

Institute of Actuaries of India

Subject CB2-Business Economics

November 2023 Examination

INDICATIVE SOLUTION

Introduction

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiner have given credit for any alternative approach or interpretation which they consider to be reasonable.

| | | |
|----------------------------|--------------------------|-------------|
| <u>Solution 1:</u> | D | [1.5 Marks] |
| <u>Solution 2:</u> | A | [1.5 Marks] |
| <u>Solution 3:</u> | B | [1.5 Marks] |
| <u>Solution 4:</u> | B | [1.5 Marks] |
| <u>Solution 5:</u> | D | [1.5 Marks] |
| <u>Solution 6:</u> | A | [1.5 Marks] |
| <u>Solution 7:</u> | D | [1.5 Marks] |
| <u>Solution 8:</u> | B | [1.5 Marks] |
| <u>Solution 9:</u> | B | [1.5 Marks] |
| <u>Solution 10:</u> | Both A and C are correct | [1.5 Marks] |
| <u>Solution 11:</u> | C | [1.5 Marks] |
| <u>Solution 12:</u> | C | [1.5 Marks] |
| <u>Solution 13:</u> | A and D | [1.5 Marks] |
| <u>Solution 14:</u> | All answers are correct. | [1.5 Marks] |
| <u>Solution 15:</u> | D | [1.5 Marks] |
| <u>Solution 16:</u> | C | [1.5 Marks] |
| <u>Solution 17:</u> | C | [1.5 Marks] |
| <u>Solution 18:</u> | A | [1.5 Marks] |
| <u>Solution 19:</u> | C | [1.5 Marks] |
| <u>Solution 20:</u> | D | [1.5 Marks] |
| <u>Solution 21:</u> | D | [1.5 Marks] |
| <u>Solution 22:</u> | C | [1.5 Marks] |
| <u>Solution 23:</u> | A | [1.5 Marks] |
| <u>Solution 24:</u> | D | [1.5 Marks] |
| <u>Solution 25:</u> | B | [1.5 Marks] |
| <u>Solution 26:</u> | D | [1.5 Marks] |

Solution 27: The external benefits of Government sponsored health insurance scheme

The individual will not have to worry about slipping into poverty because of health related costs

The money that he saves for health emergencies can be utilised for investment and consumption leading to better economic growth

Government sponsored healthcare can deliver better outcomes in certain circumstances whereas private healthcare may lead to profit maximisation of the shareholders

A better social security system will take birth which could lead to people stop chasing jobs for money and hence maybe experiment and take more risks. More entrepreneurship could lead to more future benefits for the country

[Max 2 Marks]

Solution 28: The impact on supply curve is given below

i) Glazed paper is an input to making tabletop calendars, decrease in cost will decrease the cost for tabletop calendars

So supply curve will shift to the right

[1]

ii) Increase in price of wall hung calendars increase will increase opportunity cost of using skilled workers for making tabletop calendars

Hence supply curve will shift to the left

[1]

iii) If the new process decreases the cost of production
The supply curve will shift to the right [1]

iv) If the felling trees become more difficult the cost of production will increase
This will shift the supply curve to the left [1]

[Max 4 Marks]

Solution 29: Consumers wish to buy now whilst the price of rice is relatively cheap. This will lead to increase in demand and demand curve will shift to the right
Suppliers will wish to hold back or defer supply so that they can sell their rice once price has risen. This will lead to decrease in supply of rice leading to supply curve shifting to left
Both these speculative actions will lead to further rises in the prices of rice. This is an example of self-fulfilling speculation that has a destabilising effect on price.

[Max 2 Marks]

Solution 30: Economic policy is often designed to change behaviour to meet economic objectives.
For example, taxes are imposed on tobacco in order to discourage its use and hence improve health; subsidies are given to public transport to encourage its use and hence reduce congestion and pollution; income tax might be cut to increase spending and or increase the incentive to work.
Traditional economic theory predicts that people respond in a particular way to a change in a particular variable.
Behavioural economics might add to our understanding of how people behave and why they behave in a particular way.
This understanding might then lead to the development of alternative strategies for achieving the desired result
Policies that have been successful include new pension arrangements, under which pension contributions are automatically deducted from employees' wages unless they opt out of the scheme (such 'opting out' schemes have much higher participation rates than 'opting in' schemes).
Studies show that letters to late taxpayers telling them that most people had already paid their tax, and letters to the wealthy explaining how their taxes would help improve local services both resulted in increased payment rates.

[Max 4 Marks]

Solution 31:

i) Explicit costs: Staff wages, Loan interest, rent and cost of inventory sold
Implicit costs: Depreciation, Opportunity cost of Mr Raju's money and time [Max 1]

ii) This is the profit that Mr Raju need to make to prevent him from closing down in the long run.
It is the opportunity cost of his time and money
Here it is INR 8,00,000 + INR 48,000= INR 8,48,000 [Max 2]

- iii) Treating normal profit as a cost Mr Raju made an economic profit of
 $\text{INR } 9,50,000 - (\text{INR } 8,00,000 + \text{INR } 48,000) = \text{INR } 1,02,000$ [Max 2]
- iv) Assuming the numbers remain same the next year
 By selling the bookshop he could earn an interest of $48000/750000 * 800000$
 that is INR 51,200
 Along with his software engineering job he can earn 8,00,000. On the total
 he can earn INR 8,51,200.
 By keeping a shop he can earn INR 9,50,000. Hence He should not sell the
 book shop the next year [Max 2]
- v) Mr Raju Account in year 2
- | | |
|--|---------------------|
| Accounting Profit | INR |
| 8,75,000 | |
| Less opportunity cost of Mr Raju's Time (potential salary of software engineer) | INR 8,77,000 |
| Less opportunity cost of Mr Raju's Money (interest income foregone) | |
| INR 50,000 | |
| Economic Profit | INR |
| (-52,000) | |
- Mr Raju is not going to like the results this year [Max 2]

[9 Marks]

Solution 32: The three ways are:

Exploitative Abuse:
 Business practices that directly harms the customers
 e.g. When a firm produces lower output and make a larger profit.
 An example could be the OPEC cartel which produces lower output to make
 a larger profit

Exclusionary abuse:
 Business practices that limit or prevent effective competition from either
 actual or potential rivals
 e.g. Predatory pricing
 An example could be China dumping cheap goods into Indian market to
 drive Indian manufacturers out of business

Restrictive Practices:
 When two or more firms agree to adopt common practices to restrict
 competition
 An example could be sharing of markets between two firms and none of the
 firm would poke nose in another's market

[Max 5 Marks]

Solution 33: The New Classical School believes
 Firstly that individuals use all available information to form rational
 expectations
 Secondly, that markets are continuously clearing

This would mean that any change in the money supply would have immediate effect on the prices and wages and no effect on output and unemployment

The key accompanying element is the real business cycle theory

According to this theory the supply side shocks especially technology shocks permanently affect the economy's growth path

[Max 3 Marks]

Solution 34:

- i) This is called structural unemployment.
Structural unemployment occurs where the structure of the economy changes. Employment in some industries may expand while in others it contracts.

[1]

- ii) Main reasons are:

A change in the pattern of demand

Some industries experience declining demand

This may be due to a change in consumer tastes as certain goods go out of fashion

or it may be due to competition from other industries

For example, consumer demand may shift away from coal and to other fuels

This will lead to structural unemployment in mining areas.

A change in the methods of production (technological unemployment).

New techniques of production often allow the same level of output to be produced with fewer workers

This is known as 'labour-saving technical progress'.

Unless output expands sufficiently to absorb the surplus labour, people will be made redundant.

This creates technological unemployment.

An example is the loss of jobs in the banking industry caused by the increase in the number of cash machines and by the development of telephone and Internet banking.

[Max 3]

- iii) The level of structural unemployment will depend on three factors:

The degree of regional concentration of industry.

The more that industries are concentrated in particular regions, the greater will be the level of structural unemployment if particular industries decline.

The speed of change of demand and supply in the economy.

The more rapid the rate of technological change or the shift in consumer tastes, the more rapid will be the rate of redundancies.

The immobility of labour.

The less able or willing workers are to move to a new job, the higher will be the level of structural unemployment.

Geographical immobility is a particular problem with regional unemployment.

Occupational immobility is a particular problem with technological unemployment where old skills are no longer required.

[Max 3]

iv) There are two broad approaches to tackling structural unemployment:

market-orientated.

A market-orientated approach involves encouraging people to look more actively for jobs, if necessary in other parts of the country.

It involves encouraging people to adopt a more willing attitude towards retraining, and if necessary to accept some reduction in wages.

interventionist.

An interventionist approach involves direct government action to match jobs to the unemployed.

Two examples are

providing grants to firms to set up in areas of high unemployment (regional policy)

government-funded training schemes.

[Max 2]

[9 Marks]

Solution 35: Market oriented supply side policies may be superior to interventionist supply side policies because interventionist supply side policies might:
 increase bureaucracy and waste
 reduce market incentives, eg the incentive to work and invest
 allow inefficient firms to survive
 change with change in governments, making it difficult for firms to plan ahead

market oriented supply side policies include:

reducing tax burden on workers, savers and firms to increase the incentive to work, save and invest

reducing labor power to reduce labor costs, increase profits, increase investments and increase output and employment

reducing welfare payments to reduce/remove the poverty trap and increase the incentive to work and relocate if necessary

encouraging competition, eg by privatisation and deregulation, to increase investment and efficiency, and hence national output

removing trade barriers to allow raw materials and components to be bought from the cheapest, and also to increase competition and hence efficiency

removing restrictions on international capital movements to allow capital to be allocated to the projects in which it will be most effective.

[Max 5 Marks]

Solution 36: Advantages of having a single currency for the member states of EMU:

Elimination of the costs of converting currencies.

Increased competition and efficiency.
 Elimination of exchange rate uncertainty (between the members).
 Increased inward investment.
 Lower inflation and interest rates.

[Max 2 Marks]

Solution 37: Factors that affect Investment are:

Increased consumer demand-

Investment is to provide extra capacity
 this will be necessary if consumer demand increases
 the bigger the increase in consumer demand, the more investment will be needed

Expectations-

Since investment is made in order to produce output for the future, investment must depend on the firms' expectations about future market conditions

The cost and efficiency of capital equipment-

If the cost of capital equipment goes down, or the equipment becomes more efficient, the return on investment will increase.
 firms will invest more

The rate of interest-

The higher the rate of interest, the more expensive it will be for the firms to finance investment, and hence the less profitable will the investment be.

Availability of finance-

Investment requires financing
 Retained earnings provide one possible source
 Alternatively, the firms can seek finance from banks
 or issue debt instruments such as bonds, or issue shares
 Hence difficulty in raising finance can limit investment.

[Max 5 Marks]

Solution 38: Capital adequacy is
 a measure of a bank's capital relative to its assets, where the assets are weighted according to the degree of risk.

The more risky the assets, the greater the amount of capital that will be required

Greater the CAR, greater the capital adequacy of a bank.

CAR is intended to provide banks with sufficient capital to meet the demands from depositors and to cover losses if borrowers defaulted.

CAR = (Common Equity Tier 1 capital+ Additional tier 1 Capital+ Tier 2 Capital)

Divided by

(Risk weighted Assets)

Common Equity Tier 1 Capital includes bank reserves from retained profits and ordinary share capital

Additional Tier 1 capital consists largely of preference shares

Tier 2 capital is subordinated debt with a maturity greater than five years.

Risk weighted assets are the value of assets, where each type of asset is multiplied by a risk factor.

[Max 5 Marks]

Solution 39: In the short term (up to about two years), the four macroeconomic objectives related to aggregate demand are

Faster growth in output

Lower unemployment,

Lower inflation

Avoidance of excessive current account balance of payments deficits

In the expansionary phase of the business cycle (phase 2), aggregate demand grows rapidly.

The gap between actual and potential output narrows

There is relatively rapid growth in output

(demand-deficient) unemployment falls

Thus two of the problems are getting better.

On the other hand, the other two problems become worse.

The growing shortages lead to higher (demand-pull) inflation

and larger current account balance of payments deficits as the extra demand 'sucks in' more imports

As a result, unless there is a compensating rise in interest rates,

the equilibrium exchange rate is likely to fall,

which will raise the price of imports

thus further stoking up inflation

This will probably increase inflationary expectations.

[Max 6 Marks]
