Economics Teachers' Association of Western Australia

Year 11 Semester 1 Exam 2023 – Marking Guide

SECTION 1 (20 marks)

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

SECTION 2 (50 marks)

Question 21 (12 marks)

(a) i On the diagram below draw the economy's Possibility Frontier (PPF) with capital goods on the vertical axis. (2 marks)

Description	Mark
Correctly labelled & drawn PPF model	2
Partly correct model	1
Total	**2**

ii. Calculate the opportunity cost of moving from point B to point C. (1 mark)

Description	Mark
120 consumer goods	1
Total	**1**

iii. Calculate the opportunity cost of moving from point D to point B. (1 mark)

Description	Mark
40 capital goods	1
Total	**1**

iv. If the economy was producing 20 capital goods and 400 consumer goods, what would be the opportunity cost of increasing the production of consumer goods? (1 mark)

Description	Mark
Zero	1
Total	**1**

(b) Describe why the Production Possibility Frontier (PPF) has
(i) a negative slope
(ii) a 'bowed out' shape (4 marks)

Description	Mark
Describes a reason	2
States a reason	1
Total (x2)	**4**

Answers should include:

(i) Negative slope – this is due to scarcity (limited resources), to increase production of one good means that production of the other good must decrease.

(ii) 'Bowed out' shape – this is due to the law of increasing opportunity cost, as the production of one good increases, the opportunity cost (foregone production of the other good) increases.

(c) If this economy devoted more resources to the production of capital goods, explain the effect on its future economic growth. (3 marks)

Description	Mark
Explains the effect of more production of capital goods on economic growth	2
Describes the effect on economic growth	1
States a fact about a capital good	1
Total	**3**

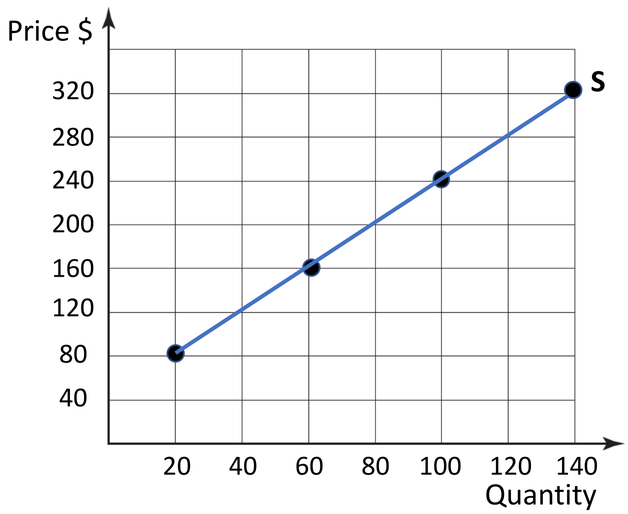
Answers should include:

- Capital goods are man made goods that are used to produce other goods e.g. machinery, factories, computers, infrastructure.
- If more resources are allocated to capital goods then this will increase future economic growth – the PPF will shift out further to the right.

Question 22 (13 marks)

(a) i. On the graph below, draw Steven's supply curve for shoes. (2 marks)

Description (see diagram below)	**Mark**
Supply curve plotted & labelled correctly	2
Partly correct graph	1
Total	**2**



(a) ii Describe why Steven's supply curve has a positive slope. (2 marks)

Description	**Mark**
Describes why Steven's supply curve has a positive slope	2
Identifies a reason for the relationship between price and quantity supplied	1
Total	**2**
Answers could include: Profit incentive – a producer is more willing to increase quantity supplied as price rises. As production increases, cost of resources increases	

(a) iii Assume the equilibrium price is $200. Calculate Steven's expected total revenue. (1 mark)

Description	**Mark**
$16,000 ($200 x 80)	1
Total	**1**

(b) Explain **two** factors that would cause an increase in Steven's supply of shoes. (4 marks)

Description	**Mark**
Explains a factor	2
Identifies a factor	1
Total (x2)	**4**

Answers should include: • Production costs – a decrease in production costs will cause an increase in qty supplied at each price • Technology – an improvement in technology will cause an increase in qty supplied at each price

(c) Calculate the price elasticity of supply if the price increases by 20 per cent from the initial equilibrium price of $200 and provide a reason why supply is either elastic or inelastic.

(4 marks)

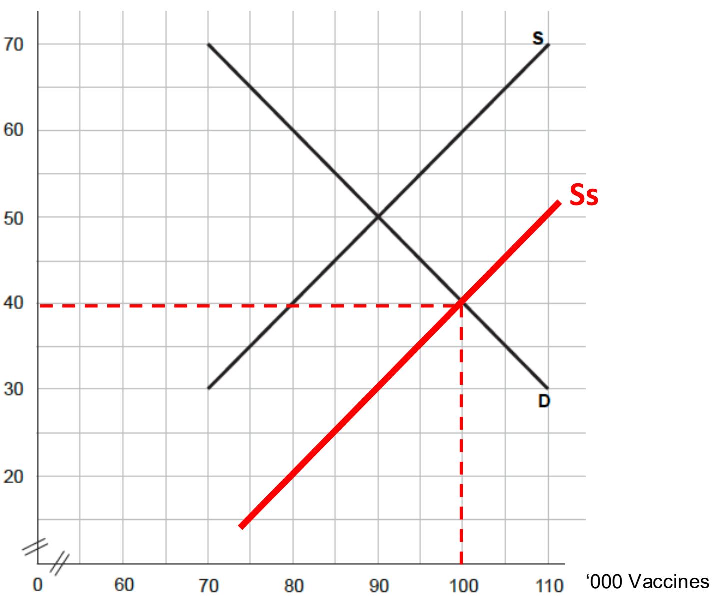
Description	**Mark**
Correctly calculates the price elasticity of supply	1
States that supply is elastic	1
Explains a reason as to why supply is either elastic or inelastic.	1-2
Total	**4**
Answers should include: • Price elasticity of supply = 20/80 x 200/40 = 1.25 • Supply is elastic • The producer can increase production relatively quickly to the change in price – there is no shortage of materials or labour (i.e. excess capacity to increase production) or item can be stored (supplier holds inventory)	

Question 23 (13 marks)

(a) Use the graph to illustrate and describe the effect of the subsidy on both price and quantity. (3 marks)

Description	Mark
Describes the effect on price & quantity	1-2
Correctly draws a new supply curve (see diagram below)	1
Total	**3**
Answers should include: The equilibrium price falls to $40 & the equilibrium quantity increases to 100	

Note: the new S curve shifts down by $20



(b) Calculate the cost of the subsidy to the government. (2 marks)

Description	Mark
Correctly calculates the cost of the subsidy	2
Partly correct calculation	1
Total	**2**
Answers should include: Cost of the subsidy = $20 x 100,000 = $2 million	

(c) Explain the effect of the subsidy on both consumer and producer surplus. (4 marks)

Description	Mark
Explains the effect of the subsidy on consumer surplus	2
States the effect on consumer surplus	1
Sub-total	**2**
Explains the effect of the subsidy on producer surplus	2
States the effect on producer surplus	1
Sub-total	**2**
Total	**4**
Answers could include: • The subsidy will increase consumer surplus because consumers can purchase a greater quantity at a lower price ($40). • The subsidy will increase producer surplus because producers receive a higher price of $60 (market price $40 + subsidy $20) & sell a greater quantity.	

(d) The government is considering a price ceiling of $40 instead of the subsidy. Describe the effect of the price ceiling on the quantity of vaccines consumed and explain which policy would be more efficient. (4 marks)

Description	Mark
Describes the effect of the price ceiling	2
States the effect of the price ceiling	1
Sub-total	**2**
Explains which policy is more efficient	2
States which policy is more efficient	1
Sub-total	**2**
Total	**4**
Answers should include: • A price ceiling of $40 will cause qty demanded to increase to 100,000 while qty supplied will decrease to 80,000 – this will create a shortage of 40,000 • The subsidy is more efficient than the price ceiling – this is because the subsidy increases consumption while the Price Ceiling decreases consumption	

Question 24 (12 marks)

(a) State the type of market failure referred to in the extract? (1 mark)

Description	
A negative externality	1
Total	**1**

(b) Identify **two** external costs associated with the cement company. (2 marks)

Description	
Identifies an external cost (x 2)	2
Total	**2**
Answers should include: • Pollution • Unreasonable odour	

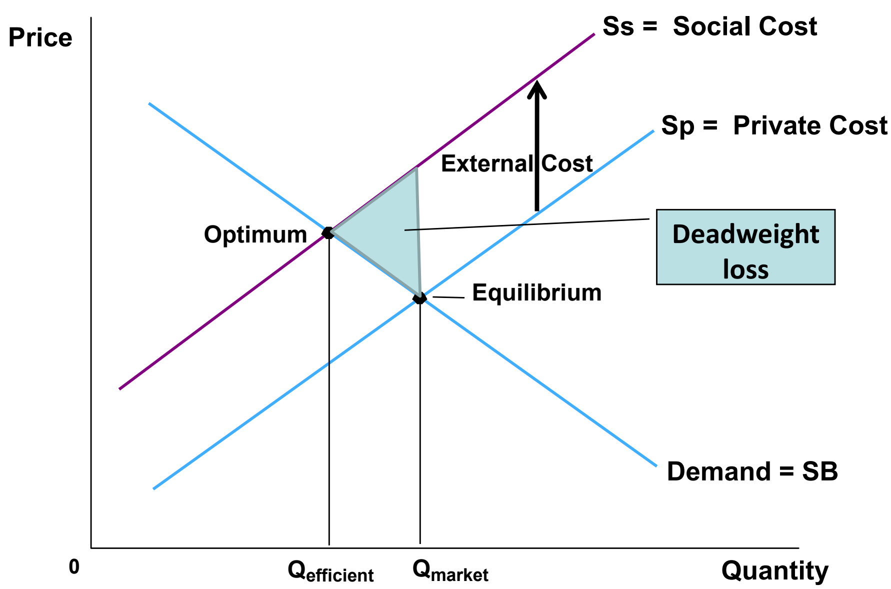
(c) Outline **two** benefits the cement company provides. State whether these are private or external benefits. (3 marks)

Description	
Outlines a benefit (x 2)	2
States that the benefits are private	1
Total	**3**
Answers should include: • Employment • Cement is used as an input in many industries • Note: the benefits associated with the cement company are private not external	

(d) Use the demand/supply model to explain the impact of the market failure on the cement market. Identify the private cost, the external cost, the social cost and the deadweight loss on your model. (6 marks)

Description	**Mark**
Negative externality model	
Correct fully labelled model showing demand curve, private supply curve (Sp), social supply curve (Ss), external cost, DWL, market qty, efficient qty	4
Partly correct model showing demand curve, private supply curve (Sp), social supply curve (Ss), external cost, DWL	3
Partly correct model showing demand curve, private supply curve (Sp), social supply curve (Ss), external cost	2
Demand/supply model showing equilibrium	1
Sub-total	**4**
Explanation of impact	
Explains the impact of the market failure	2
States the impact of the market failure	1
Sub-total	**2**

	Total	6
Answers should include: The negative externality results in social cost exceeding private cost – the Ss curve lies above the Sp curve. The market qty exceeds the efficient quantity – there is overproduction of cement which creates the deadweight loss.		



SECTION 3 (15 marks) – answer either Q25 or Q26

Question 25 (15 marks)

(a) Explain the meaning of price elasticity of demand and describe **three** determinants. (8 marks)

Description	Mark
Correct definition of price elasticity of demand	2
Partly correct definition	1
Sub-total	**2**
Describes a determinant of price elasticity of demand	2
States a determinant of price elasticity of demand	1
Sub-total (x 3)	**6**
Total	**8**
Answers should include: • Price elasticity of demand measures the responsiveness of qty demanded to a change in price – if price increases by 10% and quantity demand falls by 20%, then price elasticity = 2 and demand is elastic. • Availability of substitutes – the more substitutes available, the more demand will be elastic • Necessity vs non-essential – a necessity will be highly inelastic. • Expensive vs non-expensive – as price increases, elasticity increases • Time – how long do consumers have to react to a price change: as time increases demand becomes more elastic.	

(b) Using an example, explain how a firm can use price discrimination to increase their revenue. (7 marks)

Description	Mark
Correct definition of price discrimination	1
Sub-total	**1**
Explains, using a correct example, how price discrimination can increase a firms' revenue including necessary conditions for price discrimination to work	5-6
Describes, using a correct example, how price discrimination can increase a firms' revenue	3-4
Outlines how price discrimination will increase revenue	1-2
Sub-total	**6**
Total	**7**
Answers should include: Price discrimination is the practice whereby a firm charges different customers a different price according to their price elasticity of demand. Necessary conditions: ability to segment the market (by age or gender); a different elasticity for each group; no arbitrage. Example: hairdressers charging females a higher price than males To increase revenue, firm must increase price to group with less elastic demand and decrease price to group with more elastic demand	

Question 26 (15 marks)

(a) Using examples, explain the characteristics of a public good and a common resource. (6 marks)

Description	Mark
Explains the characteristics of a public good	1-2
States an example of a public good	1
Sub-total	**3**
Explains the characteristics of a common resource	2
States an example of a common resource	1
Sub-total	**3**
Total	**6**

Answers should include:

A **public good** is a good that is non-rival in consumption and is nonexcludable. Nonrival means that many people can consume the good at the same time. Nonexcludable means that no-one can be prevented from consuming the good for free. An example of a public good is a national park, streetlights, national defence, broadcast TV.

A **common resource** is a good that is rival in consumption and is nonexcludable. Rival means that the consumption by one decrease the quantity available for other users. An example of a common resource is fish in the sea, the atmosphere, or a congested freeway.

(b) Define market failure and explain why public goods and common resources suffer from market failure. (5 marks)

Description	Mark
Defines market failure	1
Sub-total	**1**
Public Goods	
Explains why public goods suffer from market failure	2
States why public goods suffer from market failure	1
Sub-total	**2**
Common Resources	
Explains why common resources suffer from market failure	2
States why common resources suffer from market failure	1
Sub-total	**2**
Total	**5**

Answers should include:

Market failure – occurs when the market does not produce the efficient quantity of a good/service. Total surplus is not maximised – there is a deadweight loss.

Public goods suffer from free riders – consumers can use the good or service without paying for it. This means that the private sector will not normally supply public goods because they cannot recoup their costs. The market 'fails' to supply the efficient quantity of a public good.

Common resources suffer from the 'tragedy of the commons' – the resource is depleted because it is rival, and it is free. Freeways quickly become congested if there is no price to access the freeway. Fish stocks are depleted because it is difficult to prevent fishing in the open ocean.

(c) Explain **one** policy that may be used to reduce the market failure associated with public goods and **one** policy that may be used to reduce the market failure associated with common resources (4 marks)

Description	**Mark**
Public Goods	
Explains a policy that may be used to reduce the market failure associated with public goods	2
Identifies a policy that may be used to reduce the market failure	1
Sub-total	**2**
Common Resources	
Explains a policy that may be used to reduce the market failure associated with common resources	2
Identifies a policy that may be used to reduce the market failure	1
Sub-total	**2**
Total	**4**

Answers should include:

Public good: A policy solution is for the government to supply public goods and pay for them out of tax revenue e.g. national defence, police force.

Common resource: A policy solution is for the government to sell licences or set quotas on the consumption of the common resource e.g. fishing quotas; impose tolls on major freeways to reduce congestion.