

- Q3. Pharmaceutical firms protect the intellectual property (IP) on their drugs and sue those who try to manufacture and sell patented drugs cheaply. Some of them however rebrand their drugs and sell them at lower prices in developing countries

Assess the economic justifications for the above measures adopted by pharmaceutical firms. [25]

Answer requirements:

- IP right on a particular pharmaceutical drug is **patent** → (1) **monopoly power** for firm to recover significant **fixed costs** incurred in the research and make **supernormal profit**; (2) an **incentive for R & D** new drugs.
- Knowledge discovery in pharmaceutical R&D non-rival in usage (a characteristic of **public good**) → patent is needed to enforce excludability → why firms with patent rights take legal actions against companies that manufacture generics (same formulae as patented ones).
- Conceptual support for rebranding strategy by pharmaceutical companies with the patent rights: (1) **highly price elastic demand**; (2) **economies of scale** and possible **lower operating costs** in developing countries.
- Argument against measures: (1) excessive supernormal profit due to monopoly power; (2) unfair pricing for consumers in developed countries

Words in bold indicate economic concepts expected in answer.

Introduction

The pricing of Pharmaceutical drugs is a highly contentious issue because their consumption involves moral weights - society's interest in terms of health and lives.

- Medicinal drugs in general are produced by private firms although increasingly governments are seeing the need to co-invest in pharmaceutical research to enable more socially-sound pricing.
- The issue in question involves the protection of patent. Without patent protection, there can be missing market problem because pharmaceutical research discovery has the characteristic of public good. However, patent has also been a 'shield' used by pharmaceutical firms to make excessive monopoly profits.

Thesis: The actions by the pharmaceutical firms are valid in consideration of the supporting economic reasons.

Argument 1: The fight to protect their patents is justifiable because having invested huge amount of resources into the R & D, they need to enforce their monopoly rights

- Drug research and development is long drawn (several years sometimes) and expensive due to stringent testing and standards to be met before the drug can be marketed for public consumption → R&D investment is primarily fixed cost in nature. However, the research knowledge (formulae) is non-rival in nature, which is a key characteristic of public good.
- Patent gives monopoly right to the firm that has successfully researched. With this monopoly right, consumers' demand becomes price inelastic → firm can charge higher price → make supernormal profit during the patent protection period. The potential of making supernormal profit acts as an incentive for private firms to go into pharmaceutical

research. Without patent → market failure in the form of missing market private firms will not go into such research and production → loss of society's interest in the form of sufferings and shorter life expectancy all over the world.

Note to students: For greater conceptual clarity, students are encouraged to draw a monopoly diagram illustrating supernormal profit.

- It can also be argued that the consumption of some pharmaceutical drugs for infectious diseases involves significant external benefit on others.
- Patent is therefore an incentive for firms to research and invent new drugs for treating illnesses and extend lives. It is therefore valid for these firms to sue others (governments/ firms) that produce generics before the expiry of patents.

Argument 2: Rebranding and selling patented drugs cheaper in low income countries is socially desirable as a pricing practice in view of low affordability & lower costs.

- Population in low income countries is plagued with coexistence of infectious diseases/ epidemics with low purchasing power → demand highly price elastic. They will not be able to pay patent-based pricing.
- Why costs of production for low income countries may be lower
 - Lower operating and marketing costs.
 - Greater economies of scale due to market expansion
 - Actual production cost of drugs is variable cost in nature, hence low marginal cost is low
- Also, by charging higher prices in developed countries and charging lower in low income countries, pharmaceutical firms are charging on more socially desirable basis.

Anti-thesis: However, the pharmaceutical firms have also been accused of charging excessively against society's interest.

Argument 1: Patent leads to excessive supernormal profits

Pharmaceutical firms are known to make excessive profit due to their monopoly power (price inelastic demand). The issue has been how to ensure that their pricing and profit margin are socially reasonable. A possible option has been for governments to co-invest in pharmaceutical research so that they can have a say in pricing.

Argument 2: High drug prices in developed countries a form of discriminatory pricing and is causing rising healthcare costs

- Although the practice of charging lower in low income countries cannot be conclusively identified as price discrimination because of the possible lower cost incurred in marketing in these countries, the significant gap in prices has been considered as unfair pricing for developed countries.
- With ageing population a big issue in developed countries, high drug prices contribute to rising healthcare expenditure and due to fiscal deficits their governments want to slash these costs.
- Drugs marketed in low income countries can be resold illegally at lower prices in developed countries.

Synthesis:

It can be argued that for fairer pricing overall, the economies of scale from market expansion in low income countries provides a basis for drugs to be sold cheaper in developed countries. Also, the continuing economic sluggishness and fiscal problems in developed countries have raised price elasticity of demand in these countries and this would call for pharmaceutical companies to lower prices in these countries. As a whole, pricing of drugs has to be socially reasonable in view of the nature of consumption, it is not a luxury but a need even for the high income consumers.

It is also appropriate for governments to co-invest in drug research for major illnesses as a way to ensure that the drugs can be reasonably priced.

	Descriptors	Marks
L3	<ul style="list-style-type: none">▪ Conceptually supported with good links between concepts in explaining the rationales for protection of patent rights and different prices between developed and developing countries.▪ Considering both economic and welfare considerations in discussion<ul style="list-style-type: none">○ Costly pharmaceutical R&D but public good in nature○ Difference in price elasticity of demand between developed and developing countries○ Socially valid for charging lower in developing countries○ However, pharmaceutical companies are also making excessive profits in developed countries▪ Contexts of developing and developed countries firmly used in discussion	19-21
	Sufficient use of economic concepts, accurately explained and balanced <ul style="list-style-type: none">▪ Patent as necessary monopoly power for society's interest▪ Charging lower in low income countries due to much higher price elasticity of demand compared to that in developed countries.	15-18
L2	Conceptually accurate but unbalanced or undeveloped <ul style="list-style-type: none">▪ Issue of patent only, omitting issue of charging lower in developing countries▪ Using concepts but lacking in overall coherence, eg. arguing for patent as a way to deal with missing market issue but failing to see that it leads to excessive monopoly profits▪ Thesis or anti-thesis only	12-14
	<ul style="list-style-type: none">▪ Demonstrates understanding of the welfare issues (illnesses & lives, low income in developing countries) but arguments contain superficial references to concepts OR▪ Answer as a whole is relevant and logical but conceptual explanation contains inaccuracies	10-11
L1	Entirely descriptive although reasoning is logical (without concepts)	5-9
	Most parts of answer irrelevant or illogical in reasoning	1-4
E2	Uses concepts in examining the case for and against the measures and ending with considered view. Eg. Role of government; need for firms to lower prices in developed countries in view of fiscal and growth problems	3-4
E1	Gives balanced view in assessing the measures but without considered judgement of the issues raised.	1-2