Answers to RSPL/2

1. (*c*) Positive and Increasing

2. (*b*) Negative income effect is more than the substitution effect

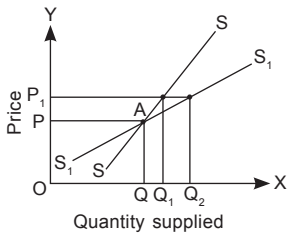
3. Average revenue is more than Marginal revenue

4. (*c*) Income

5. When quantity supplied of a commodity changes due to change in its own price, it is called 'change in quantity supplied' and is indicated by the movement along the supply curve.

6. The gap between the potential level of output and the actual level of output in the Indian economy exists because there is underutilization or inefficient utilization of resources. Government can generate employment to reduce this gap by setting up industries, encouraging private sector in those areas of production where a lot of labour is required and encouraging the use of labour intensive techniques of production. Government can produce the maximum output that the economy is capable of producing and the economy can operate at a point on the PPC by ensuring full and efficient utilization of resources.

7. Yes, I agree that flatter curve shows higher elasticity of supply at the point of intersection of two supply curves.



In the given diagram, SS is the steeper supply curve and S_1S_1 is the flatter supply curve.

Elasticity of supply in case of flatter supply curve:

$$Es = \frac{\text{Change in quantity supplied}}{\text{Change in price}} \times \frac{\text{Original price}}{\text{Original quantity supplied}}$$

$$= \frac{QQ_2}{PP_0} \times \frac{OP}{OQ}$$

Elasticity of supply in case of steeper supply curve:

$$Es = \frac{\text{Change in quantity supplied}}{\text{Change in price}} \times \frac{\text{Original price}}{\text{Original quantity supplied}}$$

$$= \frac{QQ_1}{PP_0} \times \frac{OP}{OQ}$$

$\because \quad QQ_2 > QQ_1$

Therefore, elasticity of supply in case of flatter supply curve is greater than elasticity of supply in case of steeper supply curve.

OR

$$\text{Es of good B} = \frac{3}{4} \times \text{Es of good A}$$

$$\text{Es of Good A} = \frac{\text{Percentage change in quantity supplied of good A}}{\text{Percentage change in price of good A}} = \frac{\frac{18}{100} \times 100}{15} = 1.2$$

$$\text{Es of Good B} = \frac{3}{4} \times 1.2 = 0.9$$

$$\text{Es of Good B} = \frac{\text{Percentage change in quantity supplied of good B}}{\text{Percentage change in price of good B}}$$

$$0.9 = \frac{9}{\text{Percentage change in price of good B}}$$

Percentage change in price of good B = 10

8.

Microeconomics	Macroeconomics
(*a*) It is that branch of economics which studies economic problems at the level of an individual.	(*a*) It is that branch of economics which studies economic problems at the level of an economy as a whole.
(*b*) It is mainly concerned with the determination of prices, quantity of commodity and factors of production. Thus, it is referred to as the Theory of Price.	(*b*) It is mainly concerned with the determination of aggregate output, income, general price level and employment in the economy as a whole. Thus, it is referred to as the Theory of Income and Employment.
(*c*) Demand and Supply are the tools of micro-economics.	(*c*) Aggregate demand and Aggregate supply are the tools of macroeconomics.

9. According to Utility Analysis (single commodity case), the consumer attains equilibrium when Marginal utility in terms of money is equal to Price of domestic fuel, *i.e.*,

$$\frac{\text{MU of domestic fuel}}{\text{MU of a rupee}} = \text{Price of domestic fuel}$$

When due to subsidy, the price of domestic fuel reduces (assuming MU of a rupee constant), the consumer's equilibrium gets disturbed, as now

$$\frac{\text{MU of domestic fuel}}{\text{MU of a rupee}} > \text{Price of domestic fuel}$$

This implies that the benefit of consuming domestic fuel in terms of its marginal utility in terms of money is more than the cost in terms of its price. Hence, the consumer would increase the consumption of domestic fuel. This will result in fall in its marginal utility. This will continue till the new equilibrium is attained at a higher level of consumption.

10. Complete the following table:

Output	ATC	AVC	MC	AFC
1	60	10	10	50
2	**34**	9	**8**	25
3	**24.67**	**8**	6	**16.67**
4	17.5	**5**	**–4**	**12.5**

11. D(p) = 25 – 2p

$$\frac{\text{Change in quantity demanded}}{\text{Change in price}} = -2$$

Also, Original quantity demanded at ₹ 5 = 25 – 2 (5) = 15 units

$$\text{Ed} = \frac{\text{Change in quantity demanded}}{\text{Change in price}} \times \frac{\text{Original price}}{\text{Original quantity demanded}}$$

$$\text{Ed} = -2 \times \frac{5}{15} = -0.67$$

OR

(*a*) If percentage change in quantity demanded of a commodity is less than the percentage change in its price, the demand is said to be inelastic, i.e., Ed < 1.

(*b*) In India, despite the rise in price of cigarettes, the fall in the demand of cigarettes is not much which implies that the price elasticity of demand for cigarettes is inelastic.

(*c*) This happens because consumers consuming cigarettes become habitual to cigarettes.

(*d*) Thus, rise in its price does not cause much fall in its demand.

12. (*a*)

Basis	Perfect Oligopoly	Imperfect Oligopoly
(*i*) Meaning	It is a type of oligopoly in which few big firms produce homogeneous products.	It is a type of oligopoly in which few big firms produce differentiated products.
(*ii*) Nature of products	Products are perfect substitutes.	Products are close substitutes.
(*iii*) Alternative name	It is also called pure oligopoly.	It is also called differentiated oligopoly.

(*b*)

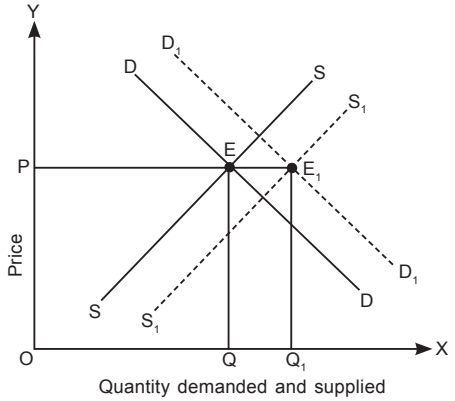
Basis	Collusive Oligopoly	Non-collusive Oligopoly
(*i*) Meaning	It is a type of oligopoly in which few big firms co-ordinate their prices output decisions.	It is a type of oligopoly in which few big firms pursue independent price output policy.
(*ii*) Competition	There is no competition.	Firms compete with one another.
(*iii*) Alternative name	It is also called cooperative oligopoly.	It is also called non-cooperative oligopoly.

13. Favourable change in taste and preferences for jeans will result in increase in its market demand at the same price and decrease in the price of cotton used for manufacturing jeans will reduce its cost of production which will result in increase in its market supply at the same price. Hence, there will be increase in both market demand and market supply of jeans.

There can be three possibilities:

Case I: Increase in demand for jeans = Increase in supply for jeans

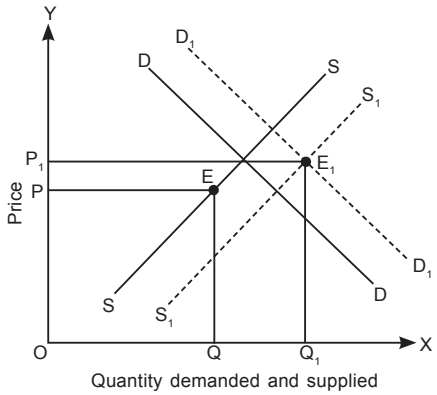
Equilibrium price will remain same and quantity will rise.



In the given diagram, DD is the market demand curve for jeans and SS is the market supply curve for jeans. Point E is the point of market equilibrium. The corresponding price OP is the equilibrium price and corresponding quantity OQ is equilibrium quantity. In this case, market demand curve shifts from DD to D_1D_1 and market supply curve shifts from SS to S_1S_1. Now at OP, there is neither excess demand nor excess supply. Hence, equilibrium price remains unchanged while equilibrium quantity rises from OQ to OQ_1.

Case II: Increase in demand for jeans > Increase in supply for jeans

Equilibrium price and quantity will rise.



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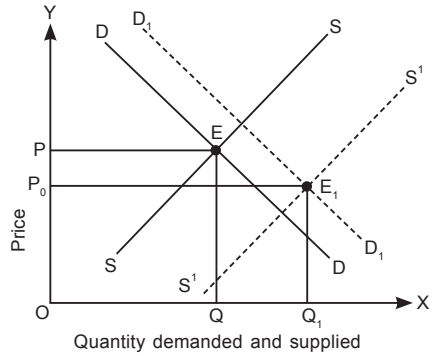
Case III: Increase in demand for jeans < Increase in supply for jeans

Equilibrium price will fall and quantity will rise.



In the given diagram, DD is the market demand curve for jeans and SS is the market supply curve for jeans. Point E is the point of market equilibrium. The corresponding price OP is the equilibrium price and corresponding quantity OQ is equilibrium quantity. In this case, market demand curve shifts from DD to D_1D_1 and market supply curve shifts from SS to S_1S_1. Now at OP, there is excess supply. This will cause competition among firms. Due to this, price will start falling. There will be expansion of demand and contraction of supply. This will continue till excess supply becomes zero and new equilibrium is reached.

14. The three properties of Indifference curve are:

(*a*) **An Indifference Curve is always downward sloping:** The indifference curve is negatively sloped or downward sloping from left to right which represents that in order to increase the consumption of commodity X, the consumer has to sacrifice commodity Y in order to remain at the same scale of preference or same level of satisfaction represented by the Indifference curve.

(*b*) **An Indifference Curve is convex to origin:** The nature and shape of indifference curve is based on the concept of diminishing marginal rate of substitution. According to which the rate of sacrifice in terms of commodity Y in order to increase the consumption of commodity X decreases with every increase in unit of commodity X due to which an indifference curve is always made convex to origin. The marginal rate of substitution depends on relative marginal utilities derived from X and Y. When the consumer consumes more of X after sacrificing Y, then it leads to decrease in MU for X and increase in MU for Y due to which the consumer becomes willing to sacrifice lesser units of Y with every increase in consumption of X due to which MRS decreases and IC is convex to origin.

(*c*) **Higher Indifference Curve represents higher scale of preference:** Indifference curve analysis is based on the assumption of monotonic preferences which represents that higher consumption of a commodity gives higher level of satisfaction to the consumer. A higher indifference curve represents that the consumer is able to consume more units of the commodity and hence represents higher scale of preference to the consumer.

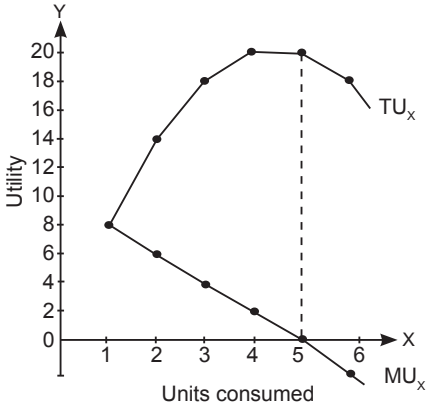
OR

The relationship between TU and MU is as follows:

- When MU decreases and is positive, TU increases at a decreasing rate.
- When MU becomes zero, TU is maximum.
- When MU is negative, TU starts decreasing.

The following utility schedule and diagram illustrates the relationship:

Units	MUx	TUx
1	8 ┐	8 ┐
2	6 ┘ MU is	14 ┘ TU
3	4 ┐ positive	18 ┐ rises
4	2 ┘	20 ┘
5	0 ┘ MU is zero	20 ┘ TU is maximum
6	–2 ┘ MU is negative	18 ┘ TU falls



15.

Output	Price	TC	TR	MR	MC	Profit = TR–TC
1	20	17	20	20	–	3
2	18	25	36	16	8	11
3	16	31	48	12	6	17
4	14	39	56	8	8	17
5	12	49	60	4	10	11
6	10	61	60	0	12	–1

According to MR-MC approach, producer attains equilibrium when following two conditions are met:

(*a*) Marginal Revenue = Marginal Cost

(*b*) Marginal Cost is rising

At 4 units of output, both the conditions are met.

16. (*c*) Fiat

17. (*c*) Net indirect taxes

18. (*b*) Profit tax

19. Interest payments = 20% of primary deficit

$20 = 0.2 \times$ primary deficit

Primary deficit = ₹ 100 crores

Primary deficit = Borrowings – Interest payments

Borrowings = Primary deficit + Interest payments

= 100 + 20 = ₹ 120 crores

20. It is the rate at which Central Bank borrows funds from commercial banks.

21.

Basis	Average Propensity to Consume	Average Propensity to Save
(*a*) Meaning	It refers to that part of income which is consumed. $APC = \frac{C}{Y}$	It refers to that part of income which is saved. $APS = \frac{S}{Y}$
(*b*) More than 1	It can be more than 1.	It can never be more than 1 as savings are always less than income.
(*c*) Negative	It can never be negative as consumption can never be negative.	It can be negative as savings are negative initially at low level of income when income is less than consumption.

22. Fall in oil prices will reduce the import bill of India as India is a huge importer of oil. Since import of goods is recorded on the debit side of current account and balance on current account is the difference between the sum of items on its credit side and the sum of items on its debit side, therefore, fall in import bill would reduce the current account deficit of India.

OR

Depreciation of Indian rupee refers to fall in the value of rupee in terms of foreign currency. This will make the Indian exports cheaper and Indian imports expensive.

Imports are recorded on the debit side of current account and Exports are recorded on credit side and balance on current account is the difference between the sum of items on its credit side and the sum of items on its debit side, therefore, due to depreciation of Indian rupee, Indian exports will rise and imports will fall which will further reduce the current account deficit.

23. $MPC = \frac{2}{3}$

Present income = 40 + 75% of 40 = ₹ 70 crores

Change in Income = ₹ 30 crores

$$MPS = \frac{1}{3}$$

$$\frac{\Delta S}{\Delta I} = \frac{1}{3}$$

$$\Delta S = \frac{30}{3} = ₹ 10 \text{ crores}$$

$$k = \frac{1}{MPS}$$

$$k = 3$$

$$k = \frac{\Delta Y}{\Delta I}$$

$$3 = \frac{30}{\Delta I}$$

$$\Delta I = ₹ 10 \text{ crores}$$

24. Personal Disposable Income = Personal income – Direct personal taxes – Miscellaneous receipts of the government

$$65 = \text{Personal income} - 15 - 5$$

$$\text{Personal income} = ₹ 85 \text{ crores}$$

$$\text{Personal Income} = \text{Private income} - \text{business tax} - \text{corporate savings}$$

$$\text{Private income} = 85 + 10 + 25$$

$$= ₹ 120 \text{ crores}$$

25. (*a*) Increase in domestic interest rate will encourage the inflow of foreign capital as foreigners would be induced to invest in the domestic economy.

(*b*) Since, purchase of assets by foreigners is the source of supply of foreign exchange, thus, this will lead to rise in supply of foreign exchange.

(*c*) Supply of foreign exchange curve will shift rightward which will result in fall in its price.

(*d*) Fall in price of foreign currency implies depreciation of foreign exchange and appreciation of domestic currency.

26. No, higher level of real GDP does not always imply higher availability of goods per person in the domestic economy. This is because:

(*a*) Per capita real GDP indicates the availability of goods per person in the economy.

(*b*) Per capita real GDP = $\frac{\text{Real GDP}}{\text{Population}}$

This shows that per capita GDP depends not only on real GDP but also on population.

(*c*) If both real GDP and population increase in such a manner that rate of growth of real GDP is equal to or less than the rate of growth of population, the per capita real GDP would remain same or fall.

(*d*) Per capita real GDP will increase only if rate of growth of real GDP is more than the rate of growth of population. This further implies higher availability of goods per person.

OR

(*a*) No, it is not included as they use the loan amount for consumption purpose.

(*b*) Yes, it is included as banks use their savings for productive purpose.

(*c*) No, it is not included as it is a transfer payment by the government and it is assumed that the government uses the debt for consumption purpose.

(*d*) Yes, it is included as firms use the loan amount for productive purpose. Hence, it is a factor payment.

27. Fiscal deficit is defined as excess of total expenditure over total receipts excluding borrowings during a financial year.

Fiscal Deficit = Total Expenditure – (Revenue Receipts + Non-Debt Capital Receipts)

The implications of fiscal deficit in government budget are:

(*a*) **Debt trap:** Fiscal Deficit shows the borrowing requirements of the government during the budget year. It creates problem of repayment of loan and payment of interest. As the government borrowings increase, its liability in future to repay loan along with interest also increases. Payment of interest increases revenue expenditure which results in higher revenue deficit. Ultimately, government may be forced to borrow to finance even interest payment leading to emergence of debt trap.

(*b*) **Low GDP growth rate:** High fiscal deficit reduces the government's investment on country's infrastructure. It also results in increase in rate of taxes which further reduces the disposable income of the people and hence aggregate demand in the economy.

(*c*) **Inflation:** If government borrows from RBI to finance its fiscal deficit, RBI prints new currency notes. This increases the money supply in the economy which further results in increase in purchasing power of the people and hence aggregate demand of the economy. This causes inflation.

(*d*) **Foreign dependence:** If government borrows from external sources like foreign government and international financial organization to meet fiscal deficit, it increases the country's dependence on other countries.

(*e*) **Hampers future growth:** It increases the financial burden for future generations. It adversely affects the future growth and development prospects of the economy.

28. Yes, I agree that increase in investment in the economy causes increase in its income.

When an additional investment is made, then income increases many times more than the increase in investment. The working of multiplier is based on the fact that one person's expenditure is another person's income.

Suppose, an additional investment of ₹ 1,000 is made in the economy. This will generate an extra income of ₹ 1,000 in the first round. If MPC = 0.8, then consumption will increase by ₹ 800. This will increase income by ₹ 800 in the second round. Now, again consumption will increase by ₹ 640. This will increase income by ₹ 640 in the third round.

Round	**Increase in Investment**	**Increase in Consumption**	**Increase in Saving**	**Increase in Income**
I	1,000	800	200	1,000
II		640	160	800
III		512	128	640
:	:	:	:	:
:	:	:	:	:
Total	**1,000**	**4,000**	**1,000**	**5,000**

$$K = \frac{\text{Change in Income}}{\text{Change in Investment}}$$

$$\frac{1}{1-C} = \frac{\text{Change in Income}}{1000}$$

Total Increase in income = 5 × 1,000 = ₹ 5,000

29.

Basis	Central Bank	Commercial Bank
(a) Meaning	It refers to an apex institution of monetary and banking system of the country.	It refers to a financial institution which accepts deposits and provides loans with aim of maximizing profit.
(b) Objective	Its objective is public welfare.	Its objective is to make profit.
(c) Public dealing	It does not directly deal with public.	It deals directly with public.
(d) Number	There is only one Central Bank in a country.	There are many commercial banks in a country.
(e) Issue of currency	It has the monopoly over the issue of currency.	It has no such power.
(f) Example	RBI in India.	Punjab National Bank, Canara Bank etc. in India.

OR

Commercial banks create money with the help of total deposits that they receive from public. The process of money creation depends upon

(*a*) Fresh deposits

(*b*) Legal reserve requirement (LRR)

Suppose initial deposits are ₹ 1000 and LRR is 20%. The banks will keep ₹ 200 in the form of reserves and remaining ₹ 800 is lent. This ₹ 800 is the secondary deposit for banks. Again banks will keep ₹ 160 as reserves and the remaining ₹ 640 is lent. This is the secondary deposit for banks. This process will continue and will come to an end when total cash reserves become equal to initial deposit.

Round	Deposits (₹)	Credit created (₹)	Cash reserves
Initial	1,000	800	200
I	800	640	160
II	640	512	128
:	:	:	:
:	:	:	:
Total	**5,000**	**4,000**	**1,000**

$$\text{Total deposit created} = \frac{1}{\text{LRR}} \times \text{Initial deposit}$$

$$= \frac{1}{20\%} \times 1{,}000 = ₹\ 5{,}000$$

30.

NDP_{MP} = Private final consumption expenditure + *Government Final consumption expenditure + **Net Domestic capital formation + Net Exports

= 1,200 + (300 + 100 + 200 – 50) + (400 – 50) + (– 40)

= ₹ 2,060 crores

*Government Final Consumption Expenditure = Compensation to employees paid by the government + Direct purchases made abroad by the government + Intermediate consumption of government – Value of Sale of goods and services by the government

**Net domestic capital formation = Net domestic fixed capital formation + Change in stock

(*a*) Domestic Income = NDP_{MP} – *Net Indirect taxes

= 2,060 – (0 – 90)

= ₹ 2,150 crores

*Net indirect taxes = Indirect taxes – Subsidies

GNP_{MP} = NDP_{MP} + Consumption of fixed capital + Net factor income from abroad

= 2,060 + 20 + (20 – 30) = ₹ 2,070 crores

(*b*) GNDI = GNP_{MP} + Net current transfers from rest of the world

2,000 = 2,070 + Net current transfers from rest of the world

Net current transfers from rest of the world = ₹ – 70 crores

Note: This implies that the current transfers from rest of the world are less than the current transfers to rest of the world.