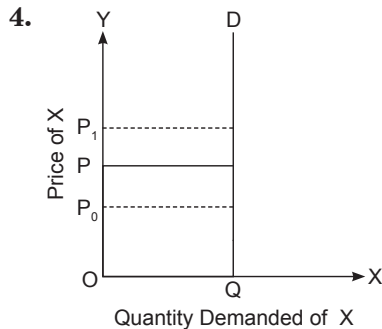


Answers to RSPL/3

Section - A

1. (c)
2. (d)
3. Slope of the demand curve refers to the 'rate at which demand curve slopes downwards'.

$$\text{Slope of the demand curve} = -\frac{\Delta p}{\Delta q}$$



DQ is the straight line demand curve, which is parallel to the OY axis showing '**zero price elasticity of demand**'.

5. (a) **False**. When there is underutilisation or inefficient utilisation of resources, the economy will produce at a point inside the production possibility curve.
(b) **False**. Massive unemployment does not cause a shift in the production possibilities curve but causes the economy to operate at a point inside the production possibility curve.
(c) **True**. A production possibility curve is drawn assuming fuller and efficient utilisation of given scarce resources. Hence, the curve represents maximum production level that an economy can achieve.
6. (a) Wages to the daily wage-earners are **variable cost** as they vary on daily basis.
(b) Expenditure on the purchase of raw materials is **variable cost** as it varies directly with the level of output.
(c) Interest on borrowed capital is **fixed cost** as it is to be borne by the producer irrespective of the level of output.

Or

- (a) An increase in the price of inputs will bring about a rise in the cost of production and a fall in the level of profit. As a result, the supply of the given good will decrease. So, the supply curve will shift **leftwards** showing a decrease in supply.
(b) When an improvement occurs in the level of technology used by the firm, the cost of production declines and profit margin increases. Consequently, the firm would now supply more than before at the given price. So, the supply curve of the good will shift **rightwards** showing an increase in supply.
(c) A fall in the rate of GST levied on the given good will reduce the cost of production and as a result the firm will supply more at the given price. So, the supply curve of the good will shift **rightwards**, showing an increase in supply.

7. (a) A consumer's preferences are monotonic if and only if between any two bundles, the consumer prefers the bundle which has more of at least one of the goods and no less of the other good as compared to the other bundle.
- (b) An indifference curve slopes **downwards** from left to right because whenever a consumer wants to have more units of one commodity, he will have to sacrifice some units of the other commodity. If the consumer can have more of both the commodities, his level of satisfaction will change which is not possible. Thus, there exists a negative relationship between the quantity of good X and quantity of good Y.

An indifference curve is **convex** to origin due to diminishing marginal rate of substitution. Marginal rate of substitution of good X for good Y refers to the number of units of good Y that the consumer is willing to forego for an additional unit of good X, so as to maintain the same level of satisfaction.

$$\text{MRS} = \frac{\Delta Y}{\Delta X}$$

Or

Given: $\Delta q = (-)5, \Delta p = 1, q = 60, e_d = (-)1.5$

$$e_d = \frac{\Delta q}{\Delta p} \cdot \frac{p}{q}$$

$$(-)1.5 = (-) \frac{5}{1} \cdot \frac{p}{60}$$

$$p = \frac{1.5 \times 60}{5}$$

$$= \frac{90}{5} = ₹ 18$$

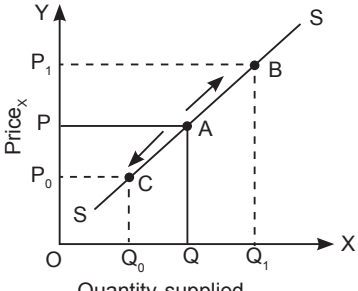
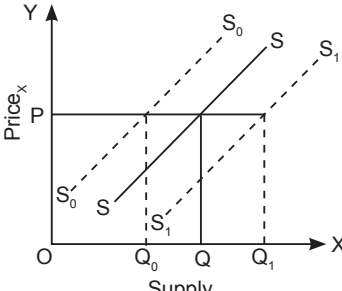
\therefore Price (p) = ₹ 18

8. A table showing quantity supplied of a given good at different prices is known as a supply schedule.

When the government gives a subsidy on the production of a particular good, this will lower its cost of production. As a result, the given producer would produce more and offer more for sale at the given price, *i.e.*, supply would increase, implying that the supply curve would shift to the right.

9. The main feature of perfect competition is that new firms are free to enter and existing firms can leave (market) any time they like. The implication is that firms will earn only normal profit in the long run. In the short run, there can be abnormal profits or losses. If there are abnormal profits, new firms enter the market. The total market supply increases, resulting in a fall in market price and fall in profits. This trend continues till profits are reduced to normal. Similarly, if there are losses, firms start leaving. The total market supply decreases resulting in a rise in market price and reduction in losses. This trend continues till losses are wiped out.

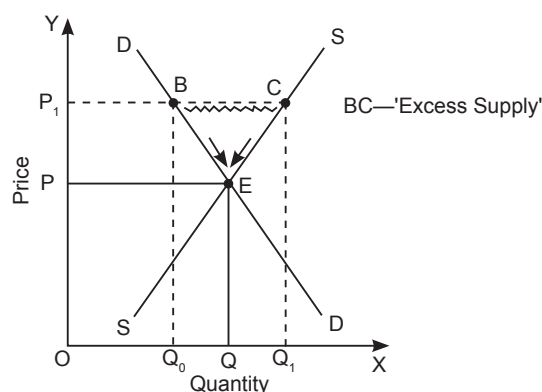
10. Basis	Change in Quantity Supplied	Change in Supply
(a) Causes	Change in quantity supplied is caused by change in price of the commodity alone, other factors remaining constant.	Change in supply is caused by factors other than the price of the commodity, <i>i.e.</i> , change in price of related commodities or change in state of technology or change in price of inputs etc.

(b) Curve	<p>Change in quantity supplied of a commodity is denoted by the 'movement along a supply curve'.</p> <ul style="list-style-type: none"> • Upward movement along a supply curve denotes 'expansion of supply'. • Downward movement along a supply curve denotes 'contraction of supply'. 	<p>Change supply is denoted by a 'shift of the supply curve'.</p> <ul style="list-style-type: none"> • Rightward shift in supply curve denotes 'increase in supply'. • Leftward shift in supply curve denotes 'decrease in supply'.
(c) Diagram		

11. When at a given price, the quantity supplied of a commodity exceeds its quantity demanded, then it is a situation of **excess supply**. When there is excess supply, the equilibrium price would be lower than the price at which there is excess supply. If there is excess supply of a commodity, the following changes take place to establish equilibrium price:

- As supply exceeds demand, all sellers will not be able to sell the total quantity they want to sell at this price. So, there will be competition among the sellers. This will reduce the price.
- As the price starts falling, its quantity demanded starts rising as the buyers demand more when price falls (expansion of demand).
- As the price starts falling, its quantity supplied starts falling as the sellers sell less when price falls (contraction of supply).
- The fall in price of the commodity causes expansion of demand and contraction of supply which continues till price reaches a level at which quantity demanded and quantity supplied are equal.
- Thus, the excess supply is wiped out and equilibrium price and quantity are established.

The diagram explains the concept of excess supply and the process by which it is wiped out. In the diagram, when the price is OP_1 , the quantity supplied is OQ_1 but quantity demanded is OQ_0 . So, there is an excess supply equal to BC . Competition among the sellers reduces the price. As the price falls from OP_1 to OP , there is expansion of demand and it is shown by a downward movement along the demand curve and there is contraction of supply due to a fall in price. This is shown by a downward movement along the supply curve as shown by arrows. Further downward movement along the supply curve (contraction of supply) takes us to point E . Point E is the equilibrium point and OP denotes equilibrium price and OQ denotes equilibrium quantity.

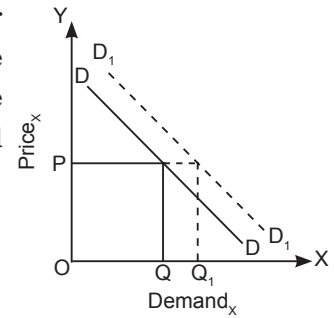


12. (a) We know that related goods may be either substitutes or complementary.

(i) If the price of a substitute good changes, the demand for the given good changes in the same direction. If price of the substitute good say Y rises, it lowers the relative price of the given good X and thus, raises its demand and vice-versa.

$$P_Y \uparrow \{D_Y \downarrow\} D_X \uparrow$$

$$P_Y \downarrow \{D_Y \uparrow\} D_X \downarrow$$

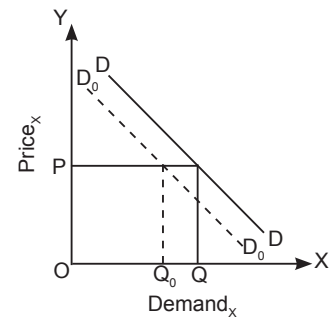


(where X is Tea and Y is coffee).

(ii) If the price of a complementary good (say pen) rises, the demand for the given good (ink) falls and vice-versa. This is so, as both the goods are used jointly.

$$P_Y \uparrow \{D_Y \downarrow\} D_X \downarrow$$

$$P_Y \downarrow \{D_Y \uparrow\} D_X \uparrow$$



(where Y is pen and X is ink).

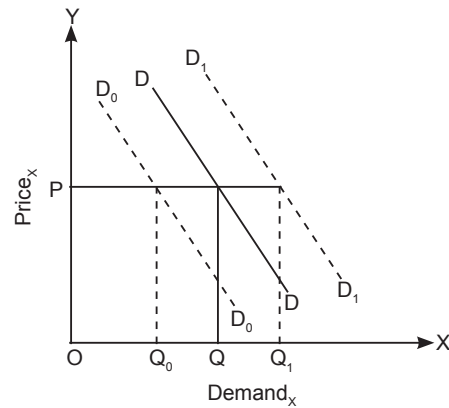
Thus, if the price of a complementary good changes, the demand for the given good changes in the opposite direction.

(b) The effect of a change in income of the consumer on demand of a good depends upon whether the good is normal or inferior in nature. If the good is normal for the given consumer, a rise in income will increase its demand and a fall in income will decrease its demand.

Thus,

$$Y \uparrow \quad D_{Ng} \uparrow$$

$$Y \downarrow \quad D_{Ng} \downarrow$$



In case of normal good, with increase in income demand curve shifts to the right from DD to D_1D_1 , whereas it shifts to the left from DD to D_0D_0 with decrease in income.

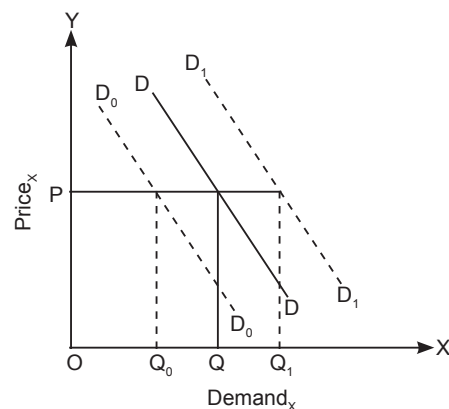
If the good is inferior good for the given consumer, a rise in income will decrease its demand and a fall in income increase its demand.

Thus,

$$Y \uparrow \quad D_{Ig} \downarrow$$

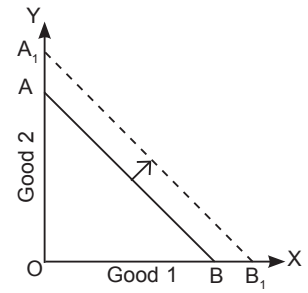
$$Y \downarrow \quad D_{Ig} \uparrow$$

In case of inferior good, with increase in income, demand curve shifts to the left from DD to D_0D_0 , whereas it shifts to the right from DD to D_1D_1 with decrease in income.



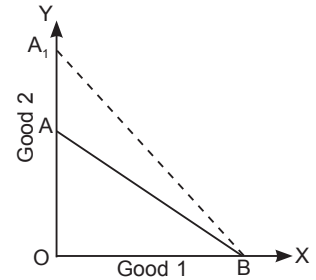
Or

- (a) Graphically, rise in the consumer's income (it doubles in the given case), with the prices of the two goods remaining unchanged, shifts the budget line parallel upwards from original budget line AB to a new budget line A_1B_1 .



- (b) If the price of good 2 decreases by a rupee but the price of good 1 and consumer's income remains unchanged, this shifts the Y axis end of the budget line along the Y axis upwards.

When the price of good 2 decreases, the budget line changes from AB to A_1B .



Section - B

13. The value of Average Propensity to Save can be negative, at very low level of income when consumption expenditure exceeds income. For example, at an income level of ₹ 200, when the consumption expenditure is ₹ 240, the saving is (-) 40.

Thus,
$$APS = \frac{S}{Y} = \frac{-40}{200} = -0.2$$

14. Professor J.M. Keynes

15. Fiscal deficit = Primary Deficit + Interest payments
= 10,000 + 8,000 = ₹ 18,000 crores

16. Recovery of loans is treated as a '**capital receipt**' because when loans are recovered from the borrowers, the assets of the government are reduced.

17. A commercial bank is considered as a 'creator of money' in the economy on the basis of its basic function of receiving/accepting deposits from the public. The commercial banks use the money in these deposits to give loans. This is the basis of deposit creation. How much is the deposit creation is determined by the amount of initial deposits by the public and the Legal Reserve Ratio (LRR). Let us now explain the process of money creation/deposit creation or credit creation.

Suppose initially people deposit ₹ 100. The banks use this money for giving loans. But the banks cannot use the whole of the deposit for this purpose. It is legally compulsory for the banks to keep a certain minimum fraction of these deposits as cash. This fraction is called the Legal Reserve Ratio (LRR), which is fixed by the central bank.

Explanation of the process of money creation. Suppose the initial deposit in banks is ₹ 100 and the LRR is 20%. Further suppose that banks keep only the minimum required, *i.e.*, ₹ 20 as cash reserve. So now they are free to lend the remainder ₹ 80. Suppose they lend ₹ 80, for this, they open deposit accounts in the names of the borrowers. Now, as all the transactions are routed through the banks, the money spent by the borrowers comes back into the banks, into the deposit accounts of those who have received this payment. This increases demand deposits in banks by ₹ 80, which is 80% of the initial deposit. This deposit of ₹ 80 has resulted on account of loans given by the banks. In this sense, the banks

are responsible for money creation with this round, increase in total deposits is now ₹ 180 (100 + 80).

This way, the deposits go on increasing round after round, but each time 80% of the last round deposit. At the same time, cash reserves go on increasing each time, 80% of the last cash reserve. The deposit creation comes to end when total cash reserves become equal to the initial deposit (*i.e.*, ₹ 100 in the given case) the total deposit creation comes to ₹ 500, *i.e.*, five times the initial deposit as proven by the following schedule.

Deposit/Money Creation by Commercial Banks

Round	Deposits (₹)	Loans (₹)	Cash Reserves (LRR = 0.2)
Initial	100	80.00	20.00
I	80	64.00	16.00
II	64	51.20	12.80
.	.	.	.
.	.	.	.
.	.	.	.
Total	500	400.00	100.00

Or

The Reserve Bank of India, being the apex bank of the country plays pivotal role in ensuring financial security to the common man indirectly, through its credit instruments used like open market operation, CRR, SLR, Repo Rate (RR), Reverse Repo Rate (RRR), Bank Rate etc. Through the proper steps taken by the RBI, the government tries to ensure economic stability in the economy. This is mainly in the interest of social or public welfare via commercial banks. They act as agents between the central bank and the common masses.

18. Repo rate refers to the rate at which Central bank lends to commercial banks for a short period. When the Central bank raises the repo rate, the borrowings by commercial banks become expensive. This, in turn, compels the commercial banks to raise their lending rate. As a result, borrowing becomes expensive and people will thereby borrow less and, thus, spend less. This, in turn, helps in reducing inflationary conditions in an economy.

19.
$$NI/NNP_{FC} = GDP_{MP} - \text{Depreciation} + \text{Net factor income from abroad} - \text{Net indirect taxes}$$

$$850 = 1,100 - \text{Depreciation} + 100 - 150$$

$$\therefore \text{Depreciation} = 1,100 + 100 - 150 - 850$$

$$= ₹ 200 \text{ crores}$$

Or

Government's expenditure on popularising *yoga* among the masses is a part of government's final consumption expenditure, so it will raise GDP. It will, on the other hand, also raise welfare of the people as *yoga* will definitely improve their health and, thus, raise the efficiency of the people, who will now contribute more productively. So, both, Gross Domestic Product and welfare, will increase on account of expenditure on *yoga*, which is thus a fruitful expenditure.

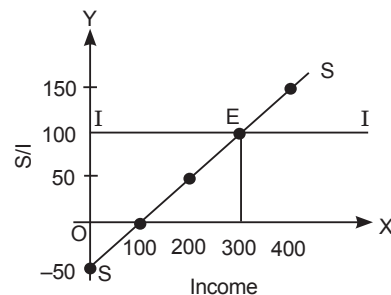
20. Voluntary unemployment refers to that part of population which prefers not to work even though suitable work is available for them, whereas involuntary unemployment refers to that part of the labour force of the country, which is able to work and prefers to work, but it is out of work, on account of no fault or wish of its own.

Voluntary unemployment is not taken into account for determining the labour force of the country whereas involuntary unemployed are a part of the labour force of a country.

Magnitude of unemployment in the country refers to involuntary unemployment only and government's objective is to remove this kind of unemployment.

21. (a) Tax revenue is an important part of Revenue Receipts. It is included in the Revenue budget of the government as it neither increases liabilities nor reduces assets.
- (b) Non-tax revenue is also included as a Revenue Receipt because it neither increases liabilities nor reduces the assets of the government.
- (c) Loans received from foreign governments imply borrowings, which leads to increase in the liabilities of the government. It is a capital receipt so not to be included in revenue budget.
- (d) Small savings like savings in post offices or PPF scheme, through them the money is lent to the government, *i.e.*, this leads to increase in its liabilities, so it is a capital receipt and not to be included in revenue budget.
22. (a) The equilibrium level of income is determined at a point where savings and investment are equal, *i.e.*, $S = I$. The given table and diagram illustrate the determination:

Income (Y)	Consumption (C)	Saving (S) = Y - C	Investment (I)	
0	50	-50	100	
100	100	0	100	
200	150	50	100	
300	200	100	100	Equilibrium
400	250	150	100	



The table and diagram show that the equilibrium level of income is ₹ 300 crores and at this point

$$\text{Savings} = \text{Investment}$$

i.e., $100 = 100$

- (b) When savings exceed planned investment means that people are consuming less and thereby spending less. As a result, aggregate demand is less than aggregate supply. This will lead to the accumulation of unintended inventories with producers. To avoid further accumulation of inventories, producers will reduce production. Consequently, output, income and employment will be reduced till the equilibrium level of income OY (₹ 300 crores) is reached where $S = I$.

23. (a) National Income (NNP_{FC}) by Income Method = (ii) + (viii) + (iv) + (v) + (vii) + (x)
- $$= 3,800 + 200 + 300 + 150 + 800 + (-30)$$
- $$= ₹ 5,220 \text{ lakhs}$$

$$\begin{aligned}
 (b) \text{ National Income (NNP}_{FC}\text{) by Expenditure Method} &= (i) + (xii) + (vi) + (ix) + (x) - (xiii) \\
 &= 1,000 + 4,000 + 600 + (-50) + (-30) - 300 \\
 &= ₹ 5,220 \text{ lakhs}
 \end{aligned}$$

24. (a) False, as fall in the price of a US dollar for ₹ 50 to ₹ 40, is appreciation of the Indian currency and not depreciation, as stated.
- (b) False, both depreciation and devaluation of domestic currency do not have the same meaning because under the fixed exchange rate system, the government's deliberate raising of the price of foreign currency in terms of domestic currency is called '**devaluation**' of domestic currency, whereas under the flexible exchange rate system, the change in foreign exchange rate in terms of domestic currency is determined by the forces of demand and supply of foreign exchange in the foreign exchange market. This phenomenon is known as '**depreciation**' of Indian currency.
- (c) True, depreciation of domestic currency encourages exports, because our Indian goods become cheaper for the rest of the world, which now buys more of Indian goods, *i.e.*, exports.
- (d) False, appreciation of domestic currency encourages imports and does not discourage them. Because appreciation of domestic currency makes imports cheaper, so their demand will rise. Thus, it encourages imports and does not discourage them.

Or

- (a) Managed floating exchange rate is a mixture of flexible exchange rate (the float part) and fixed foreign exchange rate (the managed part). Under managed floating rate, the Central Bank intervenes to buy and sell foreign currencies in an attempt to moderate exchange rate movements whenever they feel that such actions are appropriate. Official reserve transactions are, therefore, not equal to zero.
- (b) The Central Bank needs to intervene in a managed floating exchange rate system when the floating exchange rate is either too high or too low. It tries to influence the exchange rate by entering the foreign exchange market as a bulk buyer/seller. During the period, when the floating exchange rate is too high, it starts selling foreign exchange from its reserve, so as to bring the rate down. On the other hand, when the floating rate is too low, it starts buying foreign exchange, in order to boost up the rate. This is done by the central bank in the interest of importers and exporters. Another name by which Managed Floating Rate is known as 'Dirty Floating Rate.'