Essay Question 3
Suggested Answer

3	(a)	Explain, using examples, what is meant by public good and merit good.	[10]
		Explain the TWO Characteristics of Public Good	

Explain the TWO Characteristics of Public Good

1) **Non-excludable in consumption** is when it is impossible or prohibitively expensive to exclude **non-payers** from consuming it. For example, once **street lighting** is provided, there is no inexpensive or practical way to restrict the availability of the service to only people who pay for their use. The same can be said for **national defence**. For example, once an army is provided to defend the country, every citizen benefits from its protection regardless of whether they pay for it.

2) **Non-rivalry in consumption** is when the consumption by one does not reduce the **amount available** to others. For example, the use of the **street lighting** by one pedestrian will not reduce the amount of light available to others. The benefit of street lighting can be shared jointly by everyone who happened to be in the vicinity of the street lights.

Implication of the characteristics of Public Goods on its provision by the market
As a result of the characteristics of **non-excludability**, once a public good is provided, others can free-ride on the good. A **free-rider** is anyone who receives the benefits from a good or service without having to pay for it. Since anyone can enjoy all the benefits of a public good once it is produced without paying for it, no rational consumer motivated by self-interest will reveal his effective demand. There will be **no price signals to indicate consumers preference for such goods**. Hence in the absence of price signal, producers will not supply this good.

As a result of the characteristics of non-rivalry, the **marginal cost of providing a public good to an additional consumer is zero**. For example, since joint or collective consumption is possible, once an army is formed, the total cost of defending the country is the same regardless of the number of persons the army has to protect. There is no extra cost involved for defending an additional person. Since the optimal or **allocatively efficient quantity to supply is where P=MC, the efficient price to charge for the use of public good should be zero**.

Due to the twin characteristics associated with public goods, it is not possible for free markets to supply such goods profitably because it is neither possible (due to non-excludability in consumption) nor desirable (due to non-rivalry in consumption) for private producers to charge a price for its use. **Without the profit incentive and price signals, the market fails in the provision of public goods**. Hence public goods are provided by the government as **the market cannot allocate resources to produce them**.

Explain what is a Merit Good
Merit Goods are goods or services that have been **deemed by the government as**

socially desirable but **underconsumed**.

Some goods that generate **positive externalities** are deemed as merit goods. For example, education and vaccination.

Market for Vaccines

- The **Private Marginal Cost (PMC)** measures the cost to producers from an additional unit of vaccine produced such as the cost of raw materials, utility bill and wages of workers.
- The **Private Marginal Benefit (PMB)** measures the benefit to consumers from an additional unit of vaccine consumed such as the immunisation from a particular disease or a lower risk of falling ill. However vaccine **consumption** generates **external benefits** to **third parties** who are not part of the production or consumption process.
- For each unit of vaccine consumed, more people will be immunised and third parties who do not immunise themselves will also benefit in the form of lower risk of contracting the illness as there will now be less people who they can potentially contract the illness from. This also positively translates into a healthier and hence more productive workforce for the economy.
- However, the third parties **do not compensate** vaccine consumers for the external benefits they enjoy.
- Hence in this case of a **positive consumption externality**, the vaccine consumers are not concerned about the external benefits to others but only their own private benefits as the external benefits are unpriced by the price mechanism and not included in the **private benefit**s.
- For each **additional** unit of vaccine, the **social marginal benefit (SMB) includes the private marginal benefit (PMB) of the vaccine consumed plus the external marginal benefit (EMB)** to third parties. Hence the actual benefit borne by the society is represented by the SMB, which takes into account the full benefits to society of an extra unit of vaccine. SMB = PMB + EMB.

Student should draw and explain positive externality diagram

- The **socially efficient** quantity of vacinne should be at Q_S where **SMB=SMC**, where the full costs and benefits and costs to society are considered. Q_s is more than the market equilibrium quantity, Q_m where PMB = PMC. Thus there is **underconsumption** of vaccines by the quantity $Q_S - Q_m$
- Area ABC represents the **deadweight welfare loss** due to **underconsumption** of $Q_S - Q_m$.

Conclusion

There is **complete market failure** for public good while there is **partial market failure** for merit good.

Level		Descriptors
L3	7-10	There is a good explanation of public good and merit good with relevant examples. • The two characteristics of public good are well explained, linking to zero allocation of resources in the market. • The positive consumption externality is well explained, linking to under allocation of resources in the market.
L2	5-6	There is explanation of either public good or merit good only. OR There is attempt to explain both public good and merit good but the explanation is underdeveloped.
L1	1-4	Descriptive answer lacking in economic analysis. OR Mostly conceptual errors.

(b)	Governments in some countries such as Spain are reducing subsidies on healthcare, citing large budget deficit as the reason.	
	Discuss whether the reduction in government subsidies on healthcare is justified.	[15]

Explain how Subsidies work to correct Market Failure using a relevant example

- Government can use **subsidies** to internalise a **positive externality**, which is a market based approach. This approach gives private individuals the freedom of choice in making rational decisions with regard to the best level of consumption that would maximise society's welfare.

  - **Draw and explain a diagram on subsidy to internalise EMB from vaccines consumption**

- The government might give a subsidy to producers corresponding to the **external marginal benefit i.e. subsidy = EMB at Q_S** (distance BD) on each unit of vaccine. This shifts the PMC downwards so that the new PMC, which equals PMC – subsidy, coincides with the PMB at Q_S.
- Hence, the new market equilibrium quantity where PMB = PMC – subsidy, now coincides with the **socially efficient** quantity Q_S, where SMB = SMC.

Thesis: Reduction in government subsidies on healthcare is justified.
- Government may **fail to measure external benefits accurately** and thus end up over-subsidizing health care services. **Allocation of resources is not efficient** as there may be over allocation of resources.
- The government might need to **raise income tax** in future to fund the cost of the subsidies. This will increase the burden of the future generation. Moreover taxation may reduce incentives to work.
  Evaluation: The revenue can be raised via tax on goods with negative externalities.
- Government has **limited funds** available. If the government were to provide subsidies for healthcare, there will be lesser funds available to provide subsidies in other sectors such as education.
  Evaluation: This problem is made worse if the government were to overestimate the EMB at Qs, leading to over allocation of subsides to healthcare.
- Subsidies, if given to producers, may **breed inefficiency** as it reduces the incentive for providers of health care services to stay efficient by finding the lowest cost of production. If the costs keep on rising, the **government would have to incur higher expenditure to fund the subsidies** and this will worsen the government's budget position.

Anti-Thesis: Reduction in government subsidies on healthcare is NOT justified.
- If the **subsidy accurately reflects the external marginal benefit at Qs**, the externality has then been **internalised or priced in**. As the level of consumption would be increased from **Qm to Qs after subsidy** is provided, this prevents the spread of contagious disease.
- In a market economy, the ability of individuals to consumer goods depends on their

income and wealth. The market system will not respond to the needs and wants of those with insufficient economic (dollar) votes to have any impact on market demand. **The market allocates goods based on effective demand**. **Government subsidies will lower the price of healthcare services so that the very low income earners are still able to access healthcare services** such as vaccination.

- **Subsidies are required during some unexpected events**. For instance, during the SARS epidemic, the Singapore government heavily subsidised vaccines and hospitalisation and gives direct provision (subsidise 100%) of some products like masks and thermometers. The Singapore government also provides partial subsidy to patients when they see a doctor for haze-related medical problems. **During such scenarios, the healthcare of the citizens is paramount** so government ought to provide subsides to them, especially the very poor consumers.

<u>Conclusion</u>
Government provides subsidies to healthcare to achieve certain objectives, such as to ensure efficient allocation of resources, to improve equity or to tackle an expected health epidemic. Although for some countries the governments have budget deficit, **reducing the subsidies on healthcare to reduce the deficit is only a short term measure**. If more people are not able to access healthcare services, their **productivity** would be affected and this will **affect the economic growth** in the future

Level		Descriptors
L3	9-11	There is a good explanation of how subsidy works to correct the positive externalities. There is discussion on whether reduction in subsidies is justified or not.
L2	6-8	There is attempt to explain how subsidy works to correct the positive externalities. There is also attempt to provide a discussion on whether reduction in subsidies is justified or not. OR There is only discussion on whether reduction in subsidies is justified or not. There is no explanation of how subsidy works to correct the positive externalities.
L1	1-5	Descriptive answer lacking in economic analysis. OR Mostly conceptual errors.
E2	3-4	• Substantiated judgement
E1	1-2	• Unsubstantiated judgement OR Largely unsubstantiated judgement