

3. MARKET FAILURE AND GOVERNMENT INTERVENTION TO CORRECT MARKET FAILURE

Q.No.1. Define Market Failure. What are the two phases of market failure? (B) (SM)

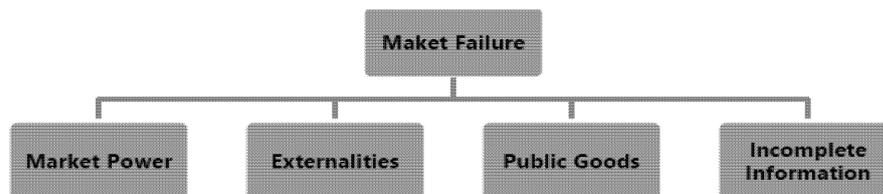
1. **MARKET FAILURE:** Market failure is a situation in which the free market leads to misallocation of society's scarce resources in the form of either overproduction or underproduction of particular goods and services leading to a less than optimal outcome.
2. **PHASES OF MARKET FAILURES:** The two aspects of market failures are demand-side market failures and supply side market failures.
 - a) **Demand-side market failures:** They occur when the demand curves do not take into account the full willingness of consumers to pay for a product.
Eg. None of us will be willing to pay to view a wayside fountain because we can view it without paying.
 - b) **Supply-side market failures:** They occur when supply curves do not incorporate the full cost of producing the product.
Eg.: A thermal power plant that uses coal do not pay the costs to the society for the fumes it discharges into the atmosphere as part of the cost of producing electricity.

SIMILAR QUESTIONS:

- 1) Define the concept of Market Failure. (MTP1 M18)
- A) Refer 1st side heading
- 2) What are the major aspects of market failure?
- A) Refer 2nd side heading
- 3) Define Demand side Market Failure with an example.
- A) Refer point a in 2nd side heading
- 4) Define Supply side Market Failure with an example.
- A) Refer point b in 2nd side heading

Q.No.2. What are the different reasons of market failure. (or) Why do markets fail? (A) (SM)

REASONS FOR THE MARKET FAILURE: There are four major reasons for market failure. They are:

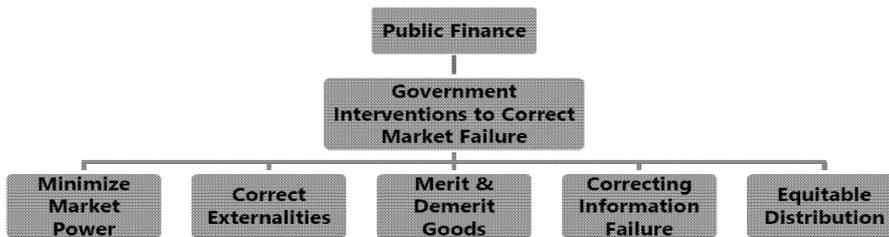


SIMILAR QUESTION:

- 1) Define the concept of market failure. Describe the different sources of market failure.
- A) Refer 1st point in 1st question and whole of the second answer

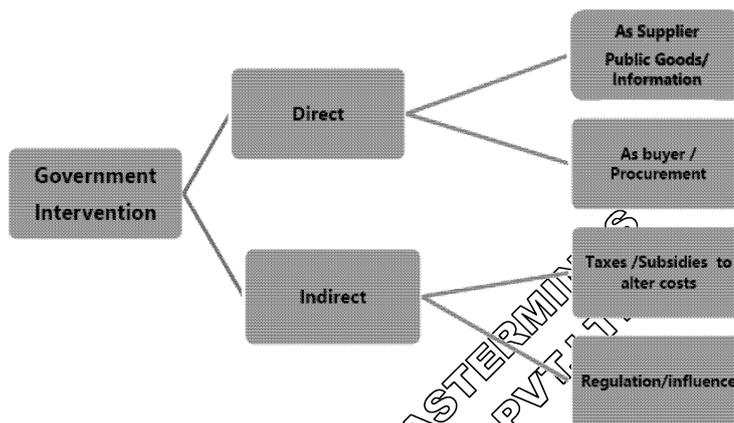
Q.No.3. Evaluate Government interventions for correcting market failure (or) What are the different forms of Government interventions for correcting market failure. (C) (SM)

In terms of market failure the government through its fiscal policy could improve efficiency in the cases of public goods, externalities (external costs and benefits), and imperfect competition.



Q.No.4. How do the government interventions be carried out for the effective functioning of markets? (C) (SM)

When the market and the price system fail to achieve productive and allocative efficiency in an economy the government intervention is essential for the efficient functioning of markets.



Q.No.5. Define the term Market power or Monopoly power. Discuss the extreme case of market power which leads to market failure. (A) (SM)

MARKET POWER: Market power can be exercised either by sellers or buyers.

Market power or monopoly power (from the seller point of view) is the ability of a firm to profitably raise the market price of a good or service over its marginal cost. It can cause the markets to be inefficient because of the following reasons:

- a) **HIGHER PRICE:** Firms that have market power are price makers and therefore, can charge a price that gives them positive economic profits.
- b) **LOWER OUTPUT:** Excessive market power causes the single producer or a small number of producers to produce and sell less output than would be produced in a competitive market. It also tends to restrict output and leads to deadweight loss.
- c) **MISSING MARKETS:** In the extreme case of Market power, there is a problem of non-existence of markets or missing markets resulting in failure to produce various goods and services that are particularly required by the people.

Ex: The markets for pure public goods do not exist.

NOTE: Market power or monopoly power (from the buyer point of view) exists when a single buyer can dictate the lower prices they pay to suppliers. It occurs in both labour market and product market. **Ex:** Military procurement by government, Amazon's buying power in the book market etc.

Comment [I11]: Side headings were provided for these points

Comment [I12]: Note point provided for better understanding

SIMILAR QUESTION:

- 1) Define Market Power. What is its disadvantage? (M19 - 2M)
- A) Refer the above answer

Q.No.6. What is the role of government in minimizing the market power through its intervention policies? (A) (SM)

MARKET POWER: Market power or monopoly power is the ability of a firm to profitably raise the market price of a good or service over its marginal cost. It is an important factor that contributes to inefficiency because it results in higher prices than competitive prices. It also tends to restrict output and leads to deadweight loss.

GOVERNMENT INTERVENTION TO MINIMIZE MARKET POWER:

a) **Competition based regulations:** Because of the social costs imposed by monopoly, governments intervene by establishing rules and regulations designed to promote competition and prohibit actions that are likely to restrain competition as follows:

i) The legislations differ from country to country.

Country	Act/ Law
India	Competition Act, 2002 (as amended by the Competition (Amendment) Act, 2007)
US	The Antitrust laws
UK	The Competition Act, 1998

ii) In some cases, government through concerned Act, may discourage the market power through prohibiting contracts, Prohibiting combinations and collusions among producers or traders which are in restraint of trade and of anti-competitive actions such as predatory pricing

iii) In some cases, government through concerned Act, may encourage, create and protect the market power through ensuring patent and copyright laws grant exclusive rights of products or processes to provide incentives for invention and innovation and avoiding their misuse.

b) **Price based regulations:**

i) Setting maximum prices that firms can charge. (often used for natural monopolies)

ii) Rate-of-return regulation (government's regulatory agency determines an acceptable price, so as to ensure a competitive or fair rate of return)

iii) Setting price-caps based on the firm's variable costs, past prices, and possible inflation and productivity growth.

NOTE:

i) **Predatory pricing:** It is the illegal act of setting prices low in an attempt to eliminate the competition. It violates antitrust law, as it makes markets more vulnerable to a monopoly.

ii) **Natural monopoly:** They can produce the entire output of the market at a cost that is lower than what it would be if there were several firms. If a firm is a natural monopoly, it is more efficient to permit as it serves the entire market rather than have several firms who compete each other. Examples of natural monopoly are electricity, gas and water supplies.

SIMILAR QUESTIONS:

- 1. Define natural monopolies.
- A. Refer note point.
- 2. What is meant by rate of return regulation?
- A. Refer 2nd bullet of point b
- 3. How the government through its price intervention can negate the effect of market power

Comment [I13]: Continuity point added

Comment [I14]: Point provided for explanation of Predatory pricing

- A. Refer point 2 (RTP-N19)
4. How does the government intervene to minimize market power? (MTP-N19)
- Refer the above answer

Q.No.7. Define the term Externality as a rationale of market failure . What are the features of Externalities? (B)

1. Externalities:

- The costs or benefits which are not reflected by the market price are called externalities because they are “external” to the market.
- Externality can be defined as when consumption or production activity has an indirect effect on other's consumption or production activities but should not be reflected directly by market prices.
- Externalities are also referred to as 'spillover effects', 'neighbourhood effects', 'third-party effects' or 'side-effects', as the originator of the externality imposes costs or benefits on others who are not responsible for initiating the effect.
- 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 consume.
- Production remains efficient only when all benefits and costs are paid for. But the producers of products with negative externalities are not fully accountable for the full cost (social cost) of their production.

2. Features of an Externality:

- The unique feature of an externality is that, it occurs only outside the price mechanism.
- The cost (benefit) of externality is not borne (paid) by the parties i.e. It will not be compensated.
- Externalities may be unidirectional or reciprocal.
For example, if an accountant who is disturbed by loud music but has not imposed any externality on the singers, then the externality is unidirectional.
For example, a workshop is creating earsplitting noise. But it imposes an externality on a baker who produces smoke and disturbs the workers in the workshop. This is a reciprocal externality.
- Externalities can be positive or negative.

SIMILAR QUESTION:

- Why do economists use the word external to describe third-party effects that are harmful or beneficial?
- A. Refer point c) in 1st side heading

Q.No.8. Explain Social cost. How the externalities do create a divergence between private cost and social cost of production? (A) (SM)(RTP-M19)

The presence of externalities creates a divergence between private cost and social cost of production.

$$\text{Social Cost} = \text{Private Cost} + \text{External Cost}$$

1. Private cost:

- It is the cost faced by the producer directly involved in a transaction.
- Private cost of producer includes direct cost of labour, materials, energy and other indirect overheads. It does not include externalities.

$$\text{Private Cost} = \text{Direct Material} + \text{Direct Labour} + \text{Direct Expenses} + \text{Indirect Over Heads}$$

Comment [I15]: Explains about how the concept gets implied

Comment [I16]: Formula provided

2. **External cost:** External cost is the cost of damage from externalities and is borne by third parties not directly involved in the transaction or private cost.
3. **Social costs:** It refers to the total costs to the society on account of a production or consumption activity. Social costs are private costs borne by individuals directly involved in a transaction together with the external costs borne by third parties not directly involved in the transaction.

Note: Similarly **Marginal Private Benefit + Marginal External Benefit = Marginal Social Benefit**

$$MSB = MPB + MEB$$

SIMILAR QUESTIONS:

1. How can social costs be differentiated from private cost?
A. Refer Point 1 & 3
2. Discuss the importance of the distinction between private costs and social costs.
A. Refer Point 1 & 3
3. Explain the concept of Social Costs? (N18 - 2M)
A. Refer Point 3
4. Distinguish between private cost and social cost (RTP M19)
A. Refer Point 1 & 3

Q.No.9. Define the terms Marginal Private Benefits, Marginal External Benefits and Marginal Social Benefits (B)

Comment [117]: Provided as a separate Question for better understanding purpose.

MARGINAL PRIVATE BENEFITS (MPB): The increase in benefit obtained from consumption or production of one additional unit received by the consumer or producer.

MARGINAL EXTERNAL BENEFITS (MEB): The additional benefit imposed on third parties by the consumption of an extra unit of a good. MEB may be positive or negative.

MARGINAL SOCIAL BENEFITS (MSB): The sum total of the Marginal Private Benefits (MPB) and Marginal External Benefits (MEB) associated with an activity.

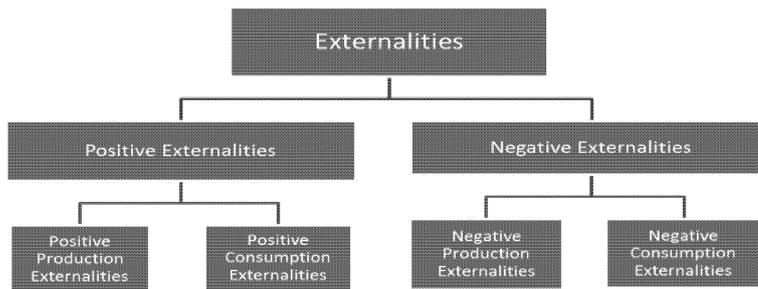
$$MSB = MPB + MEB$$

Q.No.10. Support the sentence "Externalities can be positive or negative" with suitable examples. (A) (SM, MTP M19)

Externalities: externality can be defined as when consumption or production activity has an indirect effect on other's consumption or production activities but should not be reflected directly by market prices.

Externalities can be positive or negative:

- i) Positive externalities occur when the action of one party confers benefits on another party.
- ii) Negative externalities occur when the action of one party imposes costs on another party.



1. **NEGATIVE PRODUCTION EXTERNALITIES (NPES):** A negative externality initiated in production which imposes an external cost on others may be received by another in consumption or in production.

Example:

An Aluminum factory discharges its untreated waste water into a nearby river.

Consequences:

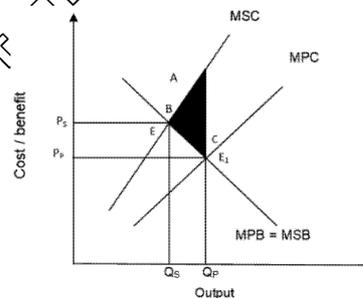
- It pollutes the water causing health hazards for people who use the water for drinking and bathing. It is a negative production externality received in consumption.
- Pollution of river also affects fish output as there will be less catch for fishermen due to loss of fish resources. It is a negative production externality received in production.

Conclusion: The firm do not account for the external costs either on consumers of river water or on fishermen when making its production decision.

Also, there is no market where the external costs can reflect the price of aluminum.

Graphical representation of NPES:

- At $Q_P = MPC = MPB$ (Output produced by Pvt. Sector)
- At $Q_S = MSC = MSB$ (Optimum Output required by society)
- $Q_P > Q_S$: Over Production - Market Failure
- ΔABC : Dead Weight Loss
- Also at Q_P : $MSC > MPS$ (or) $MSC > MSB$



Comment [I18]: Provided graph and content for better explanation purpose

Note: Social cost = Private cost + External cost

Social cost > Private cost - Overproduction - Market Failure

2. **POSITIVE PRODUCTION EXTERNALITIES (PPEs):** A positive production externality initiated in production that confers external benefits on others may be received in production or in consumption.

Compared to NPES the PPEs are less common.

Example: A beekeeper locates his beehives in an orange growing area.

Consequences:

- It enhances the chances of greater production of oranges through increased pollination. It is a positive production externality received in production.
- An individual raised an attractive garden and the persons walking by enjoy the garden. It is a positive production externality received in consumption.

Conclusion: These external effects will not be taken into account when the production decisions were made.

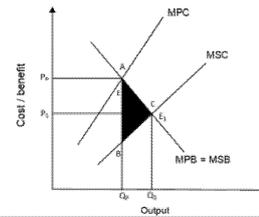
Graphical representation of PPEs:

- At $Q_P = MPC = MPB$ (Output produced by Pvt. Sector)

- At $Q_S = MSC = MSB$ (Optimum Output required by society)
- $Q_P < Q_S$: Under Production - Market Failure
- ΔABC : Dead Weight Loss
- Also at Q_P : $MPC > MSC$

Note: Social cost = Private Cost - External Cost

Social cost < Private Cost - Underproduction - Market failure



Comment [I19]: Provided graph and content for better explanation purpose

3. NEGATIVE CONSUMPTION EXTERNALITIES (NCEs): The Negative consumption externalities are initiated in consumption which imposes external costs on others may be received in consumption or in production. NCEs are experienced by us in our day to day life.

Examples of Negative consumption externalities affecting consumption:

- Smoking cigarettes in public place causes passive smoking by others.
- Playing the radio loudly obstructs one from enjoying a concert.

Examples of Negative consumption externalities affecting production:

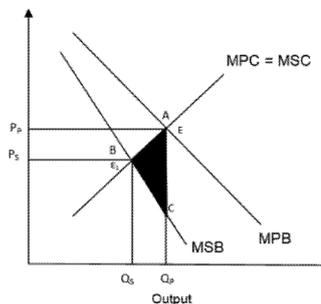
- The act of undisciplined students talking and creating disturbance in a class preventing teachers from making effective instruction.
- The excessive consumption of alcohol causing impairment in efficiency for work and production.

Graphical representation of NCEs:

- At $Q_P = MPC = MPB$ (Output produced by Pvt. Sector) - Free Market Equilibrium
- At $Q_S = MSC = MSB$ (Optimum Output required by society) - Social Equilibrium
- $Q_P > Q_S$: Over Consumption - Market Failure
- ΔABC : Dead Weight Loss
- Also at Q_P : $MPB > MSB$ (or) $MSC > MSB$

Note: Social Benefit = Private Benefit - External benefit

Social Benefit < Private Benefit - Overconsumption - Market failure



Comment [I110]: Provided graph and content for better explanation purpose

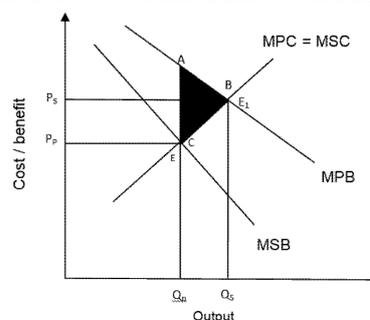
4. POSITIVE CONSUMPTION EXTERNALITIES (PCEs): A positive consumption externality initiated in consumption which imposes external benefits on others may be received in consumption or in production.

Examples:

- Immunization against contagious diseases by some persons prevents the others from getting infected (social benefit). It is a positive consumption externality received in consumption.
- Consumption of services of a health club by the employees of a firm would result in increased efficiency and productivity (external benefit). It is a positive consumption externality received in production.

Graphical representation of PCEs:

- At $Q_P = MPC = MPB$ (Output produced by Pvt. Sector)
- At $Q_S = MSC = MSB$ (Optimum Output required by society)
- $Q_P > Q_S$: Over Consumption - Market Failure
- ΔABC : Dead weight loss
- Also at Q_P : $MSB > MPB$ (or) $MSB > MSC$



Note: Social Benefit = Private benefit + External benefit

- Social Benefit > Private Benefit - Under consumption - Market failure

Comment [I111]: Provided graph and content for better explanation purpose

SIMILAR QUESTIONS:

- 1) Distinguish between positive and negative externalities.
 - A) Refer above question
- 2) What do you understand by externalities in consumption?
 - A) Refer 3rd and 4th points
- 3) Explain the different types of externalities? How externalities lead to welfare loss of markets. (RTP N18)
 - A) Refer above question
- 4) Define Externalities? Given example of each type of externalities. (MTP1 M18 - 3M)
 - A) Refer above question
- 5) Suppose a fertilizer plant dumps effluents into a river, why is it called an externality? (MTP2 M18 - 3M)
 - A) Refer example in 1st side heading and use the term "Fertilizer plant" instead of "Aluminum factory"
- 6) Distinguish between positive and negative externalities. [N19 - 2M]
 - A) Refer the above answer
- 7) Explain using diagram and examples, the concepts of negative externalities of production and consumption, and the welfare loss associated with the production or consumption of a good or service.
 - A) Refer 1st and 3rd points.
- 8) Explain Negative Production Externalities.
 - A) Refer Point 1
- 9) Explain Positive Production Externalities.
 - A) Refer Point 1
- 10) Explain Negative Consumption Externalities.
 - A) Refer Point 1
- 11) Explain Positive Consumption Externalities.
 - A) Refer Point 1

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Comment [I112]: Provided additional similar questions

Q.No.11. Graphically explain the impact of negative externalities on production and loss of social welfare. (A) (SM)

The problem of negative externalities (in general consider pollution) though serious, does not usually raise much because:

- The society does not know exactly who the producers of harmful externalities are.
- Even if the society knows it, the cause-effect linkages are so unclear that the negative externality cannot be conclusively traced to its producer.

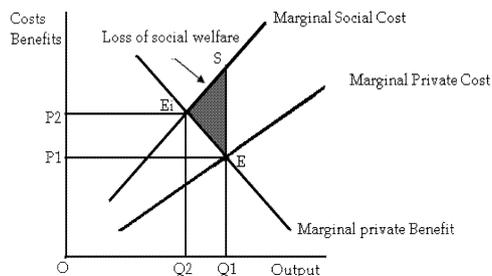
Negative Externalities and Loss of Social welfare:

a) Marginal Social Cost (MSC) represents the full or true cost to the society of producing another unit of a good. It includes Marginal Private Cost (MPC) and marginal external cost (MEC).

$$MSC = MPC + MEC$$

b) At Q₁ level of output, MPC = MPB. This is the equilibrium level of output that would be produced by a free market.

c) Assuming that there are no externalities arising from consumption, MPB = MSB



- d) Social efficiency occurs at Q_2 level of output where $MSC = MSB$
- e) At Q_1 level of output, $MSC (Q_1S)$ is higher than $MPC (Q_1E)$.
- f) Output Q_1 is socially inefficient because at Q_1 , the MSC is greater than the MSB and represents over production.
- g) The shaded triangle represents the area of dead weight welfare loss or overconsumption.

Conclusion: Negative externality → too much output relative to the social optimum → market failure → prices fail to provide the correct signals.

Note: Deadweight loss: The loss in total surplus that occurs whenever an action or a policy reduces the quantity transacted below the efficient market equilibrium quantity.

Comment [I113]: Provided explanation about dead weight loss

SIMILAR QUESTIONS:

1. Explain the role of externalities in welfare loss of markets?
 - A. Refer the above answer
2. Graphically explain the problem as a relationship between negative externalities and loss of social welfare
 - A. Refer the above answer

Q.No.12. Explain the role of government in correcting Negative Externalities through its government intervention policy. (A) (SM)

Governments have numerous methods to reduce the effects of negative externalities and to promote positive externalities. Consider the most common negative externality as pollution.

GOVERNMENT INTERVENTION TO CORRECT NEGATIVE EXTERNALITIES:

Government initiatives towards negative externalities may be classified as:

1. Direct controls
2. Market-based policies
1. **Direct controls:** They openly regulate the actions of those involved in generating negative externalities.
 - a) Direct controls prohibit specific activities that explicitly create negative externalities.
 - i) Production, use and sale of many commodities and services are prohibited in our country.
 - ii) Smoking is completely banned in many public places.
 - iii) Stringent rules are in place in respect of tobacco advertising, packaging and labeling etc.
 - b) Direct controls are required that the negative externality be limited to a certain level, for instance limiting emissions.
 - Government through legislation, fix emissions standard which is a legal limit on how much pollutants a firm can emit. If the firm exceeds limit, there will be monetary penalties or/and criminal liabilities, Charging an emission fees etc
 - The firms have to install pollution-abatement mechanisms to adhere with emission standards.
 - c) Government stipulated environmental standards and rules that protect the environment by specifying actions by producers and consumers. Ex: India has enacted the Environment (Protection) Act, 1986.
 - d) Governments may pass laws to alleviate the effects of negative externalities.
 - e) Governments may form special bodies/ boards to specifically address the problem. For instance the Ministry of Environment & Forest, the Pollution Control Board of India and the State Pollution Control Boards.

Comment [I114]: Provided explanation about direct explanation controls

2. **Market-based policies:** The market based approaches focus on generation of a market price for pollution.

This is achieved by:

- a) Setting the price directly through a pollution tax (environmental taxes)
- b) Setting the price indirectly through the establishment of a cap-and-trade system.

SIMILAR QUESTIONS:

1. How can a Government involve directly to correct externalities?
 - A. Refer side heading 1
2. How can a Government intervene through market based policies to correct externalities?
 - A. Refer side heading 2

Q.No.13. How the Pigouvian taxes can establish a market price for the negative production externality (pollution)? Explain it graphically. (A) (SM)

The First approach of market based policy focuses on establishing a price directly through a pollution tax (environmental taxes). It is one of the method of ensuring internalization of negative externalities is imposing pollution taxes.

Pigouvian taxes: These taxes are explained by A.C. Pigou

According to Pigou, when externality cannot be alleviated by contractual negotiation between the affected parties and therefore taxation should be applicable. These taxes are termed as Pigouvian taxes or pollution taxes or Environmental taxes.

Pigouvian taxes means the size of the tax depends on the amount of pollution a firm produces.

Marginal social cost (MSC) is the total cost society pays for the production of another unit in the economy.

$$MSC = MPC + MEC$$

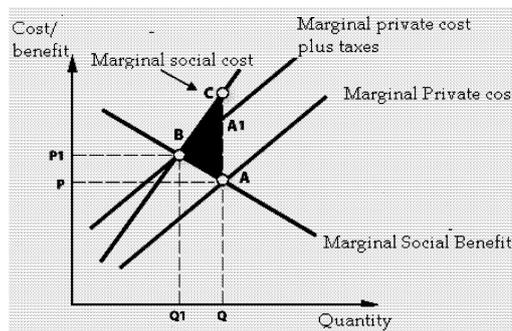
Marginal Social Benefit (MSB) can be defined as the sum total of the Marginal Private Benefits (MPB) and Marginal External Benefits (MEB) associated with an activity.

$$MSB = MPB + MEB$$

Market Outcomes of Pollution Tax

From the graph:

1. The free market outcome would be to produce a socially non optimal output level 'Q' at the level where MPC = MPB.
2. Since consumption externalities are not taken into account, MPB = MSB.
3. When externalities are present, the welfare loss to the society or dead Sweight loss (allocative inefficiency) would be the shaded area ABC.
4. The tax imposed by government (equal to the vertical distance AA1) would shift the cost curve up by the amount of tax, prices will rise to P₁ and a new equilibrium is established at point B, where the MSC = MSB.
5. Output level Q₁ is socially optimal and eliminates the whole of welfare loss on account of overproduction.



SIMILAR QUESTIONS:

1. Describe government actions to solve negative externalities through taxes.

- A. Refer the above answer
2. Do you think government intervention in markets will help enhance social welfare? Substantiate your arguments.
- A. Refer the above answer
3. How can the first approach of market based policy be used by the government to correct externalities?
- A. Refer the above answer
4. What is the main theme of Pigouvian Taxes?
- A. Refer the above answer

Q.No.14. What are the problems involved in administering an efficient pollution tax or Pigouvian tax? (B) (SM)

Pollution taxes: According to Pigou, when externality cannot be alleviated by contractual negotiation between the affected parties and therefore taxation should be applicable. These taxes are termed as Pigouvian taxes or pollution taxes or Environmental taxes. One method of ensuring internalization of negative externalities is imposing pollution taxes.

These are difficult to determine and administer because,

- i) It is difficult to discover the right level of taxation that would ensure that the private cost plus taxes will exactly equate with the social cost.
- ii) If the demand for the good is inelastic, the effect of tax is less in reducing demand. A producer shifts the tax burden in the form of higher prices. This causes inflation and may reduce consumer welfare.
- iii) The method of taxing the polluters has many limitations because it involves the use of complex and costly administrative procedures for monitoring the polluters.
- iv) This method does not provide any genuine solutions to the problem. It only establishes an incentive system for use of methods which are less polluting.
- v) Pollution taxes also have potential negative consequences on employment and investments because high pollution taxes in one country may encourage producers to shift their production facilities to those countries with lower taxes.

SIMILAR QUESTION:

1. Account for the difficulties in determination of level of taxes to solve the problems associated with pollution tax?
A. Refer the above answer
2. Describe the problems in administering an efficient pollution tax. [N19 - 3M]
A. Refer the above answer

Q.No.15. Explain the method of Cap-and-Trade System or Tradable emission Permits in generating a market price for pollution? (A) (SM)

The Second approach of Market based policy focuses on generation of a market price for pollution through the establishment of a cap-and-trade system.

Cap-and-Trade System: It means establishing a price indirectly through tradable emissions permits. These are marketable licenses to emit limited quantities of pollutants and can be bought and sold by polluters.

Under this method:

1. Each firm has permits specifying the number of units of emissions that the firm is allowed to generate.
2. Permits are allocated among firms. With the total number of permits so chosen helps the firms to achieve the desired maximum level of emissions.
3. A firm that generates emissions above what is allowed by the permit is penalized with substantial monetary sanctions.
4. These permits are transferable, and therefore different pollution levels are possible across the regulated entities.
5. By allocating fewer permits than the free pollution level, the regulatory agency creates a shortage

of permits which then leads to a positive price for permits. This establishes a price for pollution, just as in the tax case.

6. The high polluters have to buy more permits, which increases their costs, and makes them less competitive and less profitable.
7. The low polluters receive extra revenue from selling their surplus permits, which makes them more competitive and more profitable.
8. Therefore, firms will have an incentive not to pollute.

SIMILAR QUESTION:

1. Define Cap and Trade system
- A. Refer Cap and Trade System point.

Q.No.16. How does the cap-and-trade approach is functioning in India? What are the advantages claimed for tradable permits in India? (B) (SM)

Cap-and-Trade System: Refer the definition as above.

India is experimenting with cap-and-trade in the form of:

SCHEME: Perform, Achieve & Trade (PAT) scheme

CESS: Carbon tax in the form of a cess on coal.

1. The advantages claimed for tradable permits are:

- The system allows flexibility and reward efficiency.
- It is administratively cheap and simple to implement
- It ensures that pollution is minimised in the most cost-effective way.
- It also provides strong incentives for innovation.
- Consumers may benefit if the extra profits made by low pollution firms are passed on to them in the form of lower prices.

2. ARGUMENTS:

- “In reality these permits do not stop firms from polluting the environment”. They only provide an incentive to them to do so.
- “The extra cost incurred for procuring additional permits so as to further pollute the atmosphere”.
- The firms with some degree of monopoly power and inelastic demand for its product compensate this extra permit cost by charging higher prices to consumers.
- “The polluters are forced to consider pollution as a private cost.”

SIMILAR QUESTIONS:

1. How the second approach of market based policy do helpful to correct externalities?
 - A. Refer 1st side heading
2. What are the advantages claimed for tradable permits?
 - A. Refer 1st side heading
3. What are the arguments faced by cap and trade system?
 - A. Refer 2nd side heading

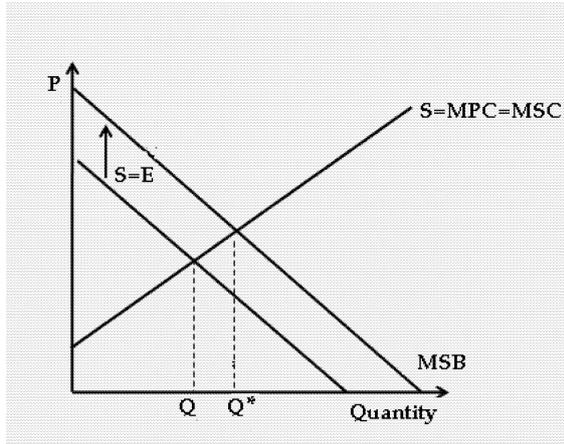
Q.No.17. Graphically illustate the effect of Pigouvian subsidy on output which have positive externalities. Explain the Government intervention in the aspect of subsidy? (B) (SM)

1. **SUBSIDY:** It is a market-based policy as subsidies to producers would lower their cost of production. A subsidy on a good which has substantial positive externalities would reduce its cost and

consequently reduces the price. It shifts the supply curve to the right and increases its output.

2. **Social optimality:** A higher output, where $MSB = MSC$ is socially optimal.

3. **Effect of Subsidy on Production of Output:**



From the above graph:

A Pigouvian subsidy equal to the benefit of externality ($S = E$) is granted by government to the producer.

The level of output after subsidy is Q^* where $MSB = MSC$ is the socially optimum level of output.

4. **Forms of Government Intervention:**

a) In the case of products and services whose externalities are vastly positive and pervasive (Spreading widely), government enters the market directly as an entrepreneur to produce and provide them.

For example, Fundamental research by government to protect the futuristic technology interest of the society.

b) Governments also engage in direct protection of environmental quality.

Examples are afforestation, reforestation, protection of water bodies, and treatment of sewage and cleaning of toxic waste sites.

SIMILAR QUESTIONS:

1. Explain why governments provide subsidies? Illustrate a few examples of subsidies.

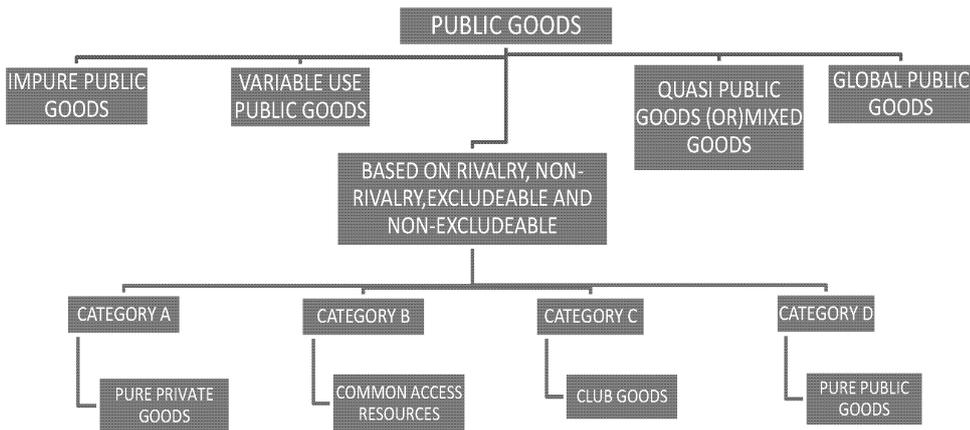
A. Refer point 4

2. Define subsidy?

A. Refer point 1

Q.No.18. Draw a flowchart representing different types of public goods

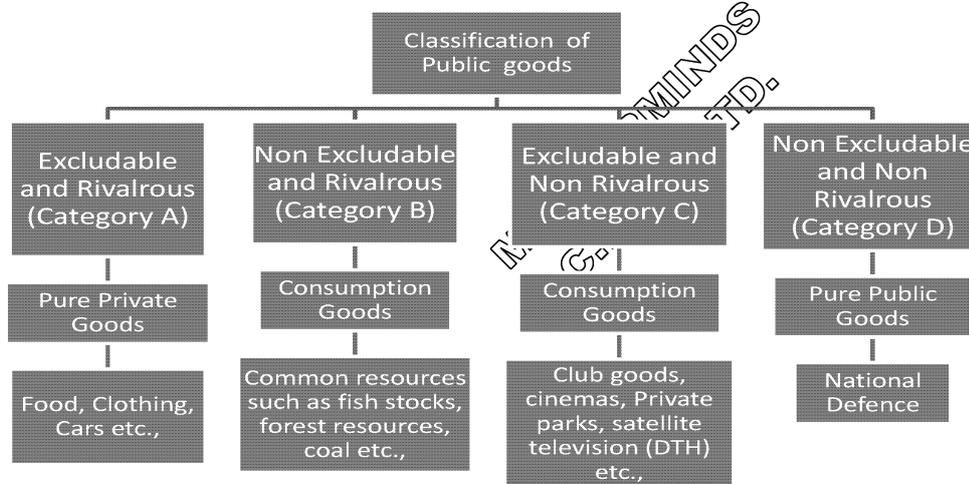
(C)



Q.No.19. Briefly explain the classification of Public Goods based on rivalrous (or) non-rivalrous and excludable (or) non-excludable. (B)
(SM)

Classification of Public Goods

One approach to classify goods is to concentrate on the non-rival and non-excludable characteristics of public goods.



Goods in category A are rivalrous in consumption and are excludable. These are also known as pure private goods.

Consumption goods in category B are rival but not excludable. Common resources such as public parks, public roads in a city etc. fall under this category.

For example, Bees from the hives of different bee keepers collect nectar from the nearby orange garden. The blossom is rival as the nectar collected for one hive is unavailable to another. The situation is non-excludable as no one can stop the use of nectar by particular honey bee.

Goods in category C is non-rival in consumption but are excludable. For example admission to a cinema, swimming pool, music concert etc. has potential for exclusion, but if there is no congestion, each individual admitted may consume the services without subtracting from the benefit of others.

Goods in category D which are characterized by both non-excludability and non-rivalry properties are called pure public goods. The benefit that an individual gets from a pure public good does not depend on the number of users.

Examples:

- The clarity of your radio reception is generally independent of the number of other listeners.
- Knowledge (discovery) of one person does not prevent others from applying the same knowledge.

Q.No.20. Define private good. Explain its characteristics.

(A) (SM)

Private good: Private goods refer to those goods that yield utility to people. Anyone who wants to consume them must purchase them. Most of the goods produced and consumed in an economy are private goods. Examples are: food items, clothing, movie ticket, television, cars, houses etc.

Characteristics of Private Goods:

- Owners of private goods can exercise private property rights and can prevent others from using the good or consuming their benefits.
- Consumption of private goods is 'rivalrous'
- Simultaneous consumption of a rivalrous good by more than one person is impossible.
- Private goods are 'excludable'.
- No free rider problem.
- Additional resource costs for producing and supplying private goods is positive.
- The market demand curve for a private good is obtained by horizontal summation of individual demand curves
- All private goods and services can be rejected by the consumers if their needs, preferences or budgets change.
- Whenever there is inequality in income distribution in an economy, issues of fairness and justice tend to arise with respect to private goods.
- Normally, the market will efficiently allocate resources for the production of private goods.

SIMILAR QUESTIONS:

- Explain, with the aid of examples, the main characteristics of private goods.
A. Refer the above answer
- Describe why markets have incentives to produce private goods?
A. Refer the above answer

Q.No.21. Define Common Access Resources. What is the effect of absence of price mechanism on environmental sustainability?

(A) (SM)

- Common Access Resources:** Common access resources or common pool resources are a special class of impure public goods which are rival and non-excludable (Category B). They are available for free of charge. Hence price mechanism is absent.

Eg.: Fisheries, Common pastures, Rivers, Sea, Backwaters, Biodiversity etc. The earth's atmosphere is the best example.

2. Effect of absence of price mechanism:

- There is no price for common resources. So, the producers and consumers do not pay for these resources and therefore, they overuse them and cause their depletion and degradation.
- Emissions of carbon dioxide and other greenhouse gases have led to the depletion of the ozone layer endangering environmental sustainability.
- This creates threat to the sustainability of these resources and, therefore, the availability of common access resources for future generations.

Conclusion: The 'tragedy of the commons' (i.e. the overuse of rival and non-excludable resources leads to the disadvantage of the entire world) is a burning problem. Although nations are aware of the fact that reduced global warming would benefit everyone, they have an incentive to free ride, with the result that nothing positive is likely to be done to correct the problem.

SIMILAR QUESTIONS:

1. Describe common access resources using examples.
- A. Refer the above answer
2. Define common resources. Why are they overused?
- A. Refer the above answer
3. Explain why environmental pollution is regarded as a source of market failure.
- A. Refer point 2
4. Describe the term 'Tragedy of Commons'. (RTP M19)
- A. Refer the conclusion.
5. What do you mean by common pool resources and why producers and consumers do not pay for these resources?
- A. Refer the above answer (MTP M20)

Q.No.22. Define Public goods. What are the characteristics of public goods? Or Describe features of public goods. (A) (SM, M18 - 2M)

Collective Consumption Good or Public Good:

Introduced by: Paul A. Samuelson

Publication: 'The Pure Theory of Public Expenditure' (1954)

Recognition: He is the first economist to develop the theory of public goods.

Definition: A public good is defined as one which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtraction from any other individuals' consumption of that good.

A few examples of public goods are: national defense, highways, public education, scientific research which benefits everyone, law enforcement, lighthouses, fire protection, disease prevention and public sanitation.

Characteristics of Public Goods:

- a) Public goods yield utility to people.
- b) The consumption of public good is essentially collective in nature.
- c) Public good is non-rival in consumption. (It means that consumption of a public good by one individual does not reduce the quality or quantity available for all other individuals.)
EX: If you walk in street light, other persons too can walk without any reduced benefit from the street light.
- d) Public goods are non-excludable. (If the good is provided, one individual cannot deny other individuals' consumption)
- e) Public goods are characterized by indivisibility. For example, a lighthouse, a highway, an airport, defence, etc. cannot be consumed in separate units.
- f) Public goods are more vulnerable to issues such as externalities, inadequate property rights and free rider problems.
- g) The additional resource cost of another person consuming the public goods is 'zero'.
- h) Public goods are generally divided into two categories namely, public consumption goods and public factors of production.
- i) A unique feature of public goods is that they do not conform to the settings of market exchange.

SIMILAR QUESTIONS:

1. Public goods do not use up extra resources as additional people consume them. Why?
 - A. Refer point c, d and g
2. Define public good. Why do you consider national defence as a public good? (MTP1 N18 - 3M, RTP M19)
 - A. Refer the above answer (instead of public good use the word national defence for the features)

Q.No.23. Explain the different ways of government intervention in the case of public goods to overcome market failure? (C) (SM)

Public goods are non-excludable and non-rivalrous.

GOVERNMENT INTERVENTION IN THE CASE OF PUBLIC GOODS:

1. As public goods are non-excludable, the direct provision of a public good by government can help to overcome free-rider problem.
2. The non-rival nature of consumption provides a strong argument for the government rather than the market to provide and pay for public goods.

E.g.: where entry fees cannot be charged on pure public goods, direct provision by governments through the use of general government tax revenues is the only option.

3. A very commonly followed method is to grant licenses to private firms to build a public good facility.
4. Excludable public goods can be provided by government and the same can be financed through entry fees. The government regulates the level of the entry fee chargeable from the public and keeps strict watch on the functioning of the licensee to guarantee equitable distribution of welfare.

SIMILAR QUESTIONS:

1. Why do governments provide public goods?
 - A. Refer the above answer
2. What is the rationale behind the argument that public goods should be provided by government?
 - A. Refer the above answer

Q.No.24. Describe Pure and Impure Public Goods (B) (SM)

1. **Pure public good:** A pure public good is non-rival as well as non-excludable (CATEGORY D).

Criticisms on Pure public good: These goods are not in fact observable in the real world.

Examples

- i) *If the government provides law and order, the use of law courts by some individuals subtracts the consumption of others and if they need they have to wait.*
- ii) *In case of defence if armies are mostly deployed in the northern borders, it may not result in the same amount of protection to people in the south.*

2. **Impure public good:** The hybrid goods that possess some features of both public and private goods are called impure public goods and are partially rivalrous or congestible. It includes Category B and Category C

- a) Due to congestion, the benefit that an individual gets from an impure public good depends on the number of users. ((CATEGORY B)

For example, open-access Wi-Fi networks become crowded when more people access it.

- b) Impure public goods are non-rivalrous. (CATEGORY C)

For example the use of cable TV by others will not reduce your enjoyment of it.

- c) Impure public goods are often excludable. (CATEGORY C)

For example cable television is excludable since the cable TV service providers can refuse connection if you do not pay for set top box and recharge it regularly.

Comment [I115]: Conclusion provided accurately

- d) The possibility of exclusion from the use of an impure public good has two implications.
 - i) Since free riding can be eliminated, the impure public good may be provided either by the market or by the government at a price or fee.
 - ii) 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.
- e) Impure public goods are classified into two broad classes namely Club goods (Ex: swimming pools, fitness centres etc.) and Variable use public goods (such as roads, bridges etc.)

SIMILAR QUESTIONS:

1. Identify a pure public good using the criteria for identification.
 - A. Refer point 1.
2. Is cable television an example of impure public good? Verify your answer. (RTP N19)
 - A. Refer point 2(b)

Q.No.25. 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
Non-rivalrous and are Excludable	Non-rivalrous but are may be excludable or non excludable
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.

Comment [I116]: Included for better understanding

NOTE: We should exclude the enjoyment of roads, bridges etc. of some people as there is the possibility of congestion due to large number of vehicles and the potential reduction of benefit to the users.

Comment [I117]: Provided Note for conclusion

Q.No.26. What are Quasi - Public goods (Mixed Goods)? Explain the features of Quasi - Public Goods. (A) (SM)

Quasi-public goods: They possess nearly all of the qualities of the private goods and some of the benefits of public good.

Eg. Education, health services etc.

The quasi-public goods or services, also called a near public good.

Features of quasi public goods:

1. It is easy to keep people away from them by charging a price or fee. But this is undesirable because the society would be better off if more people consume them.
2. The combination of virtually infinite benefits and the ability to charge a price results in some quasi-public goods being sold through markets and others are being provided by government. But people argue that these should not be left to the market alone.

3. Markets for the quasi-public goods are considered to be incomplete markets.
4. Their lack of provision by free markets would be considered as inefficiency and market failure.

SIMILAR QUESTION:

1. Explain the term quasi-public goods. (RTP M18)
- A. Refer the above answer
2. What is meant by quasi public goods? (M19-2M)
- A. Refer the above answer

Q.No.27. Define Global Public Goods. Provide the classification of global public goods according to WHO and World Bank. (B) (SM)

Global Public Goods: Global public goods are those goods whose benefits accrue to everyone in the world. These goods have widespread impact on different countries and regions, population groups and generations. These are goods whose impacts are indivisibly spread throughout the entire globe.

Classification of global public goods By WHO: Global public goods may be used as follows:

- i) Final public goods are 'outcomes', (e.g. the eradication of polio)
- ii) Intermediate public goods, which contribute to the provision of final public goods. (E.g. International Health Regulations aimed at stopping the cross-border movement of communicable diseases and thus reducing cross-border health risks).

Classification of global public goods: By World Bank

- i) The environmental commons which includes (Prevention of change in climate and biodiversity)
- ii) Communicable diseases (HIV/AIDS, tuberculosis, malaria and avian influenza),
- iii) International trade,
- iv) International financial architecture, and
- v) Global knowledge for development.

Conclusion: The distinctive characteristic of global public goods is that there is no mechanism (either market or government) to ensure an efficient outcome.

SIMILAR QUESTION:

1. What do you mean by 'Global Public goods'. Explain in brief. [N19 - 2M]
- A. Refer the above answer

Comment [I118]: Similar Question considered from N19 QP

Q.No.28. Explain the terms related to the Free Rider Problem. What will be the impact of free riding on public goods? (B) (SM)

The Free Rider Problem: 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.

Free rider: A free rider is a consumer or producer who does not pay for a nonexclusive good in the expectation that others will pay.

Free riding: Free riding means 'benefiting from the actions of others without paying'.

Eg.: When students are required to do a group project, some group members tend to escape the work and make others do the entire work. Those who escape assignment 'free ride' on the efforts of others.

Applicability of free riding on public goods:

- a) Consumers can take advantage of public goods without contributing sufficiently to their production.
- b) As public goods are non-excludable, the people will tend to act in their own self-interest and this

- leads to the problem of free riding i.e. people will not express to buy a particular quantity at a price
- c) If every individual plays the same strategy of free riding, the strategy will fail. Then, a free ride for any one becomes impossible.
 - d) Due to free rider problem there is no meaningful demand curve for public goods.
 - e) If individuals make no offers to pay for public goods, then the profit maximizing firms will not produce them.
 - f) If the free-rider problem cannot be solved, the following two outcomes are possible:
 - i) No public good will be provided in private markets
 - ii) Private markets will seriously under produce public goods even though these goods provide valuable service to the society.

SIMILAR QUESTIONS:

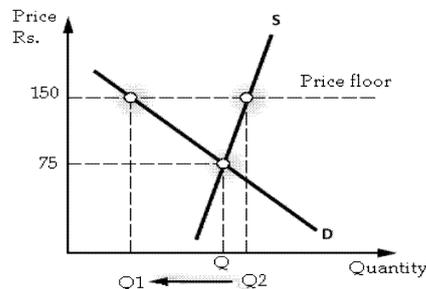
1. Explain the free rider problem. Give examples.
 - A. Refer the above answer
2. Describe the free rider problem associated with public goods.
 - A. Refer the above answer
3. Describe the free rider problem associated with public goods. What would be the outcome? Give examples.
 - A. Refer the above answer

Q.No.29. What is meant by Price Intervention by the government (NON MARKET PRICING)? Describe graphically about market outcomes in case of price floor and price ceiling? (A) (SM)(MTP-M19)

1. **Price intervention:** It generally takes the form of price controls which are legal restrictions on price. Fixing of minimum wages and rent controls are examples of such market intervention. Government usually intervenes in many primary markets which are subject to extreme as well as unpredictable fluctuations in price on grounds of fairness and equity.
2. **Price controls:** Price controls are introduced by governments to influence the outcomes of a market. Price controls may take the form of either a price floor or a price ceiling
 - i) **Price Floor:** It is a minimum price buyers are required to pay.

Market Outcome of Minimum Support Price or Price Floor

For example in India, in the case of many crops the government has initiated the Minimum Support Price (MSP) programme as well as procurement by government agencies at the set support prices. The objective is to guarantee steady and assured incomes to farmers. In case the market price falls below the MSP, then the guaranteed MSP will prevail.



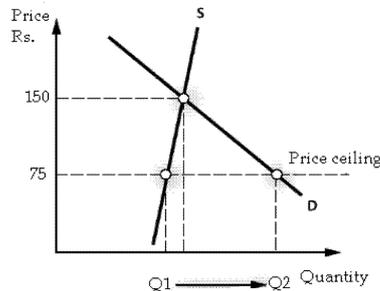
- When price floors are set above market clearing price, suppliers are encouraged to over-supply and there would be an excess of supply over demand.
- At price Rs. 150/ which is much above the market determined equilibrium price of Rs. 75/, the market demand is only Q1, but the market supply is Q2.

ii) **Price Ceiling:** It is a maximum price sellers are allowed to charge for a good or service

Market Outcome of Maximum Price (or) Price ceiling:

When prices of certain essential commodities rise excessively, government may resort to controls in the form of price ceilings for making a resource or commodity available to all at reasonable prices.

For example: maximum prices of food grains and essential items are set by government during times of scarcity



- a) A price ceiling which is set below the prevailing market clearing price will generate excess demand over supply.
- b) The price ceiling of Rs.75/- is below the market determined price of Rs.150/- leads to generation of excess demand over supply equal to Q1-Q2.

Conclusion: With the objective of ensuring stability in prices and distribution, governments often intervene in grain markets through building and maintenance of buffer stocks. It involves purchases from the market during good harvest and releasing stocks during periods when production is below average.

SIMILAR QUESTIONS:

1. Explain why governments impose price floors?
 - A. Refer point 2 and 2 (i)
2. Describe the concept of price floors with examples.
 - A. Refer point 2 and 2 (i)
3. Explain the rationale for price support for agricultural products
 - A. Refer point 2 and 2 (i)
4. Explain why governments impose price ceilings?
 - A. Refer point 2 and 2 (ii)
5. Describe the effects of price ceilings with examples.
 - A. Refer point 2 and 2 (ii)
6. Illustrate the impact of a price ceiling on market outcomes.
 - A. Refer point 2 and 2 (ii)
7. Elucidate the functioning and outcomes of price intervention.
 - A. Refer the above answer
8. How the Government intervenes to ensure stability in price level? (N18 - 2M)
 - A. Refer point 1 and 2
9. Describe Price Ceilings with examples. (RTP N18)
 - A. Refer Point 2 (ii)
10. When price of certain essential goods rises excessively, how does the government intervene to control the price? Explain with the help of an example and with suitable diagram. (RTP N19)
 - A. Refer point 2 (ii)

11. What do you mean by price ceiling? Explain it with the help of examples. (MTP M20)

A. Refer point 2 and 2 (ii)

Comment [I119]: Considered from MTP M20

Q.No.30. Explain the features and market outcome of merit goods. (A) (SM)

1. Merit goods:

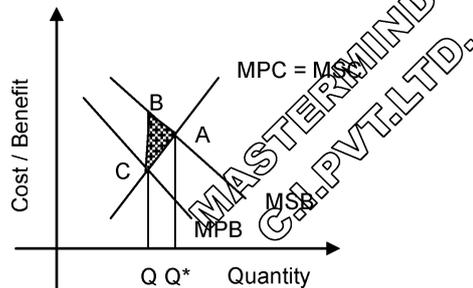
Merit goods are goods which are deemed to be socially desirable and therefore the government deems that its consumption should be encouraged.

Examples are education, health care, welfare services, housing, fire protection, waste management, public libraries, museum and public parks.

2. Features of Merit goods:

- a) They are rival and excludable.
- b) They are limited in supply.
- c) They are rejectable by those unwilling to pay.
- d) They involve positive marginal cost for supplying to extra users.
- e) Substantial positive externalities are involved in the consumption of merit goods.
- f) Merit goods can be provided through the market, but are likely to be under-produced and under-consumed through the market mechanism so that social welfare will not be maximized.

3. Market Outcome for Merit Goods:



From the above graph:

- a) In the absence of government intervention, the output of the merit good would be Q where $MPC = MPB$.
- b) The welfare loss to the society due to under production and under consumption is the shaded area (ABC).
- c) On account of positive externalities, the optimal output is Q^* at which where $MSC = MSB$. This is a strong case for government intervention in the case of merit goods.

SIMILAR QUESTIONS:

- 1. Explain about merit goods and its features?
- A. Refer points 1 & 2.

Q.No.31. Why do Government intervention is necessary in case of merit goods? (A) (SM)

Need for Government intervention in the case of Merit Goods: The merit goods which have positive externalities if left to the market, only private benefits and private costs would be reflected in the price paid by consumers. Hence people would consume inadequate quantities than socially desirable. The additional reasons for government provision of merit goods are:

- a) Information failure is widely prevalent with merit goods
- b) Equity considerations demand that merit goods (health and education) should be provided free rather than for a price.
- c) There is a lot of uncertainty as to the need for merit goods E.g. health care. (Due to uncertainty about the nature and timing of healthcare required in future, individuals may be unable to plan their expenditure and save for their future medical requirements. The market is unlikely to provide the optimal quantity of health care when consumers actually need it, because they may be short of the necessary finances to pay the market price.)

Comment [I120]: Provided for better understanding

SIMILAR QUESTIONS:

1. What are the different options for providing merit goods to the public by the government?
 - A. Refer the above answer.
2. Suggest reasons why education and health care might be considered as merit goods to be provided by government? (MTP2 M18 - 2M)
 - A. Refer point c)

Q.No.32. Elucidate the role Government intervention in case of under provision of merit goods. (A) (SM)

Government Intervention in the case of under provision of Merit goods:

The possible government responses to under-provision of merit goods are regulation, standards, legislations, direct government provision, subsidies, and a combination of government provision and market provision.

- a) Government regulation determines how a private activity may be conducted. These regulatory mechanisms enhance consumption of merit goods and to ensure their quality.

Ex.1: The way in which education is to be imparted is government regulated.
- b) Governments can prohibit some type of goods and activities, set standards and issue mandates making others oblige.

Ex.1: Government may make it compulsory to avail insurance protection.

Ex.2: Compulsory immunization as it helps not only the individual but also the society at large.
- c) Government through legislation can enforce the consumption of a good which generates positive externalities.

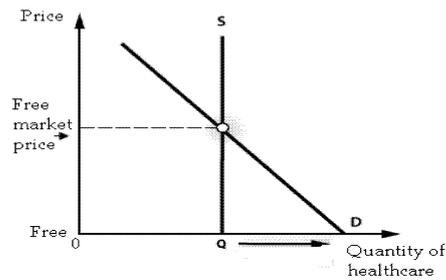
Ex.1: Use of helmets, seat belts etc.

Ex.2: The Right of Children to Free and Compulsory Education Act, 2009 which mandates free and compulsory education for every child of the age of 6 -14 years.
- d) When governments provide merit goods, it may give rise to large economies of scale and productive efficiency. EX: Infrastructure laid by government
- e) When merit goods are directly provided at free of cost (100% subsidy or Zero price) by government, there will be substantial demand for the same.

Comment [I121]: Provided as per NEW SM

Comment [I122]: Provided for better clarity

Ex: Consumption of Merit Goods at Zero Price: Suppose if health care is provided freely by the government



From the given graph it is clear that when people are required to pay the free market price, people would consume only OQ quantity of healthcare. If provided free at zero prices, the demand OD far exceeds supply.

- f) In case of underproduction of merit goods by free market then government adopts combination of government provision and market provision.

Ex.1: Private schools and Government schools

Ex.2: Private hospitals and Government hospitals

Comment [I123]: NEWLY INSERTED according to the concept

SIMILAR QUESTIONS:

1. **What are the possible government responses to under-provision of merit goods?**
 - A. Refer the above answer.
2. **Graphically elucidates the effect on demand and supply merit goods at zero price or provided freely by the government.**
 - A. Refer point e)

Q.No.33. What are the features of demerit goods?

(C)

(SM)

Demerit goods: Demerit goods are goods which are believed to be socially undesirable. Examples are cigarettes, alcohol, intoxicating drugs etc.

Features of demerit goods

1. The consumption of demerit goods imposes significant negative externalities on the society as a whole.
2. The private costs incurred by individual consumers are less than the social costs experienced by the society.
3. The production and consumption of demerit goods are likely to be more than optimal under free markets.
4. The marginal social cost will exceed the market price and overproduction and over-consumption will occur, causing misallocation of society's scarce resources.
5. The price that consumers pay for a demerit good is market determined and does not account for the social costs that arise due to externalities. EX: Price on packet of cigarettes

However, all goods with negative externalities are not essentially demerit goods; e.g. Production of steel causes pollution, but steel is not a socially undesirable good.

SIMILAR QUESTION:

1. Define demerit good and point out its characteristics.
 2. Is production of steel a demerit good? Give reason. (RTP N19)
- A. Refer above answer and conclude with steel instead of demerit good

Comment [I124]: Modified according to NEW SM

Q.No.34. How do governments correct market failure resulting from demerit goods?

(A) (SM, N18 - 3M, RTP M20)

Government Intervention to correct Market Failure in case of demerit goods:

Generally consumers are not the best judges of welfare of demerit goods and overvalue them because of imperfect information.

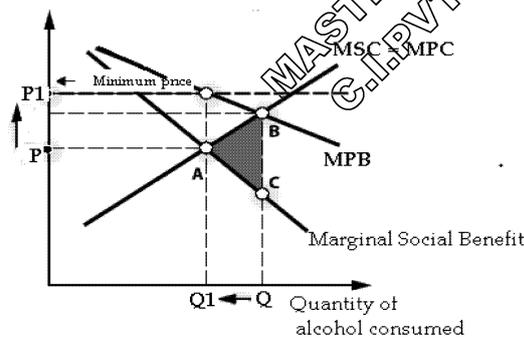
The government intervenes to discourage their production and consumption as follows:

1. A government may enforce complete ban on a demerit good.
E.g.: Intoxicating drugs. In such cases, the possession, trading or consumption of the good is made illegal.
 2. Through legislations that prohibit the advertising or promotion of demerit goods
 3. Strict regulations to limit access to the good, especially by vulnerable groups such as children and adolescents.
 4. Regulatory controls in the form of spatial restrictions.
E.g.: smoking in public places, sale of tobacco to be away from schools, and time restrictions under which sale at particular times during the day is banned.
 5. Imposing high taxes on producing or purchasing the demerit good makes it costly and unaffordable.
This is the most commonly used method for reducing the consumption of a demerit good.
- For example, the GST Council has bracketed four items namely, high end cars, pan masala, aerated drinks and tobacco products into demerit goods category and therefore these would be taxed (with a cess being added on to the basic tax) at much higher rates than the top GST slab of 28 per cent.
6. The government can fix a minimum price below which the demerit good should not be exchanged.

Q.No.35. Explain graphically the Outcomes of Minimum Price for a Demerit Good. (A) (SM)

The government can fix a minimum price below which the demerit good should not be exchanged. This reduces the consumption of demerit good.

1. Outcomes of Minimum Price for a Demerit Good above the equilibrium price



- a) Free market equates MPC with MPB at point 'B' and produces an output of a demerit good Q at which MSB is much less than MPB.
 - b) The shaded area represents loss of social welfare.
 - c) If the government determined minimum price is P₁, demand contracts and the quantity of alcohol consumed would be reduced to Q₁.
 - d) At Q₁ level of output, MSB is equal to MSC and the quantity of alcohol consumed is optimal from the society's point of view.
2. **Interpretation:** The demand for demerit goods such as, cigarettes and alcohol is often highly inelastic, so that any increase in price resulting from additional taxation causes a less than proportionate decrease in demand. Also, sellers can always shift the taxes to consumers without losing customers.
 3. **Adverse effect of stringent regulation:** Total ban is not often realized in the form of complete

elimination of the demerit good; conversely such goods are secretly driven underground and traded in a hidden market.

SIMILAR QUESTIONS:

1. What are the consequences if demerit goods are left to free market?
- A. Refer point 1 up to (b).

Q.No.36. What is meant by Incomplete information? What are the reasons for Incomplete Information? How can it affects the market failure? (B) (SM)

INCOMPLETE INFORMATION:

Perfect information implies that both buyers and sellers have complete information about anything that may influence their decision making. However, this assumption is not fully satisfied in real markets.

Information failure is widespread in numerous market exchanges. It occurs when some, or all, of the participants in an economic exchange do not have *perfect knowledge*. Thus misallocation of scarce resources takes place and equilibrium price and quantity is not established through price mechanism. This results in market failure.

Comment [I125]: Newly added

Reasons for incomplete information

- a) The nature of products and services tends to be highly complex e.g. Cardiac surgery, financial products (such as pension products, mutual funds etc).
- b) In many cases consumers are unable to quickly / cheaply find sufficient information on the best prices as well as quality for different products.
- c) Sometimes consumers may misunderstand or uncertain about the true costs or benefits of a product.
- d) People are ignorant or not aware of many matters in the market.
- e) The consumers have inaccurate or incomplete data and consequently make potentially 'wrong' choices / decisions.

Note: If information failure exists when one participant in an economic exchange knows more than the other, then it is termed as **Asymmetric information**.

Comment [I126]: Newly added

SIMILAR QUESTIONS:

1. Appraise the role of incomplete information in generating market failure.
- A. Refer the above answer
2. Define information failure (MTP2 N18 - 3M,RTP M19)
- A. Refer Introduction

Q.No.37. Explain Asymmetric Information with suitable examples. (C) (SM)

1. 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 mislead choices.

Examples:

- i) *The landlords know more about their properties than tenants.*
- ii) *A borrower knows more about their ability to repay a loan than the lender.*
- iii) *A used-car seller knows more about vehicle quality than a buyer.*
- iv) *Some traders may possess insider information in financial markets.*

2. Sometimes in a transaction if one party knows a material fact that the other party does not, it is referred as the 'lemons problem'. It is an important source of market failure.
3. Asymmetric information can take the forms of either **Adverse selection** (low-quality goods can drive high-quality goods out of the market) or **Moral hazard** (An opportunism characterized by more informed person's taking advantage of a less-informed person)

Q.No.38. Define Adverse Selection. Provide any two examples.

(A) (SM)

Adverse selection: It is a situation in which asymmetric information about low quality eliminates high-quality goods from a market.

Eg.1: Health insurance:

Mostly the people with unhealthy life styles and with underlying health issues purchase health insurance to use it. Being aware of this the insurance company raises the average price of insurance cover. This high price throws healthy consumers out of the market as healthy people will be unwilling to pay such high premium. The result is that only high risk individuals buy insurance. This is a market failure.

Eg.2: Used car market (or) the 'market for lemons':

Anyone who sells a 'lemon' (an unusually poor car) stands to gain. The market becomes flooded with lemons. Eventually the market may offer nothing but lemons. The good-quality cars disappear because they are kept by their owners or sold only to friends. In brief buyers expect hidden problems in items offered for sale, leading to low prices and the best items being kept off the market.

SIMILAR QUESTION:

1. Explain the concept of adverse selection. What are the possible consequences of adverse selection? (MTP2 N18 - 3M, RTP N19))
- A. Refer above answer.

Q.No.39. What is meant by Moral Hazard? How can it lead to market failure?

(A) (SM)

Moral hazard: It is opportunism characterized by an informed person's taking advantage of a less-informed person through an unobserved action.

- i) It arises from lack of information about someone's future behavior.
- ii) It occurs when an individual knows more about his or her own actions than other people do.
- iii) This leads to a distortion of incentives to take care or to exert effort when someone else bears the costs of the lack of care or effort.
- iv) This happens when someone is protected from paying the full costs of their harmful actions, and also harmful consequences.
- v) It occurs when a party whose actions are unobserved can affect the probability or magnitude of a payment associated with an event.

Ex: The insured consumers knowing that a claim will be paid by the insurance company, the less a person cares whether the doctor charges excessive fees or uses inefficient and costly procedures as part of his health care. This causes insurance premiums to rise for everyone, driving many potential customers out of the market. In India this issue led to conflict between the health insurance providers and big private hospitals. This was resolved by 'third party administration' to settle the medical claims.

SIMILAR QUESTION:

1. Define 'moral hazard'. (MTP1 M18 - 2M, MTP2 N18 - 2M)
- A. Refer Introduction

Q.No.40. Mention the Government Interventions that are employed for correcting information failure. (A) (SM, M 18 - 2M)

GOVERNMENT INTERVENTION FOR CORRECTING INFORMATION FAILURE:

For combating the problem of market failure due to information problems and considering the importance of information in making rational choices, the following interventions are resorted to:

1. Government makes it mandatory to have accurate labeling and content disclosures by producers. For example: SEBI requires that accurate information be provided to prospective buyers of new stocks.
2. Public dissemination of information to improve knowledge and subsidizing of initiatives in that direction.
3. Regulation of advertising and setting of advertising standards to make advertising more responsible, informative and less persuasive.

Q.No.41. Explain the extent of government intervention for achieving equitable distribution. (A) (SM)

GOVERNMENT INTERVENTION FOR EQUITABLE DISTRIBUTION: One of the most important activities of the government is to redistribute incomes so that there is equity and fairness in the society. Equity can be brought about by redistribution of endowments with which the economic agents enter the market.

1. Some common policy interventions include:

- a) Progressive income tax,
 - b) targeted budgetary allocations,
 - c) unemployment compensation,
 - d) transfer payments, subsidies,
 - e) social security schemes,
 - f) job reservations,
 - g) Land reforms, gender sensitive budgeting etc.
2. Government also intervenes to combat black economy and market distortions associated with a parallel black economy.
 3. Government intervention in a market that reduces efficiency while increasing equity is often justified because equity is greatly appreciated by society.

SIMILAR QUESTIONS:

1. How could the Government with its regulations and policies can achieve equitable distribution in an economy?
A. Refer above answer
2. Examine what types of fiscal policy measures are useful for redistribution of income in an economy? (RTP M18)
A. Refer above answer

QUESTIONS FOR ACADEMIC INTEREST - FOR STUDENT SELF STUDY

Q.No.42. Comment on "A unique feature of public goods is that they do not conform to the settings of market exchange". (B) (SM)

Public goods do not conform to the settings of market exchange:

- a) The property rights of public goods with extensive indivisibility and nonexclusive properties cannot be determined with certainty. Therefore, the owners of such products cannot exercise sufficient control over their assets.

For example, if you maintain a beautiful garden, you cannot exercise full control over it so as to charge your neighbors for the enjoyment which they get from your garden.

- b) Public goods do not provide incentives that will generate optimal market reaction.
- c) Producers are not motivated to produce a socially-optimal amount of products if they cannot charge a positive price for them or make profits from them.
- d) Though public goods are extremely valuable for the well-being of the society, left to the market, they will not be produced at all or will be grossly under produced.

SIMILAR QUESTION:

1. Why it is difficult for the government to determine the optimal quantity of a public goods? (MTP2 M18 - 2M)
- A. Refer above answer

Q.No.43. The second approach to the classification of impure public goods focuses on the mix of services that arise from the provision of the good". Explain with an example. (C) (SM)

For example, vaccination against measles by a person confers not only private benefit to him but also an external benefit as it reduces infection to others who are in contact with him

Q.No.44. "The external effect associated with the consumption of a private good may have the characteristics of a public good". Explain with an example. (C) (SM)

For example, education will improve not only the individual's earning potential but also it creates non rival and non-excludable knowledge and information (i.e. public goods). Education also benefits the society in improvement in decision making behaviour, provision of a screening device for the labour market to determine the quality of labour and better cultural environment and heritage for future generations.

Q.No.45. The public good in the society can be consumed by everyone without reducing the amount available for consumption by others. But the demand curve at different prices does not incorporate all the external effects. Explain with an example. (C) (SM)

For example, the students pursuing the CA course will have a demand curve at various prices. This reflects the private benefits i.e. they would enjoy as a result of this education. Also there are external benefits such as, the possible addition to accounting knowledge and practices, the consultancy services you give to others for a better tax or budgeting system etc. Thus CA course is a public good but its demand curve did not incorporate all these external effects.

Q.No.46. "We cannot be sure whether the government interventions would be effective or whether it would make the functioning of the economy less efficient." Comment on it. (C) (SM)

Government failures: It can be defined as where government intervention in the economy to correct a market failure creates inefficiency and leads to a misallocation of scarce resources occur very often.

Government failure occurs when:

Intervention is ineffective causing wastage of resources expended for the intervention

Intervention produces fresh and more serious problems

Conclusion: There are costs and benefits associated with any Government intervention in a market, and it is important that policy makers consider all of the costs and benefits of a policy intervention.

Q.No.47. As a part of direct control of negative externalities (pollution) "The firms have to install pollution-abatement mechanisms to ensure adherence to the emission standards" Suggest the purpose of it. (C) (SM)

The firms have to install pollution-abatement mechanisms to ensure adherence to the emission standards. This means additional expenditure to the firm leading to rise in the firm's average cost. New firms will find it profitable to enter the industry only if the price of the product is greater than the average cost of production plus abatement expenditure.

Comment [1127]: New Question considered from NEW SM

Q.No.48. How can we ensure the internalization of negative externalities?

(C) (SM)

The key to internalizing an externality (both external costs and benefits) is to ensure that those who create the externalities include them while making decisions.

One method of ensuring internalization of negative externalities is imposing pollution taxes. The size of the tax depends on the amount of pollution a firm produces (Pigouvian taxes).

Q.No.49. Briefly explain about Pigouvian taxes.

(C) (SM)

Pigouvian taxes: These taxes are explained by A.C. Pigou

He argued that an externality cannot be alleviated by contractual negotiation between the affected parties and therefore taxation should be resorted to.

Pigouvian taxes means the size of the tax depends on the amount of pollution a firm produces

- These taxes, by 'making the polluter pay', seek to internalize external costs into the price of a product or activity.
- The tax is placed on the externality itself (the amount of pollution emissions) rather than on output (say, amount of steel).
- For each unit of pollution, the polluter must choose either to pay the tax or to reduce pollution through any means at its disposal.
- Tax increases the private cost of production or consumption and would decrease the quantity demanded and therefore the output of the good which creates negative externality.

Argument: The proceeds from the tax can be specifically earmarked for projects that protect or enhance environment.

Q.No.50. In practice why it is difficult in imposing a tax on demerit goods?

(C) (SM)

In order to impose a tax which is equivalent to the marginal external cost, the governments need to know the exact value of the marginal external cost (either in consuming or producing the demerit good) and then ascribe accurate monetary value to those negative externalities. In practice, this is extremely difficult to do.

Q.No.51. How externalities cause inefficiency and market failure?

(C) (SM)

Causes for inefficiency and market failure due to externalities:

- 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 consume.
- A market assumes that the price charged by a producer represent the full cost of production plus profit.
- The producers of products with extensive negative externalities tend to reflect only the private costs but not external cost. Since externalities are not reflected in market prices, they can be a source of economic inefficiency. Production remains efficient only when all benefits and costs are paid for.
- Negative externalities impose costs on society that extend beyond the cost of production as originally intended by the producer. Without government intervention a producer will have no reason to consider the social costs of pollution.
- When firms do not worry about the negative externalities associated with their production, the result is excess production and unnecessary social costs.

SIMILAR QUESTION:

1. Why externalities are considered as a source of market failure?

A. Refer above answer

Q.No.52. Do markets always lead to efficiency? If not how the government intervention can correct market failure? (C) (SM)

Markets do not always lead to efficiency.

- i) When there is a market failure, the market outcomes may be inefficient and government intervention can improve society's welfare.
- ii) Government can ensure economic efficiency by providing the necessary legal and regulatory system that facilitates efficiency and /or it can intervene to correct specific market failures.

Q.No.53. How the pollution which is a negative externality can be directly controlled through government intervention? (A) (SM)

Direct control through government intervention to reduce pollution:

1. The government may, through legislation, fix emissions standard which is a legal limit on how much pollutant a firm can emit.
2. The set standard ensures that the firm produces efficiently.
3. If the firm exceeds the limit, it can invite monetary penalties or/and criminal liabilities.
4. The firms have to install pollution-abatement mechanisms to ensure adherence to the emission standards.
5. This additional expenditure to the firm leads to rise in the firm's average cost.
6. New firms will find it profitable to enter the industry only if the price of the product is greater than the average cost of production plus abatement expenditure.
7. Charges an emission fee which is levied on each unit of a firm's emissions. The firms can minimize costs and enhance their profitability by reducing emissions.

DIFFERENCES

Q.No.52. Differentiate between Private cost and Social Cost (A) (MTP 1 N18 - 2M)

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.53. 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

Q.No.54. Differentiate between Excludability and Non Excludability of consumption (B)

Basis of difference	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.	Non paying consumers can not be prevented from accessing it.

Q.No.55. 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 Rivality	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.57. 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

TEST YOUR KNOWLEDGE

1. A firm offers training to its employees for increasing their skills. So the firm generates positive benefits on other firms when they hire such workers as they change their jobs. Name the type of externality i.e. applicable
2. Ideally do competitive markets have sufficient incentives to produce and supply either private goods or public goods?
3. The peculiar characteristics of a particular good are indivisibility, non-excludability and non-rivalry. Which type of good can exhibits all these features?
4. Competitive private markets will fail to generate economically efficient outputs of public goods. Comment the statement.
5. Why should we exclude the enjoyment of roads, bridges etc. of some people?
6. When do the demand-side market failures occur?
7. When do the supply -side market failures occur?
8. What is the effect of Excessive market power on production?

9. Define Private cost. What does it includes? Write its formula in terms of social cost.
10. Which externality exists when social costs exceed private cost?
11. If producers do not take into account the externalities, then what are its consequences?
12. When firms do not have to worry about negative externalities associated with their production, what does this results in?
13. Identify the market outcomes for each of the following situations **(MTP M18)**
- A few youngsters play loud music at night. Neighbours may not be able to sleep.
 - Ram buys a large SUV which is very heavy.
 - X smokes in a public place.
 - Rural school students given vaccination against measles.
 - Traffic congestion making travel very uncomfortable.
 - Piracy of computer programs.
 - Some species of fish are now getting extinct because they have been caught indiscriminately.
 - The municipality provides sirens four times a day.
 - Burglar alarms are installed by many in your locality.
 - Global warming increases due to emissions of fossil fuels.
14. Define Social Good? What is the similarity and dissimilarity between Social Goods and Common Pool Resources? (MTP-N19)
15. How does the presence of positive externality influence price and output?
16. How does the presence of negative externality influence price and output?
17. Why are health and education not pure public goods?
18. 'The existence of poverty in economically less developed countries creates negative externalities through over-exploitation of land for agriculture, and this poses a threat to sustainability'. Elucidate
19. State the Government Provision of Public Goods to rectify market failure.
20. Why health and education are not pure public goods?
21. There is a lot of uncertainty as to the need for merit goods E.g. health care. What are its consequences?
22. The Right of Children to Free and Compulsory Education Act, 2009 mandates free and compulsory education for every child of which age group?
23. "Certain goods are produced and consumed as public goods and services despite the fact that they can be produced or consumed as private goods". Comment on it.
24. What are the Natural monopolies that are usually subject to price controls?
25. Name the two different forms of government initiatives towards combating market failures due to negative externalities?
26. What are the two market-based approaches that operate through price mechanism to create an incentive for change?
27. Explain why governments impose taxes on goods and services?
28. How do you justify food price controls and rent controls?
29. Why do governments fix minimum wages?
30. How does monopoly power affect efficiency of markets?
31. Explain how government can get domestic producers produce more pulses?
32. Why do markets fail to produce public goods? Illustrate your answer.
33. Classify each of the following goods based on their characteristics. Mention the rationale. **(RTP M19)**
- (i) Open-access Wi-Fi networks

(ii) Roads with toll booths

(iii) Parks

34. Why do you think it is necessary for the government to manipulate the price and output of commodities and services? What consequences do you foresee in the absence of government intervention?

35. The pharmaceutical industry is involved in innovation, development, production, and marketing of medicines in India. Ensuring the availability of lifesaving drugs at reasonable prices is the duty of the government. The National Pharmaceutical Pricing Authority (NPPA) is the watchdog in India, which controls the prices of drugs. Government has to consider the interest of both the producers and the buyers.

Questions:

a) Elucidate the market outcomes if matters relating to drugs are entirely left to the pharmaceutical industry.

b) Appraise the need for government action in the above case. Do you consider government action necessary in the case of medicines? Why?

c) What are the different policy options available to government to meet its public health objectives?

36. The draft of New Education Policy, 2016 proposes key changes in government's policy towards education. Explain the rationale for government action to streamline the education system in the country.

37. The Commission for Agricultural Costs and Prices (CACP) advises the government on minimum support prices of 23 agricultural commodities which comprise 7 cereals, 5 pulses, 7 oilseeds, and 4 commercial crops.

a) What is the underlying principle of minimum support prices? Do you think?

b) MSP is a form of market intervention? Why?

c) Why do you consider free markets undesirable for the above mentioned agricultural commodities?

38. Reflect on the externalities presents in each of the following. Also examine their market implications **(RTP M20)**

i) A decision to stop smoking

ii) Switching from conventional farming to organic farming

iii) Started to drive a car and increased road congestion

iv) Water polluted by industries

v) Building Lighthouse

39. Distinguish between positive and negative externalities. **(N19 - 2M)**

40. Explain Social benefit. How the externalities do create a divergence between private benefit and social benefit?

Comment [I128]: Considered from RTP M20

Comment [I129]: Considered from N19

Comment [I130]: Question framed

THE END