

# Questions

## Part 1: True or false

No.	Question
1	When economics makes statements about the decisions and behavior of consumers and firms, it is neither specifically referring to particular consumer nor particular firm. Instead, it is referring to the decisions and the behavior of “dummies” (generic entities), which are thought to be useful serving as representatives of consumers and firms, respectively.
2	Economics is a soft science that aims at solving the problem of scarce resources.
3	Economic problem is represented in the existence of various and renewable needs and limited goods. Thus, the needs of human beings are perceived as principally unbounded.
4	Needs at lower levels are stronger than needs at higher levels, while both remain unfulfilled.
5	Needs at higher levels are unimportant, even non-existent, as long as needs at lower levels are unsatisfied.
6	Once the needs at lower levels are satisfied, other needs at higher levels come into focus.
7	Many goods have the ability to satisfy human needs directly, and such goods are called consumer goods.
8	The more consumer goods are consumed, the more satisfaction is obtained. This is true till a certain level, then additional units of a certain good may implies a decline in the degree of satisfaction.
9	A public good is a good that is non-excludable, and consumption of it is non-rival.
10	"Non-excludable" means that it is impractical to prevent people who haven't paid for it from using or enjoying the good.

11	"non-rival" means one person's use or enjoyment of the good does not use it up or preclude another's use or enjoyment of it.
12	Wildlife stock and fish stock are considered examples of open-access Resources.
13	Club goods are usually facing the problem of congestion or overuse.
14	Coal is considered one example of open-access Resources.
15	Parking spaces are considered examples of private goods.
16	Public parks and free-to air television are considered examples of collective goods.
17	Cable television and private parks are considered one example of club goods.
18	Inputs, i.e. natural resources used in the production process, often do not have the ability to satisfy needs directly.
19	Capital goods are types of goods that are utilized to help increase future production, such as coal, aluminum, and gold.
20	The distinction between consumer goods and investment goods does not always depend on the characteristics of a certain good but often on its mode of use.
21	Although it is impossible to remove scarcity completely, it is possible to minimize the negative consequences of scarcity.
22	The minimum principle requires that a goal be achieved to a given level using the minimum amount of resources.
23	The maximum principle recommends that the goal at hand be achieved at the maximum level possible given the means available.
24	The standard circular flow shows land merely as a supplier of raw materials for human economic activity.
25	The economic system created and operated by mankind must be viewed as subordinate to nature and a subsystem of nature. As, without certain services of nature, human economic activity could not take place at all.

26	There are many natural commodities that directly satisfy humans' needs at the basic level. However, it is much harder to find any example of natural resources which directly contribute to the satisfaction of needs at the top levels Maslow's framework such as human belongingness and love needs, or esteem needs.
27	By substantially reducing greenhouse gas emissions, global climate stabilization could be achieved.
28	Many greenhouse gases are emitted from direct human-induced impacts on forestry and other land use, such as through deforestation, land clearing for agriculture, and degradation of soils.
29	It is possible to remove carbon dioxide (Co <sub>2</sub> ) from the atmosphere through reforestation and improvement of soils.
30	Severe environmental problems may arise where natural goods can be characterized as collective goods (non-excludability, non-rivalry) such as the purity of the atmosphere; or as open access goods (non-excludability, rivalry) such as sea fish.
31	Climate stabilization is considered non-rival and non-excludable. As, no person in the world could be excluded from the corresponding benefits. In addition, there is non-rivalry, because climate stabilization would be enjoyed by people in all over the world.
32	Resources that have known reserves, i.e, of which we know the quantity and quality available, are the actual resources.
33	Potential resources are known to exist and may be used in the future, but it is not actually drilled out or put into use.
34	Stock resources are that part of actual resources that cannot be developed profitably because of lack of technology.
35	Reserve resources are that part of the actual resource that can be developed profitably with available technology.
36	An externality exists where a consumption or production activity has unintended effects on others for which no compensation is paid.
37	Sulphur emissions from a coal-burning power station might be an example of the external effect that is an untraded – and unpriced –

	arising because the victim has no property rights that can be exploited to obtain compensation for the external effect.
38	Renewable resources are biotic, plant and animal populations, and have the capacity to grow in size over time, through biological reproduction.
39	Non-renewable resources are abiotic, stocks of minerals, and do not have that capacity to grow over time.
40	Renewable resources are exhaustible if harvested for too long at a rate exceeding their regeneration capacities.
41	If the depletion of a resource stock is irreversible, and there is no close substitute for the services that it provides, then clearly the rate at which the resource is depleted has major negative impact on sustainability.
42	If what is available from natural resources in the market is increased, the price that producers are willing to pay falls.
43	The demand curve for natural resources is negatively sloped. As, it reflects the inverse relationship between the price of natural resources (coal) and the quantity demanded.
44	As more and more of a given resource (coal, petroleum, natural gas, nuclear, solar, geothermal, etc.) is used, according to the law of diminishing marginal product, the marginal contribution of the resource in terms of output declines.
45	Other things being equal, producers will be willing to buy more of a natural resource (such as coal) if, and only if, its price is lowered to compensate for the decline in the productivity of the resource at the margin.
46	Unlike the market demand for a product, it is productivity, not utility, that determines the demand (value) for a factor of production.
47	The demand for any natural resources is determined by the consumer demand for the goods and services that are produced using the resources under consideration.

48	The price of the final good is considered one of the most important factors in determining the demand for (or value of) natural resources.
49	The higher the price of electricity, the higher the demand (price) for coal will be.
50	A decrease in the price of other natural resources that is a substitute for coal cause a reduction in the demand for, and hence the price of, coal.
51	If a new technology enhanced the relative productivity of natural gas (i.e., relative to coal) in the production of electricity, other things being equal, this could cause a decline in the demand for, and price of, coal.
52	If a new chemical additive to coal were to contribute significantly to the efficient combustion of coal in the production process of electricity, other things being equal, this would cause increase in the demand for, and hence the price of, coal.
53	The price that resource owners ultimately receive depends on both the demand for and the supply of the resource under consideration.
54	The minimum price that owners of natural resources are willing to accept increases with an increase in quantity of natural resources supplied to the market.

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## **Part 2: Define the Following Items**

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- 1. Natural Resource Economics**
- 2. Natural resource management**
- 3. Environmental economics**
- 4. Needs**
- 5. Goods (commodities)**
- 6. Services**
- 7. Overfishing problem**
- 8. Excludability of use**
- 9. Non-excludability of use**
- 10. Rivalry in use**
- 11. Non-rivalry in use**
- 12. Private goods**
- 13. Collective goods (public goods)**
- 14. Club goods**
- 15. An open access goods (Common-pool resources)**
- 16. Scarcity**
- 17. Resource Efficiency**
- 18. The circular flow**
- 19. Sustainable development**
- 20. Greenhouse gases**
- 21. Biotic resources**
- 22. Abiotic resources**
- 23. Biofuels**
- 24. The market demand for natural resources**
- 25. The market supply for natural resources**

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## **Part 3: Answer the following questions**

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- 1. Differentiate between the market demand for a product and the market demand for natural resources.**
- 2. What are the main objectives of environmental economics?**
- 3. How could policy maker manage the behavior of economic agents?**
- 4. What is the role of economic theory?**
- 5. What are the main classification of human needs?**
- 6. Why is classification of goods based on criteria of excludability of use and rivalry in use considered important for environmental economists?**

- 7. what are the main goals of resource management?**
- 8. why does natural gas serve as an example for private goods?**
- 9. What are the required conditions a market system must satisfy in order to be considered as an efficient institution for allocating resources?**
- 10. Why are prices considered as a measure of resource scarcity?**
- 11. Why are prices considered as a signal of the trend of a good or service cost over time?**
- 12. What are main reasons of upward trend of international food prices?**
- 13. How could increasing production of biofuels threaten biodiversity?**
- 14. Using illustrative figures, prove that "price of the final good is one of the most important factors in determining the demand for (or value of) natural resources.**
- 15. How do prices of other natural resources affect the demand for specific natural resource?**
- 16. How could a technological change directly affect the demand for specific natural resource?**
- 17. How could a technological change indirectly affect the demand for specific natural resource?**
- 18. How could you justify the positive relationship between the minimum price that owners of natural resources are willing to accept and the quantity supplied to the market?**
- 19. What could explain the positively sloped supply curve for coal assuming that that transportation cost is negligible?**
- 20. What are the key factors affecting the supply of a natural resource according to the neoclassical economic school?**
- 21. What is the key factor affecting the supply of a natural resource according to opponents of neoclassical economic school?**
- 22. How could technology affect the supply of natural resources according to opponents of neoclassical economic school?**
- 23. How could environment be affected by practices of the following:**
  - a. A farmer in Egypt;**
  - b. A business in manufacturing sector in Egypt;**
  - c. A household in Egypt.**

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## Part 4: Explain the Following Statements

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1. See fishing is characterized by non-excludability of use and rivalry in use. As a result, number of environmental problems may arise as a result of overfishing.
2. Goods can be classified based on different criteria
3. "Oil is considered an investment good that can be used as input in the production. Although, it can satisfy human needs indirectly. it causes a lot of environmental damage"
4. People tends to apply the so-called economic principle in order to influence the relation between the amount of goods used, on the one hand, and the degree of satisfaction of needs, on the other.
5. The standard circular flow model shows the real-financial interactions between two types of economic agents, i.e. consumers and firms. However, it is essential to integrate environment in such model.
6. Draw a chart that explains the circular flow that shows the role of environment as a vital economic actor.
7. Growing awareness of environmental issues and their relationship to the economy has led to the emergence of three main policy goals in natural resource management
8. Environmental problems are multidisciplinary in nature. Development policies cannot be implemented without considering harmful effects of economic activities. This suggests the existence of a strong link between sustainable development strategy and major environmental problems.
9. graphically explain the relationship between the natural environment and economic system.
- 10."Two problems may arise from the productive use of natural resources."
- 11."Natural resources can be classified based on their ability to make a direct or indirect contribution to the satisfaction of human needs"
- 12."Natural resources can be classified based on the criteria of excludability of use or rivalry in use."
- 13."Natural resources can be classified into renewable and non-renewable resources."
- 14."Natural resources can also be classified on the basis of their origin."

15. "Natural resources are also classified based on their availability for commercial use as potential resources and actual resources."
16. "For billions around the world—especially the world's poorest—healthy oceans mean jobs, food and protection"
17. "Healthy oceans, coasts and freshwater ecosystems are crucial for economic growth and food production."
18. "A healthy ocean is also fundamental to the global effort to mitigate climate change."
19. "Although fish stocks have deteriorated due to overfishing it is possible to restore the productivity of the ocean in developing countries"
20. "Consumers and producers in a market-oriented economy are viewed as being single-minded in their economic behavior."
21. "The effectiveness of an economy is judged by how well it satisfies the material needs of its consumers".
22. Evaluate the potential environmental impacts of coal-fired power plant.