Question 1

Mobile phones come in different models such as the high-end smartphones (Iphone), entry-level smartphones (Huawei and LG) and feature phones with basic functions (Nokia). A rise in incomes and the entry of Asian manufacturers such as Huawei and LG offering more affordable smartphone models are likely to affect the different models of mobile phones in different ways.

(a)   Explain how elasticities of demand can assist in understanding the effect of each of these changes on the sales volume of different models of mobile phones.   [10]

(b)   Compare and contrast the likely combined impact of both of these changes on the consumer expenditure on the different models of mobile phones.   [15]

Suggested answer outline:

(a)   Explain how elasticities of demand can assist in understand the effect of each of these changes on the sales volume of different models of mobile phones.   [10]

Income rises → effect on dd depends on the sign and value of YED
High-end smartphones → YED > 1 (luxury) → DD rises more than prop → DD shifts right by a large extent → eqm Q (sales volume) rises by a large extent
Entry-level smartphones → 0<YED<1 (necessity) → DD rises less than prop → DD shifts right by a small extent → eqm Q (sales volume) rises by a small extent
Feature phones → YED < 0 (inferior) → DD falls → DD shifts left → eqm Q (sales volume) falls

Entry of Asian manufacturers offering more affordable smartphone models → SS entry level smartphones rise → P falls → eqm Q (sales volume) rises → extent depends on PED → price elastic (PED > 1) as the entry-level smartphones target at low/middle Y consumers who are sensitive to price change → Q rises by a large extent.

P of entry-level smartphones fall → DD for high-end smart phones and feature phones fall → extent depends on CED
→ likely to be weak substitutes with high-end smartphones due to brand loyalty → DD of high-end smartphones fall less than prop → Q falls by a small extent
→likely to be close substitutes with feature phones thus CED > 1 → DD of feature phones fall more than prop → Q falls by a large extent.

Requirements (overview) for part (a)
Candidates should show a good understanding of how the change in price of the good, income and price of related goods affects the extent of change in quantity using the concept of price elasticity of demand (PED), income elasticity of demand (YED) and cross elasticity of demand (CED). Good candidates should be able to identify the different models of mobile phones, feature phone, entry level smartphones and high-end smartphones, and how the increase in income and fall in price of entry level smartphones affect the quantity of the different models using PED, YED and CED concept.

(b) **Compare and contrast the likely combined impact of both of these changes on the consumer expenditure on the different models of mobile phones.** **[15]**

High-end smartphones
Y rises → DD rises (YED > 1)
P of entry-level smartphones fall → DD falls less than prop (0< CED < 1)
Combined effect → DD rises as effect of higher Y greater than effect of lower P of entry-level smartphones.
Evaluation: This is particularly true if the high-end smartphone producers can engage in aggressive advertising and R&D to reduce the size of the CED
Overall DD rises, eqm P and Q rises, TE rises.

Entry-level smartphones
Y rises → DD rises less than prop as 0<YED<1 (necessity) → eqm P and Q rise
This is particularly true in developed countries as consumers have higher level of income and may deem entry-level smartphones as necessity rather than luxury.
Evaluation: However, in developing countries where the consumers have lower level of income and hence may deem entry-level smartphones as luxuries.
Entry of more suppliers of entry-level smartphones → SS rise → eqm P falls, eqm Q rises
Combined effect:
DD rises and SS rises → eqm Q rises, eqm P uncertain
Evaluation: if there is a large number of suppliers entering the market, SS can rise by a larger extent than DD → eqm P falls → however overall the eqm P may fall only marginally
Eqm Q rises, eqm P falls marginally, TE will still rise overall.

Feature phones
Y rises → DD falls as YED < 0 → eqm P and Q fall
Entry of more suppliers of entry-level smartphones → DD falls by large extent as they are close substitutes

Evaluation: This depends on the extent to which the price of entry-level smartphones fall. If it falls by a large extent making it more affordable for the low-income consumers from developing countries to buy them, the dd for feature phones will fall by a large extent.
Also, depends on the price of data plan → in many developing countries, data plan may be very expensive, thus many consumers may still not buy smartphones despite the falling price.
Combined effect → overall DD falls, SS unchanged → eqm P and Q fall by large extent → TE falls by large extent.

Requirements (overview) for part (b)
Candidates should show a good understanding how the increase in income and increase in the number of firms offering entry-level smartphones affect the extent of shift of demand and supply of three different mobile phones market, which will affect the equilibrium price and quantity of each market before being able to make a judgement what happens to consumer expenditure.