

MULTIPLE CHOICE

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|------|-------|-------|-------|
| 1. C | 6. A | 11. B | 16. D |
| 2. A | 7. A | 12. D | 17. A |
| 3. B | 8. C | 13. A | 18. B |
| 4. A | 9. C | 14. D | 19. B |
| 5. B | 10. B | 15. A | 20. C |

SHORT ANSWER QUESTIONS

Question 1

- (a)** Renewable resources are inputs to production that reproduce themselves, such as trees or fish. As a result, consuming these resources does not permanently reduce their supply. In contrast, non-renewable resources such as coal and oil have a limited supply because they cannot be easily reproduced.
- (b)** Ecologically sustainable development is the concept of maintaining a level and quality of economic growth that does not result in long-term damage to the environment or depletion of non-renewable resources.
- (c)** An answer to this question may include any one of the following
- The government may use tax concessions for firms to offset the cost of research into environmentally sustainable production processes. Research is a means to uncover new production methods that limit resource use or minimise negative externalities.
 - The government may introduce a tax on non-renewable resources, such as oil. Demand for these inputs to production may contract as their prices rise, leading to conservation of non-renewable resources.
 - The government may eliminate the negative externalities associated with the production or consumption of a good by imposing a ban on its production or sale.
 - The government may provide environmentally friendly public goods and services. For instance, the government provides public transport as an alternative to private vehicles, minimising the pollution associated with transport.
- (d)** This answer uses dry land salinity as a case study to illustrate an environmental problem for the Australian economy.

Dry land salinity results from damaging agricultural practices that attempt to gain the maximum output from Australia's limited arable land, such as excessive land clearing and irrigation. As a result, too much salty rainwater enters the groundwater system, leaving salty deposits which reduce the land's productivity. This decrease in agricultural productivity is an economic cost represented in a shift inwards of the production possibility frontier. Salinity also consumes government resources in attempting to rehabilitate waterways and agricultural land, such as the \$1.4bn National Action Plan on Salinity introduced in 2002.

Question 2

- (a) An externality is an unintended social or environment cost or benefit that results from the process of production or consumption, yet is not reflected in the price mechanism.
- (b) Noise and air pollution caused by aeroplane flights
- (c) Market failure can occur when the price mechanism fails to represent the unintended social or environmental costs or benefits of production, known as externalities. Because the market reflects only private costs, the price of a socially or environmentally damaging good will be lower than it would be if these costs were taken into account. This lower price will create a higher level of demand, leading to a higher level of production than is socially desirable. At this level of production, negative externalities such as damage to the environment will result.
- (d) Environmental externalities occur because producers will consider only their private costs and benefits of production in determining how much of a good or service to produce. Environmental costs are borne by society as a whole, so they do not factor into private costs represented in the price mechanism. As a result, production will be higher than the environmentally sustainable level, leading to environmental damage. Producers are unlikely to remedy this damage because it would incur a private cost while the benefit would accrue to society as a whole, leading to environmental degradation.

Question 3

- (a) A public good is an item that private firms are unwilling to supply as they are not able to restrict usage and benefits to those willing to pay for the good. Because of this, governments tend to provide these goods.
- (b) An answer to this question may include one example such as:
- A public park
 - A defence force
 - A fireworks display to celebrate an event
 - A lighthouse
- (c) A public good is non-excludable, so the provider of the good is unable to prevent people enjoying its benefit even if they are unwilling to pay. A public good is also non-rival, as one person's consumption of the good does not diminish another person's ability to consume the good.
- (d) Public transport is an excludable good because a person may only access the benefits of the service through paying a fare. Public transport is not a non-rival good because a person using the service occupies one of the limited seats available, reducing other peoples' access to the service.
- (e) The free rider problem occurs where an individual benefits from a good or service without contributing to its cost. Some environmental goods, such as clean air, belong to nobody in particular, so there is nobody to compensate for their use. Any producers who use such goods are free-riding because they enjoy their benefits without paying their cost. As a result, an incentive exists for producers to over-use these resources, leading to environmental degradation.