ICSE Board
Class X Economics Applications
Board Paper – 2013

Time: 2 hrs **Total Marks: 100**

General Instructions:

1. Answers to this paper must be written on the paper provided separately.

*2. You will **not** be allowed to write during the first **15** minutes.*
This time is to be spent in reading the question paper.

3. The time given at the head of the paper is the time allotted for writing the answers.

*4. Attempt **all** questions from **Part I** and **any four** questions from **Part II**.*

5. The intended marks of questions or parts of questions are given in brackets [ ].

PART I (40 Marks)

*Attempt **all** questions from this part.*

Question 1 [10]

a) With the help of a diagram show how a market demand cure can be obtained from individual demand curves.

b) Which section of society is worst affected during inflation? Briefly explain.

c) Mention one way be which Government policy can ensure social justice.

d) There are no substitute goods in a monopoly market. Give a reason to support your answer.

e) Briefly explain the impact of constructing dams on the ecosystem.

Question 2 [10]

a) Briefly explain why labour is considered to be the means and end of production.

b) Distinguish between joint demand and composite demand.

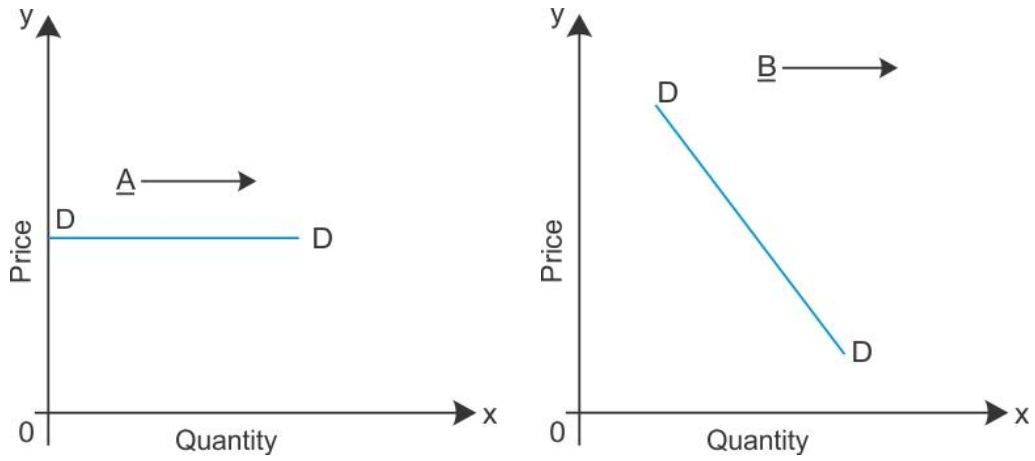
c) State two reasons for slow capital formation in a developing economy.

d) State one difference between monopsony and monopolistic competition.

e) Classify the following capital goods:
(i) Machines (ii) Cotton yarn (iii) Oil mill (iv) Bridge

Question 3 [10]

a) Indicate the degree of elasticity of demand of the following demand curves.



b) What is meant by land use pattern?

c) What are indirect taxes? Give an example.

d) Define money. How does it act as a 'measure of value'?

e) What is meant by an overdraft facility?

Question 4 [10]

a) The price of milk rises from Rs. 26.00 to Rs. 30.00 per litre and its demand falls from four litres per day to two litres per day. Calculate the elasticity of demand for milk.

b) Differentiate between an entrepreneur and labour on the basis of:
(i) Nature of work (ii) Nature of risk involved

c) Distinguish between the fiscal and monetary policy of the Government.

d) What are public sector units? Mention one problem faced by Public sector units in India.

e) What is meant by bank rate? How does it help in controlling the flow of credit in the economy?

PART II (60 Marks)

*Attempt **any four** questions from this part*

Question 5

a) Define capital and explain three important functions of capital. [7]

b) "Land is the original source of all material wealth". In this context, explain four determinants that influence the productivity of land. [8]

Question 6

a) Explain the following functions of the Central Bank of a country. [8]

i. Acting as a "banker to the Government".

ii. Fixation of margin requirement on secured loans.

iii. Developmental functions.

b) What is meant by ecosystem? Explain three adverse effects of mining on the ecosystem. [7]

Question 7

a) Efficient labour force is an important economic ingredient. In this context, define efficiency of labour.

Explain three factors that determine the efficiency of labour. [8]

b) Define a Commercial Bank. Explain three methods adopted by Commercial Banks to mobilise funds from the public. [7]

Question 8

a) Define privatisation. Discuss two arguments each in favour and against privatisation. [8]

b) Read the following extract and answer the questions that follow: [7]

Economic Times, September 4th 2012

Terming payment of taxes as a "mark of civilisation". Finance Minister P. Chidambaram has assured that authorities will not "rashly" implement controversial retrospective tax rules while once again promising a non-adversarial tax regime for all taxpayers. It is the second time in less than a week that Chidambaram has given assurance of a stable and fair tax regime, after the tax department attracted criticism for ushering in what some have called a "raid raj" and for introducing a series of measures industry and investors have slammed as retrograde.

i. Define direct tax, Give two examples.

ii. State how a direct tax can foster social consciousness.

iii. What is meant by a progressive direct tax? How does its imposition bring about equity?

iv. State two demerits of direct tax.

Question 9

a) Define price elasticity of demand. Explain how the following determine factors determine price elasticity of demand. [7]

i. Existence of substitute goods
ii. Nature of the commodity
iii. Proportion of expenditure incurred in a household budget.

b) State whether the following statements are true or false. Give reasons for each. [8]

i. If prices are expected to fall in the future current demand rises.
ii. Slow growth rate in Indian agriculture has increased mobility of labour from rural to urban areas.
iii. In a developing country like India public expenditure should not incurred on infrastructural development.
iv. An indirect tax can be made progressive by imposing higher tax rates on luxury goods.

Question 10

a) Under which type of a market are producers price takers? Explain three of its characteristics. [7]

b) With the help of a diagram state whether supply of a good is directly or inversely related to its price. Explain any four determinants of supply. [8]

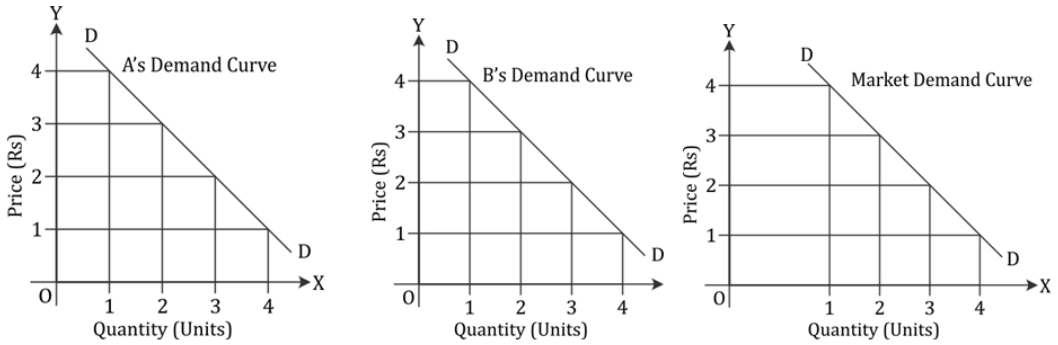
Solution

PART I (40 Marks)

*Attempt **all** Solutions from this part.*

Solution 1

a) The diagram below illustrate that the market demand curve represents the market demand schedule for two consumers A and B in the market. The market demand curve is the horizontal summation of the individual demand curves. It indicates various quantities of a commodity which all consumers in the market are willing to buy at different possible prices of the commodity at a point of time.



b) During inflation people who receive a fixed income are hit the hardest. People living on past savings, fixed interest or rent, pensions, salaries etc. suffer during periods of rising prices as their incomes remain fixed. The middle class which works hard to provide for their children's education, their own livelihood in the times of sickness and old age, and accommodate day-to-day expenses, find it difficult to survive in the times of serious inflation.

c) The government in a welfare state like ours can ensure social justice with the help of the Fiscal policy. The state can reduce inequality and achieve the goal of equity through the system of progressive taxation, subsidies and concessions to low and middle income groups.

d) The government may grant license for the production of a particular commodity to a single producer. Accordingly, monopoly comes into existence. Also, the government may decide to control the production of certain goods exclusively through its departmental undertakings such as of the railways in India. Hence, there are no close substitutes of the monopoly product in the market. For example, there is no close substitute of railways as a 'bulk carrier'.

e) The impact of constructing dams on the ecosystem is as follows:
   i. Soil erosion: The main problem of constructing dams is erosion of land. Dams hold back the sediment load generally found in a river flow, thus restricting their transport downstream. The downstream water then erodes its channels and banks to make up for the sediments. The lowering of the riverbed threatens the vegetation and river wildlife.
   ii. Species extinction: Many large dams do not include proper bypass systems for fishes and other aquatic species, which interferes with their lifecycles and even forces species to extinction. As fisheries are an important source of food supply, we need to protect them from the harmful effects of dams on many fish and marine mammal populations.

Solution 2

a) A labourer is both a means of production as well as the end of it. He produces goods and also consumes them. The demand for goods largely depends upon the level of wages in the country. Hence labour is considered to be the means and end of production.
b) When the demand for different complementary goods is created simultaneously, it is termed as a joint demand. For example, the demand for computer hardware and software is created jointly.

   When any good or service is in demand for many alternative uses, that demand is called a composite demand. For example, a computer is in demand for both domestic as well as commercial purposes.
c) The reasons for the slow rate of capital formation in India are:
   i. Lack of ability to save: Due to poverty, poor people are unable to save more than a negligible part of their earnings. Hence, a low rate of savings leads to a low rate of capital formation in the Indian economy.
   ii. Lack of willingness to save: In certain parts of the country, there still exists a feudal economic system. Even people who have the ability to save money are not willing to save, and spend all their incomes on day-to-day consumption.
d) Monopsony refers to a market where there is a single seller of a commodity or service but there are many buyers; whereas monopolistic competition is a form of market in which there are many buyers and sellers in the market.
e)
   i. Machines- Fixed capital
   ii. Cotton yarn- Floating capital
   iii. Oil mill- Sunk capital
   iv. Bridge- Social capital

Solution 3

a) Degree of elasticity of demand:
DD is a perfectly elastic demand curve which is parallel to the x-axis. It shows a situation where the slightest rise in prices causes the quantity demanded of the commodity to fall to zero. Hence, the elasticity of demand is infinite or $E_d = \infty$.
It is a situation when a change in the quantity demanded in response to a change in the price of a commodity is such that the total expenditure on the commodity remains constant. Hence, elasticity of demand is unity or $E_d = 1$.

b) Land can be used for various alternative purposes such as cultivation, dairy or poultry farming, building of houses etc. The use of land for any particular purpose depends not only on the returns from that particular use, but also its returns from alternative uses. Land use pattern relates to the physical features of the land, the institutional and other framework of resources such as labour, capital available etc. These aspects are connected with the economic development of a country.

c) Indirect taxes are those taxes which are imposed on an individual but are paid by another person either partly or wholly. Hence, the impact and incidence of taxes are on different persons. Customs and excise duties are examples of indirect taxes. Here the producer bears the impact and the incidence of tax on the consumer.

d) Robertson defined money as- Anything which is widely accepted in payment for goods or in discharge of other kinds of business obligations.
People keep their wealth in the form of money as it is the most liquid form of wealth. Savings in the form of money are maintained for purchasing commodities with the savings in future. In this case, the values of commodities are being stored. Hence money acts as a store of value.

e) Demand deposit holders can avail the overdraft facilities provided by a bank. When a customer receives an overdraft facility from a bank, then he/she can draw cheques in excess of the balance standing in his/her credit to the extent of the amount of overdraft.

Solution 4

a) Elasticity of demand for milk:

Price per litre (Rs)	Quantity Demanded per day
26	4
30	2

E_p = (-) % Change in quantity demanded/ % Change in its price

E_p = (-)P/Q * ΔQ/ΔP

P1 = 26 P2 =30 ΔP = 30 - 26 = 4

Q1 = 4 Q2 = 2 ΔQ = 2 - 4 = -2

E_p = (-) 26/4 * -2/4

= 52/16

= 3.25

Here, the elasticity of demand is greater than unity.

b) Differences between an entrepreneur and a labour:

Entrepreneur	Labour
Nature of work: An entrepreneur is a person who co-ordinates the activities of all the other factors of production and receives rewards in the form of profits or zero profit.	Nature of work: A labourer works physically or mentally to earn wages at a rate which is contractually fixed and positive.
Nature of risk involved: Risk bearing and innovative capabilities are associated with entrepreneurship.	Nature of risk involved: Labour does not have any of these qualities in any business activity.

c) Differences between fiscal policy and monetary policy:

Fiscal policy	Monetary policy
The fiscal policy affects the revenue and expenditure of the government and its instruments are government expenditure, imposition of taxes, subsidy provision, public debt, etc.	The monetary policy affects the aggregate supply of money in an economy and its instruments are bank rate, statutory liquidity ratio, cash reserve ratio, differential interest rates, etc.

d) A public sector unit is owned and controlled by the government. The main aim of this sector is to maximise social welfare. It stresses more on the production of capital goods. Nearly 26% of the national income comes from the public sector and 20% of the total working population is engaged in this sector. This sector enjoys monopoly in the market. The main problem faced by the public sector unit is the lack of incentives to do its best. Promotion is awarded only by seniority and on merit. This sector is least concerned with the profit of the unit.

e) Bank rate is the rate at which the Central Bank provides credit to commercial banks. An increase or decrease in the bank rate leads to an increase or decrease in the market rate of interest.

Bank rate policy is used as the main instrument of monetary control during inflation. When the Central Bank raises the bank rate, it is said to have adopted a dear money policy. The increase in bank rate increases the cost of borrowing which reduces borrowings of the commercial banks from the Central Bank. Consequently, the flow of money from the commercial banks to the public gets reduced. In this was inflation arising due to bank credit is controlled.

PART II (60 Marks)

*Attempt **any four** Solutions from this part*

Solution 5

a) Capital is known as the produced means of production. Firstly, it is created by man and is not a gift of nature. Secondly, it is a means of production and is used as an input to produce other goods. Such types of goods are not directly consumed.

Functions of capital are as follows:

i. Capital and large-scale production: Capital allows investment in heavy machineries which in turn enable industries to undertake large-scale production.

ii. Capital and division of labour: Capital enables the complete production process to be divided into small groups and different groups are entrusted with the responsibility of carrying out segments of the whole production process. Due to division of labour, the rate of production increases as compared to the cost of production.

iii. Extraction of goods from nature: Capital helps in easy extraction of goods from nature. Nature cannot provide goods unless man uses tools and machinery for mining, farming etc. Natural resources cannot be utilised properly without capital.

b) Four determinants which influence the productivity of land are:

i. Farmers need to use high-yielding variety of seeds, adequate amount of chemicals or bio-fertilisers and pesticides, and improved agricultural implements such as power tillers or tractors. Thus, the scientific process of cultivation will help in increasing the yield of crops per hectare.

ii. The productivity of land is largely determined by its natural qualities. In agriculture, some properties of the soil would be more suitable for the cultivation of wheat than for the cultivation of rice. Farmers need to identify the soil suitable for the cultivation of a particular crop. Thus, cultivation in a suitable soil also increases the land productivity.

iii. The location of the land also affects the productivity of land. Land located near the market will be more productive than land situated at a distant place, as it will not require extra expenditure to bring the produce to the market. If it is away

from the market, a farmer will have to pay more for transportation of the produce to the market.

iv. Ownership of land is an important factor affecting the productivity of land. Owners always take added interest in maximising the productivity. They encourage workers to work hard and increase the productivity. On the other hand, persons with temporary settlements do not take much interest in the cultivation of land because they can be evicted from land.

Solution 6

a) Functions of the Central Bank:
   i. Acting as a 'Banker to the Government': The government maintains an account with the Central bank. All types of income of the government are deposited into this account and all the expenses of the government are also incurred out of this account. It also advances short-term loans to the government to meet the deficit in its budget.
   ii. Fixation of margin requirement on secured loans: Margin money implies the minimum margin (30% of the loan amount) to be kept by the borrowers with commercial banks while borrowing money against specific securities from commercial banks. In case of secured or less risky loans, the margin money requirement is kept at a low level. By changing the margin requirement, the Central Bank can affect the number of loans.
   iii. Developmental functions: It helps in the development of money and capital markets in the country. It undertakes measures to maintain price stability necessary for the growth of an economy. It adopts suitable measures to maintain exchange rate stability which again is required for the growth of international trade and foreign investment.

b) An ecosystem can be defined as a group of living and non-living things which are interdependent and are found in a particular type of environment.
   More than 80,000 hectares of land is under the stress of mining activities. These activities require removal of plant cover along with the underlying soil mantle and excavation of overlying rock masses. Hence, mining results in adverse effects on the ecosystem such as:
   i. Mining generates a great amount of waste.
   ii. It disrupts surface and groundwater circulation.
   iii. It leads to reshaping of the topography.

Solution 7

a) Efficiency of labour means the productive capacity of a worker. It indicates the ability of a worker to do more work or better work during a given period of time.

Factors influencing the efficiency of labour are:

i. The ability and willingness of the workers to work and learn skills depends upon their health and therefore on their wage rate and standard of living. An improvement in the standard of living leads to an improvement in health through better nourishment. It also depends on the average age of the labourer.

ii. Literacy is perhaps the first priority to improve the efficiency of labour. Adequate provisions for imparting training to the workers will improve the efficiency of labour.

iii. Climatic differences affect the efficiency of labour in production. The hot and humid climate of majority states of India is a factor which prevents people from doing more work and thus hinders their ability to display high efficiency.

b) A commercial bank is defined as a financial institution which provides services such as accepting deposits, giving business loans, mortgage lending and basic investment products such as savings account and certificates of deposit.

A commercial bank mobilises funds from the public by accepting the following deposits:

i. Fixed deposits, which carry a relatively higher interest rate, are accepted for a specific period of time. According to the maturity period, the rate of interest varies. If the deposited money is withdrawn before the expiry of the specified period, the interest will not be paid.

ii. Demand deposits are those deposits which can be withdrawn at any time by the depositors by a cheque. It has no interest rate.

iii. Savings deposits are those deposits whose withdrawals have certain restrictions. Cheque facility is provided to the depositors. It is generally held by households who have idle cash for a short period.

Solution 8

a) Privatisation refers to any process which discourages the participation of the state public sector in the economic activities of an economy. Its main objective is to make the best possible utilisation of privately owned resources for the collective welfare of the people.

Arguments in favour of privatisation:

i. The process of privatisation introduces the 'profit-oriented' decision making process in the working of the enterprise leading to improved efficiency and performance.

ii. It minimises the effect of political interference which becomes unavoidable in case of PSUs. Often the government imposes non-economic objectives on PSUs.

Arguments against privatisation:

i. Privatisation has no guarantee for social betterment. It results in an unbalanced growth of the economy. Public sector is indispensable for the development of all sectors of the economy.

ii. Privatisation has nothing to do with the standard of living of the masses.

b)

i. Direct taxes refer to those taxes which are really paid by those on whom they are legally imposed. The tax burden cannot be shifted to any other individual or firm by the taxpayer. Direct taxes are progressive because the tax rate increases with an increase in the income slabs. The impact and incidence of tax fall on the same person. For example, income tax, property tax etc. For income tax, the tax burden cannot be shifted to any other person. The person on whom the government imposes the tax must pay a part of his/her income as tax to the government.

ii. Under direct tax, income earners under the high income group have to pay taxes at a progressively higher rate whereas income earners under the low income group are exempted from tax. Hence, direct tax help in reducing inequalities of income.

iii. In progressive tax, the tax rate increases with an increase in the income. There is different rate of tax for every income slab. A tax is said to be progressive when the rate of tax increases with an increase in the tax payer's income. Under this system, the tax liability increases not only in absolute terms, but the proportion of income tax also increases. Rich people pay a higher average income tax than the poor people. Hence, it reduces the income inequalities among the rich and poor groups of people.

iv. (a) Tax evasion: There is a greater possibility of tax evasion of direct taxes as these taxes are collected based on the honesty of the tax payers. Business groups try to evade direct tax by misrepresenting their income statements to the income tax authorities.

(b) Narrow in scope: Direct taxes are imposed heavily on rich people. The government cannot approach the low income group through these taxes. Hence these taxes have a limited scope.

Solution 9

a) The price elasticity of demand for a good is defined as the percentage change in demand for the good divided by the percentage change in its price. Thus, the percentage method of calculating price elasticity of demand for a good is:

e_p = Percentage change in the demand for the good/Percentage change in the price of the good

i. Existence of substitute goods: The price of a commodity falls in relation to its substitute. Consumers can easily switch from one good to another even if there is only a small change in the price and hence its demand will increase. Hence the price elasticity of demand for commodities having close substitutes is relatively high.

ii. Nature of the commodity: Elasticity of demand for necessities of life such as food grains, medicines, textbooks, edible oil etc., is very low in comparison to luxury goods where price elasticity will be high. The consumers will buy almost the same quantity of a necessary commodity per unit of time whether its price is somewhat higher or lower. On the other hand, demand for luxury goods is elastic in nature. When prices of such commodities increase some people may avoid purchasing them. Their demand will fall sharply and hence the elasticity of demand will be high.

iii. Proportion of expenditure incurred in a household budget: A consumer spends a very small part of his/her income on the purchase of match boxes, needles to stitch etc. Therefore, even a large change in their price will not induce him/her to change his level of demand. But when we take commodities such as milk, clothes etc. into consideration, where the consumer spends a considerable part of his/her income, people may cut the level of consumption and hence their demand will be elastic.

b)

i. False. If prices are expected to fall in the future current demand will fall. It is because some consumers may postpone their consumption for future.

ii. True. Indian agriculture is growing at slow rate and has failed to generate employment opportunities. This has resulted in a shift of labour force from the rural to the urban areas in search of employment.

iii. False. A developed infrastructure is crucial for the growth of a developing economy. Hence, more public expenditure should be incurred on its development.

iv. (True. Indirect taxes are regressive in nature. However, by imposing a higher tax rate on luxury goods, they can be made progressive. It is because luxury goods are generally purchased by the rich.

Solution 10

a) Perfect competition is a form of market where there are a large number of buyers and sellers of a commodity. A homogeneous product is sold in the market. An individual firm has no control over the price, it is a price taker.

Characteristics of perfect competition are as follows:

i. Large number of sellers and buyers: The number of firms selling a particular commodity is so large that any increase or decrease in the supply by an individual firm hardly impacts the total supply. Hence, an individual firm fails to impact the price of the commodity in the market. It can sell any amount at the existing price of the commodity. Thus, a firm under perfect competition is a price taker. Also as the number of buyers is large even an individual buyer is also unable to influence the price of the commodity.

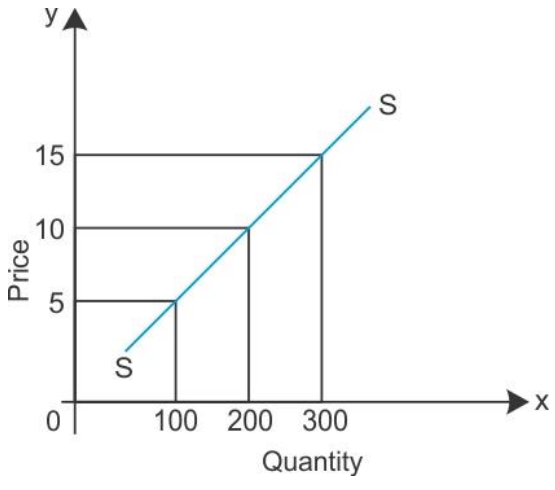
ii. Homogenous products: All sellers sell identical units of a product. The existence of an identical product implies the same price for the product in a competitive market. Hence, buyers have no reason to prefer the product of one seller as compared to that of another.

iii. Free entry and exit of firms: A firm can easily enter and exit any industry as there is no legal restriction. Whenever there are abnormal profits, new firms will enter the industry and whenever there are losses, few existing firms will exit the industry. This situation is possible only in the long run.

b) The law of supply states that other factors being equal, the quantity of a good supplied increases with an increase in the price level and decreases with a decrease in the price level of a good.

The supply schedule below shows the positive relationship between price and quantity supplied.

Price (in Rs)	Quantity Supplied
5	100
10	200
15	300



SS is the supply curve sloping upwards. When the price increases from Rs. 5 to Rs. 15, the quantity supplied also increases from 100 units to 300 units.

Factors determining supply are:

i. Price of the product: When there is an increase in the price of a product and if it is more than the marginal cost of production, it enables the firm to earn more profit by selling at a higher price. Hence, there is an increase in the supply of the product.
ii. The prices of the factors of production: Given the other factors, if the prices of the factors of production increase, there is decline in the profit of the firm. Hence, the firm would reduce the quantity of supply at the current price level.
iii. Technological condition: Technological improvement in production enables the firm to increase the supply at the current price level.
iv. Risk-taking: It depends upon the willingness of the entrepreneurs to take risk. If entrepreneurs are willing to take risk, the supply will be more. On the other hand, if entrepreneurs hesitate to take risk, the supply will be less.