	7
6	6	3	6	6	6

The equilibrium condition is satisfied when the consumer consumes the goods in the combination of 1 unit of Goods X and 4 units of Goods Y.

At this level of consumption, the total expenditure of the consumer is:

$$(1 \times ₹ 2) + (4 \times ₹ 1) = 2 + 4 = 6$$

This is attainable also in his given income of 12.

3. (a) Explain any two factors affecting the price elasticity of demand. [3]
- (b) Derive a market supply curve from two hypothetical individual schedules. [3]
- (c) If more variable factors are employed to fixed factors, the total product increases initially at increasing rate and finally it decreases. Explain this law with the help of a diagram. [6]

Ans. (a) The various factors affecting the price elasticity of demand are (Any two):

(i) **Availability of substitutes:** Demand for goods which have close substitutes (like tea and coffee) is relatively more elastic because, when price of such goods rises, the consumers have the option of shifting to its substitute. Goods without close substitutes like cigarettes, etc., are generally found to be less elastic in demand.

(ii) **Proportion of income spent on a commodity:** Demand for goods on which a consumer spends only a small fraction of his total income is relatively more inelastic because, even when price of such goods rises, the consumers can still afford the same units of the commodity. Goods on which a major portion of the income is spent are likely to have elastic demand.

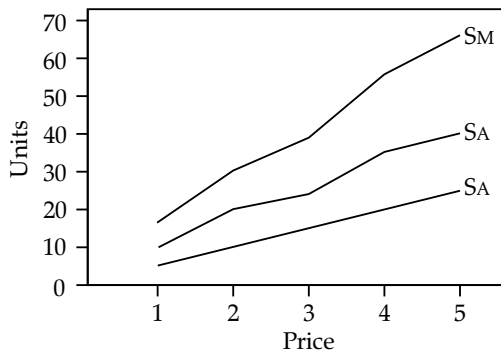
(iii) **Nature of a commodity :** Ordinarily, necessities like salt, matchboxes, etc., have

less than unitary elastic demand luxuries like air conditioner, costly furniture, car etc., have greater than unitary elastic demand. Comforts like, cooler, fans, etc., have neither very elastic nor very inelastic demand. Jointly demanded goods like pen ink, etc. show a moderate elasticity of demand.

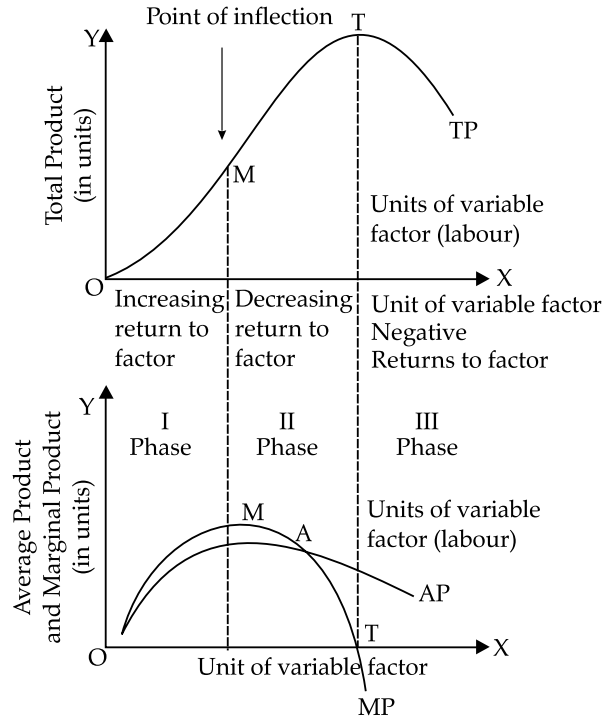
- (iv) **Tastes and habits of the consumer:** Demand for goods for which a consumer has taste preference or is habitual of is relatively more inelastic because even when price of such good rises, the consumers will still prefer to buy the same units of the commodity. **(Any two)**

Ans. (b)

Price (₹)	Individual Supply (units)		Market Supply (units)
	S_A	S_B	$S_M = S_A + S_B$
1	5	10	$5 + 10 = 15$
2	10	20	$10 + 20 = 30$
3	15	25	$15 + 25 = 40$
4	20	35	$20 + 35 = 55$
5	25	40	$25 + 40 = 65$

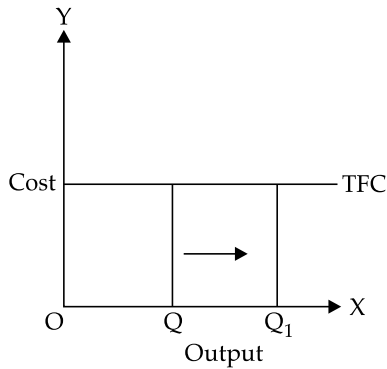


- (c) Law of Variable Proportions states that in short run, as more and more units of the variable factor are combined with the fixed factor, the Total Product (TP) increases initially at increasing rate and finally it decreases or in other words, Marginal Product (MP) of the variable factor may initially increase and subsequently stabilise but must finally decrease. Phase of changes in Total Product according to the Law of Variable Proportion are shown in following figure:

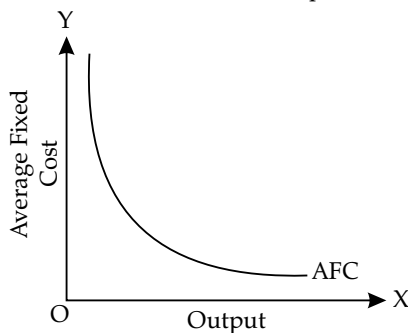


- (i) **Phase I Increasing Returns:** This stage is in between O and M on TP curve. In this stage, MP tends to rise till OM units of labour and used with the constant application of fixed factor. When MP is rising, TP tends to rise at an increasing rate. This occurs till point M on TP curve and MP curve. This is a situation of increasing returns to a factor.
- (ii) **Phase II–Diminishing Returns:** This stage is between M and T on TP curve. Beyond OM units of labour, MP tends to decline and TP increases only at diminishing rate. This occurs between M and T on MP curve and TP curve. This is a situation of diminishing return to a factor.
- (iii) **Phase III–Negative Returns:** This stage is beyond T on TP curve. Beyond OT units of labour, MP becomes negative. Now, TP starts declining. This is a situation of negative returns to a factor.
4. (a) **Explain the shapes of total fixed cost curve and average fixed cost curve. Give one reason each to justify the shape of the two curves.** [3]
- (b) **Explain the concept of maximum price legislation with the help of a diagram.** [3]
- (c) **Explain any four features of perfect competition.** [6]

Ans.(a) Total fixed cost curve is a straight line parallel to x-axis as it remains constant at all levels of output.

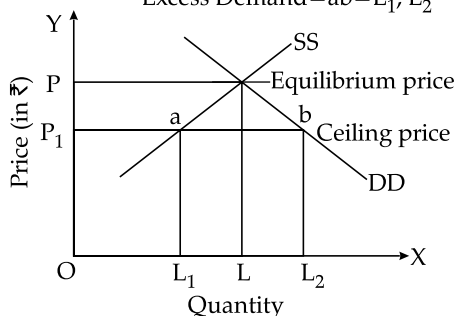


The Average Fixed Cost (AFC) curve looks like a rectangular hyperbola. It happens because same amount of fixed cost is divided by increasing output. As a result, AFC curve slope downwards and is rectangular hyperbola, i.e. area under AFC curve remains same at different points.



(b) **Maximum price legislation or price ceiling** is the method, when the government sets a maximum legal limit of a price of a particular commodity with the aim of reducing prices below the market equilibrium price of a commodity.

Equilibrium Price = OP
 Equilibrium Quantity = OL
 Ceiling Price = OP₁
 Excess Demand = ab = L₁L₂



When government fixes price of OP', demand for bajra extends from OL to OL₂. On the other hand, supply contracts from OL to OL₁. Consequently, a gap emerges between market demand and market supply. It is a situation when MD > MS. It is called a situation of excess demand. In the diagram, excess demand = ab = L₁L₂ (OL₂ - OL₁). Excess demand for bajra would have its own implications.

Significantly, people fail to buy bajra to the extent they wish to buy. Accordingly, a situation of partial hunger' may continue to exist.

(c) **Four features of perfect competition are:**

(i) **Large number of buyers and sellers:** Under perfect competition, there are large number of buyers and sellers but no individual buyer or seller can influence the price of the commodity in the market. Any change in the output supplied by a single firm will not affect the total output of the industry. No individual buyer can influence the price of the commodity by his decision to vary the amount that he would like to buy, i.e., price of the commodity is given to the buyer. Firm is a price-taker, having no bargaining power in the market.

(ii) **Freedom of entry and exit of firms:** The industry is characterised by freedom of entry and exit of firms. In a perfectly competitive market, there are no barriers to entry or exit of firms.

(iii) **Perfect knowledge about market:** This means that both buyers and sellers are fully informed about the market price. Therefore, no firm is in a position to charge a different price and buyers will not pay a higher price. As a result, a uniform price prevails in the market.

(iv) **Homogeneous product:** In a perfectly competitive market, buyers treat the product produced by different firms as homogeneous. There are large number of buyers and sellers who deal in homogeneous product due to which every seller has the same type of product which is identical in nature.

5. (a) **Explain how a firm in perfect competition incurs loss in short run equilibrium.** [3]

(b) **Discuss how prices of related goods affect the demand for a commodity.** [3]

(c) **Explain how a producer attains equilibrium using TR and TC approach.** [6]

Ans. (a) The situation occurs when the price is so low that it does not fully cover the AFC. The market price is less than AC of production and the firm incurs losses. This situation is graphically illustrated. At price OP determined by the intersection of market demand and supply comes equilibrium is at point E. At point E, MC = MR and MC curve cuts MR from below. Losses are incurred.

Losses are calculated as:

$$AR = MR = P$$

$$TR < TC$$

$$TR = PEQO$$

$$TC = RCQO$$

$$LOSS = RCEP$$

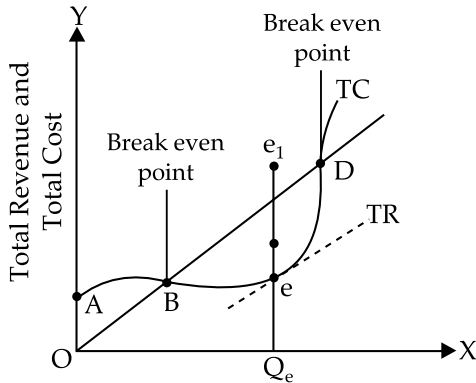
$$AR = P \text{ covers AVC}$$

The firm is not able to completely cover the AFC. The firm still continues to produce even though there are losses because at least the AVC is being covered by the price.

(b) In case of substitute goods, demand for a commodity falls with fall in price of the substitute commodity. In case of

complementary goods, market demand for the commodity rises with a fall in the price of complementary commodity.

Ans. (c) According to TR and TC approach, producer's equilibrium refers to stage of that output level at which the difference between TR and TC is positively maximised and total profits fall as more units of output are produced. After reaching such a position, there will be no incentive for the producer to increase or decrease the output and the producer will be said to be at equilibrium.



6. (a) Discuss the mechanism of investment multiplier with the help of a numerical example. [3]
 (b) Complete the following tables: [3]

Income (Y) ₹	Consumption (C)	APS	MPS
0	40		
50	70	--	--
100	100	--	--
150	120	--	--

- (c) Explain the concept of inflationary gap with the help of a diagram. Discuss two monetary measures to correct it. [6]

Ans. (a) Investment multiplier refers to increase in national income as a multiple of a given increase in investment. Its value is determined by MPC.

It is denoted by 'K' where $K = \frac{\Delta y}{\Delta I}$.

where, Δy = additional income generated
 ΔI = additional investment.

$$\text{Multiplier} = \frac{1}{1 - \text{MPC}} \text{ or } \frac{1}{\text{MPS}}$$

$$\text{Mole} = \text{mpc} + \text{mp} = 1$$

$$\text{Thus, } \text{mps} = 1 - \text{mpc}$$

Where MPC = Marginal Propensity to Consume

MPS = Marginal Propensity to Save

Suppose increase in investment is ₹1000 and MPC = 0.8. The increase in national income is in the following sequence:

- (i) Increase in investment raises income of those who supply investment goods by ₹1000. This is the first round increase.
 (ii) Since MPC = 0.8, the income earners spend ₹ 800 on consumption. This raises the income of the suppliers of consumption goods by ₹ 800. This is second round increase.
 (iii) In the similar way, the third round increase is ₹ 640 = 800 × 0.8. In this way, national income goes on increasing round after round.
 (iv) The total increase in income is ₹ 5000 which equals to:

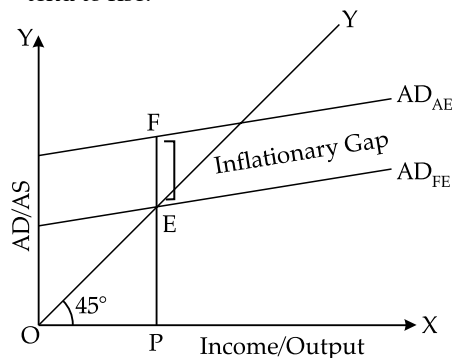
$$\Delta Y = \Delta I \times \frac{1}{1 - \text{MPC}}$$

$$\Delta Y = 1000 \times \frac{1}{1 - 0.8} = ₹ 5,000$$

Ans.(b)

Income (Y) ₹	Consumption (C)	Saving (S)	APS	MPS
0	40	-40	—	—
50	70	-20	-0.4	0.4
100	100	0	0	0.4
150	120	30	0.2	0.6

- (c) **Inflationary Gap** occurs when $AD > AS$ corresponding to full employment level. This inflationary gap, i.e., excess of aggregate demand causes inflation in the economy and price levels tend to rise.



In the above figure,

AD_{FE} = AD at full employment level

AD_{AE} = AD above full employment level

The point E is the equilibrium point where $AD = AS$. But the excess demand (current) of AD_{AE} , aggregate demand FP is more than the aggregate supply in the economy. This difference of actual aggregate demand and supply i.e., EF is the inflationary gap.

Inflationary Gap = Excess Demand

$$= AD_{AE} - AD_{FE}$$

$$= EF$$

Monetary measures to correct inflationary gap are:

- (i) Rise in Bank Rate
- (ii) Sale of Securities in Open Market
- (iii) Rise in Cash Reserve Ratio
- (iv) Increase in Liquidity Ratio
- (v) Increase in Margin Requirement of money
- (vi) Credit Rationing (Any two)

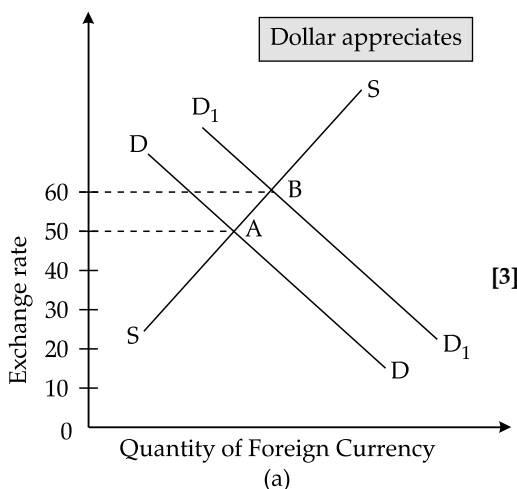
7. (a) Differentiate between *Revenue deficit* and *Fiscal deficit* [3]
 (b) What is an *indirect tax*? How is it different from a *direct tax*? [3]
 (c) Show with the help of a diagram how exchange rate is determined under flexible exchange rate system. [6]

Ans. (a)

Basic	Revenue deficit	Fiscal deficit
Meaning	It results when revenue receipts are less than the expenditure.	It is the difference between total revenue and total expenditure of the government (excluding borrowing).
Indicator	It indicates the dependency on loans in near future.	It is an indicator of the total borrowings needed by the government.
Arises	It arises when the government's actual net receipts are lower than the projected receipts.	It arises due to hike in capital expenditure.

- Ans. (b) **Indirect Tax** : Tax in which burden of tax and responsibility to deposit tax do not lie on the same person. For example, VAT, sales tax, service tax, GST, etc. are indirect taxes.
Direct Tax : Tax in which burden of tax and responsibility to deposit tax lie on the same person. For example, income tax, corporate tax, wealth tax, etc. are direct taxes.

- Ans. (c) The system of exchange rate in which rate of exchange is determined by forces of demand and supply of foreign exchange market is called Flexible Exchange Rate System. Here, value of currency is allowed to fluctuate or adjust freely according to the change in demand and supply of foreign exchange.



8. (a) Explain *any two* functions of the Reserve Bank of India. [3]
 (b) Explain the following terms: [3]
 (i) Fiat money

- (ii) Deposit money
- (iii) Token money
- (c) How do commercial banks create credit? Explain with the help of an example? [6]

Ans. (a) The major functions of Central Bank are :

- (i) **Issue of Currency**: Currency authority function means that the Central Bank has the sole authority to issue currency. It brings uniformity in notes circulation. It also gives power to the central bank to directly control money supply.
- (ii) **Bankers to the government**: A central bank is a bank to the government like commercial banks are to the public. It accepts deposits from the government and gives loans to the government in times of need.
- (iii) **Custodian of foreign exchange reserves**: The foreign exchange reserves of every country are under the custody of the Central Bank of that country. The Central Bank maintains the foreign exchange reserves so that the international trade of the country does not suffer a setback.
- (iv) **Lender of the last resort**: It means that if a commercial bank fails to get financial accommodation from anywhere, it approaches the Central Bank as the last resort. Central Bank advances loan to such a bank against approved securities. By offering loans to the commercial banks in situation of emergency, the Central Bank ensures that the banking system of the country does not suffer any setback and the money market remains stable. (Any two)

- Ans.(b) (i) Fiat money is a type of currency that is declared legal tender by a government and is not backed

by any tangible asset, such as gold or silver. It is a physical currency determined by the government. Government maintains control of the money under fiat monetary system. [1]

- (ii) Deposit money is defined as the amount of deposits held by commercial banks as deposits in different account like current, saving, fixed, recurring, etc.
- (iii) Token money is a form of money whose face value exceeds its commodity value. Most modern coins used in circulation are token money, as are paper notes. It is a subsidiary of subsidiary money.

Ans.(c) Money/credit creation is an important function of the commercial banks. By creating credit, commercial banks contribute to money supply in the economy. They create credit in the form of demand deposits. Demand deposits of the commercial banks are many times more than their cash reserves. If cash reserves are (say) ₹1,000 and if the demand deposits are (say) ₹ 10,000, then the commercial banks are creating credit ten times of their cash reserves. Accordingly, on the basis of cash reserves of ₹ 1,000, the commercial banks are contributing ₹ 10,000 to the supply of money. The process of credit creation is like this: Initially, bank receives deposits of ₹ 1,000. The required reserves to tackle the liability of ₹ 1,000 is equal to ₹ 100 (on the assumption that cash reserve ratio is 10% of total deposits). Implying that the banks have excess reserves = ₹ 1,000 – ₹ 100 = ₹ 900 which they can use for the purpose of lending. When these excess reserves are loaned out, total deposits of the

bank amount to ₹ 1000 + ₹ 900 = ₹ 1,900. The banks need to hold cash reserves as 10% of ₹ 1,900 or ₹ 190, while their actual reserves are ₹ 1,000. Implying excess reserves of ₹ 1,000 – ₹ 190 = ₹ 810 can be loaned. This process continues till total demand deposits are ₹ 10,000 and cash reserves are ₹ 1,000. Thus, if required reserve ratio is equal to 10%, total cash reserves of ₹ 1,000 allow the bank to create demand deposits upto ₹ 10,000. So that,

$$\begin{aligned} \text{Demand Deposits} &= \frac{1}{\text{RR}} \times \text{Cash Reserves} \\ &= \frac{1}{10\%} \times 1000 = 10000 \end{aligned}$$

Here, RR refers to reserve requirement of the commercial banks as a percentage of their demand deposits. Here, it is important to note that loans are never offered in cash. These are always reflected as demand deposits in favour of the borrowers. Accordingly, when loans are offered, demand deposits of the banks lend to build up. In the above example, cash reserves of ₹ 1,000 allow demand deposits of ₹ 10,000 which serve as a source of money supply.

- 9. (a) Explain the components of *compensation of employees* for calculation of National Income by Income method. [3]
- (b) Explain how the following are treated in estimating National Income: [3]
 - (i) Wheat grown by a farmer for self-consumption.
 - (ii) Earnings of the shareholders from the sale of shares.
 - (iii) Service rendered by family members to each other.

(c) From the following data, calculate National Income by Income method and Expenditure method: [6]

<u>Items</u>	<u>₹(in crores)</u>
(i) Compensation of employees	700
(ii) Government final consumption expenditure	750
(iii) Net factor income from abroad	(-)10
(iv) Net exports	(-)15
(v) Profits	600
(vi) Net indirect taxes	60
(vii) Mixed income of self employed	350
(viii) Rent	200
(ix) Interest	310
(x) Private final consumption expenditure	1100
(xi) Net domestic capital formation	385
(xii) Consumption of fixed capital	65

Ans. (a) Compensation of employees refers to the factor income earned by labour in exchange of their factor services. Its components are Wages and Salaries, Employers' contribution to social

security and Retirement Pension.
(i) Wages and Salaries: Factor payments received by employees in the form of basic, DA, bonus, commission, HRA, perquisites, etc.

(ii) Employers' contribution to social security: Amount deposited by the employer in provident fund, insurance schemes, etc. of the employees.

(iii) Retirement Benefits: Amount deposited in pension and pension-linked schemes for the employees.

Ans.(b) (i) Imputed value of what grown by farmer for self-consumption must be included.

(ii) Purchase or sale of financial assets like shares is not included while calculating national income.

(iii) Imputed value of self-consumed services

rendered by family member to each other is not included in the national income.

Ans.(c) *National income (income method) = Compensation of employees + Profits + Rent + Interest + Mixed income of self employed – Net factor income to abroad = 700 + 600 + 200 + 310 + 350 – 10 = 2150 crores*

National income (expenditure method) = Govt. final consumption expenditure + Net domestic capital formation + Net exports + Private final consumption expenditure – Net indirect taxes – Net factor income to abroad = 750 + 385 – 15 + 1100 – 60 – 10 = 2150 crores

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