INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

23rd November 2012

Subject CT7 – Business Economics

Time allowed: Three hours (10.00 – 13.00 Hrs)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1 Please read the instructions on the front page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception

2 Mark allocations are shown in brackets.

3 Attempt all questions, beginning your answer to each question on a separate sheet. However, answers to objective type questions could be written on the same sheet.

4 Please check if you have received complete Question Paper and no page is missing. If so, kindly get new set of Question Paper from the Invigilator.

AT THE END OF THE EXAMINATION
Please return your answer book and this question paper to the supervisor separately.

Q.1) In an economy, measuring (1) total value added, (2) total spending on final goods and (3) total factor earnings gives the result that:

A) 3>2>1
B) 3=2=1
C) 3<2<1
D) 2>3>1 **[1.5]**

Q.2) Consider the below statements:
[i] Saving is an injection and Investment is a leakage in the circular flow of income
[ii] Imports are a leakage and exports are an injection in the circular flow of income
Which of the below is correct

A) 1 is false and 2 is true
B) 1 is false and 2 is false
C) 1 is true and 2 is false
D) 1 is true and 2 is true **[1.5]**

Q.3) If desired spending in the economy exceeds income we would expect ______________

A) Households to save more
B) Firms to produce less
C) Firms to produce more
D) Fhe marginal propensity to consume to change **[1.5]**

Q.4) When investment is assumed to be autonomous, the slope of the AD schedule is determined by the

A) Marginal propensity to invest
B) Marginal propensity to consume
C) Average propensity to consume
D) None of the above **[1.5]**

Q.5) For given government spending and tax rate, the government budget deficit will grow in ___________ and decline in ____________

A) Booms, booms
B) Recession, recession
C) Recession, booms
D) Booms, recession **[1.5]**

Q.6) Banks create money by

A) Printing money
B) Issuing debit cards
C) Lending out part of their deposits
D) Accepting cheques **[1.5]**

Q.7) When interest rate_______, other things equal, we can expect the quantity of real money holdings to ______________

A) Rise, fall
B) Rise, increase
C) Fall, does not change
D) Fall, fall **[1.5]**

Q.8) A reduction in interest rates, causes _________ in the monetary base that results in __________ in the availability of consumer credit and ________________ in the cost of consumer credit

A) Reduction, increases, increase
B) Increase, reduction, reduction
C) Increase, increase, increase
D) Increase, increase, reduction **[1.5]**

Q.9) When the $/Rs exchange rate rises the rupee ____________, and when the $/Rs rate falls the rupee___________

A) Depreciates, appreciates
B) Revalues, devalues
C) Appreciates, depreciates
D) Becomes more expensive, becomes cheaper **[1.5]**

Q.10) If a fishery is located downstream to a chemical manufacturing factory, then in the situation of equilibrium with no government intervention which of the following will be true for the chemical factory

A) Marginal social cost = marginal social benefit
B) Marginal social cost > marginal social benefit
C) Marginal cost = marginal benefit
D) Both B and C **[1.5]**

Q.11) A reduction in income tax on private income will ________ the labour supply of individuals in the economy if ______________________________

A) Increase, Substitution Effect of tax decrease>Income effect of tax decreases
B) Increase, Substitution Effect of tax decrease<Income effect of tax decreases
C) Decrease, Substitution Effect of tax decrease=Income effect of tax decreases
D) Decrease, Substitution Effect of tax decrease>Income effect of tax decreases **[1.5]**

Q.12) Suppose two countries- Baba and Chloe- can produce two goods – one pair of Jeans and 1 kg coffee. The only factor of production is labour and the number of hours required to produce each good in each country is given below

	Jeans	Coffee
Baba	4	8
Chloe	2	3

Which of the below statements is true?

A) Chloe has absolute and comparative advantage in producing coffee
B) Baba has absolute and comparative advantage in producing jeans
C) When Baba and Chloe trade, Baba will specialise in production of Jeans
D) Both A and C **[1.5]**

Q.13) Central bank of a Country wants to reduce equilibrium interest rate to enhance investment. So it increases money supply in the economy. However, the impact on interest rates is very little. This may occur if:

A) Money demand is highly responsive to interest rates
B) Money demand is not responsive to interest rates
C) Money supply is highly responsive to interest rates
D) None of the above **[1.5]**

Q.14) In India, suppose due to a decrease in confidence of investors there is a sudden outflow of foreign institutional investor funds. This leads to:

A) Depreciation of rupee against dollar
B) Appreciation of rupee against dollar
C) Devaluation of rupee against dollar
D) The exchange rate of rupee remains unchanged **[1.5]**

Q.15) Suppose public keeps all cash in the banks, then given that the liquidity ratio in banks is 10% which of the following is true

A) Bank multiplier is 10 and deposit multiplier is 5
B) Bank multiplier is 10 and deposit multiplier is 10
C) Bank multiplier is 10/9 and deposit multiplier is 10/9
D) Bank multiplier is 10 and deposit multiplier cannot be calculated **[1.5]**

Q.16) Which of the following statements provides the basis for limit pricing approach?

A) Firms have to price their product below or equal to the price fixed by the government.
B) An existing firm deliberately keeps its price low to avoid government action.
C) Potential new entrants have lower average cost than the existing firm.
D) Potential new entrants have high average cost than the existing firm **[1.5]**

Q.17) A fixed-percentage mark-up pricing may be more useful at that range of output over which ..

A) AVC is falling
B) AVC is rising
C) AVC is constant
D) AFC is constant **[1.5]**

Q.18) A pricing system based on two-part tariff is an example of

A) 1st degree price discrimination
B) 2nd degree price discrimination
C) 3rd degree price discrimination
D) None of above **[1.5]**

Q.19) Which of the following statements is TRUE regarding the types of mergers?

A) A horizontal merger involves two firms at the same stage of the different production processes in different industries.
B) A horizontal merger involves two firms at the different stages of the same production process in the same industry.
C) A vertical merger involves two firms at different stages of the same production process in the same industry.
D) A vertical merger involves two firms at the same stage of the same production process in the same industry. **[1.5]**

Q.20) Which of the following characterize vertical de-merger?

A) It enables firms to expand its scope of activities.
B) It enables firms to concentrate on core activities.
C) It indicates expansion to new industries.
D) It indicates withdrawal from other industries. **[1.5]**

Q.21) If valuation ratio of a firm is high, in order to be able to finance growth,

A) It must have high amount of ploughed-back profits.
B) It must have zero ploughed-back profits.
C) It may issue corporate bonds.
D) It cannot borrow from bank. **[1.5]**

Q.22) Vertical product differentiation is best possible/profitable in case of

A) Products involving sophisticated technology
B) Primary products from natural resources
C) Generic products
D) All of the above **[1.5]**

Q.23) Assume that the market for a product is expanding at a high rate and is expected to continue so in the foreseeable future. In order to avoid risk and competition, a firm operating in this market should go for..

A) Market penetration strategy
B) Product development strategy
C) Market development strategy
D) Diversification strategy **[1.5]**

Q.24) Beta Limited is multi-product firm, producing X and Y and selling in two different markets, A and B, respectively. Advertising intensities for product X and Y are 0.02 and 0.05, respectively. For Beta and its products, it implies that

A) A is oligopolistic market and B is monopolistically competitive market
B) A is oligopolistic market and B is perfectly competitive market
C) A is monopolistically competitive market and B is oligopolistic market
D) Both A and B are perfectly competitive markets **[1.5]**

Q.25) Shadow pricing implies that

A) A small firm chooses the same price as that set by a dominant firm.
B) A small firm chooses the same price as that set by a firm which is believed to reflect market conditions in the most satisfactory way.
C) A small firm functions as shadow of large firm and sets the same price as charged by the large firm.
D) Firms observe each other's pricing and ensure that they all remain at similar levels. **[1.5]**

Q.26) Which of the following statements is TRUE about equilibrium price (P) and marginal cost (MC) with respect to a firm?

A) P is always greater than MC in perfect competition.
B) P is always less than MC in monopoly.
C) P is always less than MC in perfect competition.
D) P is always greater than MC in monopoly **[1.5]**

Q.27) Other things remaining constant, price is an ineffective tool to increase Total Revenue from a product if price elasticity (sign ignored) of demand for the product is

A) 0.5
B) 1.0
C) 1.5
D) 2.0 **[1.5]**

Q.28) In the short run, if a firm is producing a significant range of output under conditions of constant returns to the variable factor, then, throughout this range:

A) Total variable cost must remain constant.
B) Average cost must remain constant.
C) Average variable cost must remain constant.
D) Average fixed cost must remain constant. **[1.5]**

Q.29) Suppose that the marginal utility (MU) can be measured in monetary terms (MU being equal to the maximum price a consumer would be prepared to pay for a good) and consumer's demand curve is linear downward sloping. Total consumer surplus will be maximum when

A) MU is greater than Price and difference between MU and Price is the maximum.
B) MU is the maximum.
C) MU is increasing.
D) MU is equal to price. **[1.5]**

Q.30) In short run, the price elasticity of supply will be higher if

A) The firm has lower marginal costs.
B) The firm has higher marginal costs.
C) The firm is operating at its full capacity.
D) The firm has high price elasticity of demand for its products. **[1.5]**

Q.31) In the aggregate demand framework, consumption function is given by $C=100+.8Y_D$ where Y_D is the disposable income. Suppose there are no taxes in this economy so $Y=Y_D$ Investment level is Rs 50 and government expenditure is Rs 50.

[i] What is the level of saving in the economy in the equilibrium state? (1)

[ii] If Investment rises to 100 in this economy what will be the new equilibrium level of income? (2)

[iii] What is the multiplier in this economy? (1)

[iv] Now, suppose government introduces taxes in this economy (Investment level is Rs 50 and government expenditure is Rs 50 now as in the initial case). Out of every 1 rupee of income 0.2 rupees are collected in taxes. What will be the level of equilibrium income now? What is the multiplier now? (4)

[v] Now, suppose the government does not impose taxes but makes transfer payments to its citizens worth Rs 20 (Investment level is Rs 50 and government expenditure is Rs 50 now as in the initial case). Calculate the equilibrium income? (1) **[9]**

Q.32) Country A trades with the rest of the world a product called “Maggots”. The product is produced in a perfectly competitive market in the home market and is also imported. The country is a price taker in the world market at P_w

[i] Suppose the government of country A imposes a tariff of Rs 2 on the product. How will this affect domestic supply, domestic demand, level of imports, consumer surplus, producer surplus and government surplus? Does the total welfare increase or decrease with imposition of tariff? Show graphically (4.5)

[ii] Suppose the government imposes an import quota on the product instead of a tariff. How will this affect domestic supply, domestic demand, level of imports, consumer surplus, producer surplus and government surplus? Does the total welfare increase or decrease with imposition of quota? Show graphically (4.5) **[9]**

Q.33) What are the aims of supply side government policies?
Distinguish between market oriented supply side policies and interventionist supply side policies?

[4]

Q.34) Suppose India faced a balance of payment crises. To deal with it Indian government devalued the Indian rupee to help revive the current account balance. This policy however, resulted in worsening of current account balance in short term and the opposition party asked for an explanation. As the finance minister, what would your response be? Discuss. **[5]**

Q.35) A firm sells its product in a perfectly competitive market where other firms charge a price of $80 per unit. The firm's total costs are $C(Q)= 40 + 8Q + 2Q^2$.

[i] How much output should the firm produce in the short run (2)
[ii] What price should the firm charge in the short run? (1)
[iii] What are the firm's short-run profits? (1)
[iv] What adjustments should be anticipated in the long run? (2) **[6]**

Q.36) You are the manager of a monopoly, and your demand and cost functions are given by $P = 200 - 2Q$ and $C(Q) = 2000 + 3Q^2$. respectively

[i] What price–quantity combination maximizes your firm's profits? (2)
[ii] Calculate the maximum profits (1)
[iii] Is demand elastic, inelastic, or unit elastic at the profit-maximizing price–quantity combination? (1)
[iv] What price–quantity combination maximizes revenue? (2)
[v] Calculate the maximum revenues. (1)
[vi] Is demand elastic, inelastic, or unit elastic at the revenue-maximizing price–quantity combination? (1) **[8]**

Q.37) What are the four stages of life cycle of a product? How will the consumer demand, competition and the other factors affecting the pricing decision generally vary between these stages? **[5]**

Q.38) Discuss and distinguish between marketing strategies and marketing mix. What are intended effects of advertising? Use appropriate graph to substantiate your answer **[9]**

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