

# INSTITUTE OF ACTUARIES OF INDIA

## EXAMINATIONS

12<sup>th</sup> September 2018

**Subject CT7 – Business Economics**

**Time allowed: Three Hours (10.30 to 13.30 Hours.)**

**Total Marks: 100**

### INSTRUCTIONS TO THE CANDIDATES

1. *Please read the instructions inside the cover 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. You are not allowed to carry the question paper in any form with you.

- Q. 1)** Characterise the good by taking the following elasticity into account:
- I.** Price elasticity of demand = - 0.5
  - II.** Income elasticity of demand = - 0.3
  - III.** Cross-price elasticity of demand = -0.6
- A.** Price - inelastic, inferior good, complementary good  
**B.** Price inelastic, normal good, supplementary good  
**C.** Price inelastic, inferior good, supplementary good  
**D.** Price inelastic, normal good, complementary good [1.5]
- Q. 2)** The demand and supply function of Good A are:  
 $Q_d = 40 - P$   
 $Q_s = 2P - 20$   
What is the amount of Producer Surplus when the market is in equilibrium?
- A.** 200  
**B.** 300  
**C.** 100  
**D.** 150 [1.5]
- Q. 3)** Which of the following statements below is true?
- I.** Dumping occurs when exports are sold at prices below marginal cost
  - II.** Dumping is as a result of government promoting free trade
  - III.** Dumping is as a result of restricting subsidy by government
  - IV.** Dumping of subsidised exports is unfair trade practice
- A.** I & II  
**B.** I only  
**C.** II & III  
**D.** I & IV [1.5]
- Q. 4)** Diminishing marginal utility of income can be represented by a utility curve:
- I.** Which is upward sloping and concave
  - II.** Which has gradient equal to marginal utility of income
  - III.** Which is downward sloping and concave
  - IV.** Which has gradient equal to total utility of income
- A.** I & II  
**B.** I only  
**C.** II & III  
**D.** I & IV [1.5]
- Q. 5)** Which of the following statements is **false** about firms operating in monopolistic competition?
- A.** Produce lower quantities than firms operating in perfect competition
  - B.** Produce at a higher price than firms in perfect competition
  - C.** Have excess capacity than firms in perfect competition
  - D.** Leads to a more allocation of resources than under perfect competition [1.5]

- Q. 6)** The price discrimination can occur only if:
- A. The firm faces a downward sloping demand curve
  - B. The elasticity of demand remains same between consumers at a given price
  - C. The firm can buy in one market and resell at higher price in another market
  - D. The firm does not have a degree of market power
- [1.5]**
- Q. 7)** The price elasticity of demand for cigarettes is about -0.4. Suppose the current price per cigarette is 2. The Government is considering taxing cigarettes to reduce smoking. If the Government wants to reduce smoking by 20% how much should it increase the price?
- A. 50%
  - B. 8%
  - C. 20%
  - D. 25%
- [1.5]**
- Q. 8)** Which one of the following will shift supply curve of a Good to right?
- A. The opportunity cost of using skilled labors to make Good increases
  - B. The Government makes it illegal to use one of the raw materials previously used to make Good
  - C. The cost of producing Good increases due to increase in cost of raw materials
  - D. A new process is developed such that the amount of electricity needed to produce the Good is reduced
- [1.5]**
- Q. 9)** The intended effect of advertising is-
- A. To shift product's demand curve to right and to make product's demand price elastic
  - B. To shift product's demand curve to right and to make product's demand less price elastic
  - C. To shift product's demand curve to left and to make product's demand price elastic
  - D. To shift product's demand curve to left and to make product's demand less price elastic
- [1.5]**
- Q. 10)** Which of the following are assumptions of marginal costing?
- I. All elements of cost can be divided into fixed and variable components
  - II. Total fixed cost remains constant at all levels of output
  - III. Total variable costs vary in proportion to volume of output
  - IV. Per unit selling price remain unchanged at all levels of activity
- A. I and II
  - B. I , II and III
  - C. II and III
  - D. I, II, III and IV
- [1.5]**
- Q. 11)** Which of the following is not a feature of the theory of contestable markets?
- A. The prices are determined by threat of competition
  - B. Free and costless entry and exit in the market
  - C. Firms make supernormal profits
  - D. Firms produce efficiently
- [1.5]**

- Q. 12)** Economic profit equals:
- A. Total revenue plus opportunity cost
  - B. Accounting profit less implicit cost
  - C. Accounting profit plus implicit cost
  - D. Total revenue less opportunity cost
- [1.5]**
- Q. 13)** Which of the following measures protect insurance company against problem associated with self-selection?
- A. Operating a no claim discount system
  - B. Capping the claim amount
  - C. Screening
  - D. Operating deductible for claims
- [1.5]**
- Q. 14)** Which of the following will occur if a tax of 5% is imposed on suppliers?
- I. A movement along a demand curve
  - II. Supply curve shifts to left
  - III. A movement along a supply curve
  - IV. Supply curve shifts to right
- A. I and II
  - B. I and IV
  - C. III only
  - D. II only
- [1.5]**
- Q. 15)** Which one of the following is not true of kinked demand theory of oligopolies?
- A. The demand curve is relatively elastic above equilibrium price
  - B. The demand curve is less elastic below equilibrium price
  - C. Marginal cost curve moves within discontinuous section of marginal revenue curve
  - D. Marginal cost curve moves within discontinuous section of average revenue curve
- [1.5]**
- Q. 16)** As per the Central Bank's classification of money stock the difference between narrow money (M1) and Broad Money (M3) is –
- I. Demand deposits of the public
  - II. Post Office Saving Deposits
  - III. Time deposits of public with Banks
  - IV. Total Post Office Deposits
  - V. National Saving Certificates
- A. All of the above
  - B. Only (III)
  - C. I,II,III,IV
  - D. I and III
- [1.5]**
- Q. 17)** What refers to the portion of total deposits of commercial bank which it has to keep with itself in the form of liquid assets?
- A. CRR
  - B. SLR
  - C. Bank Rate
  - D. Repo Rate
- [1.5]**

- Q. 18)** In order to control credit
- A. CRR should be increased and Bank rate should be decreased
  - B. CRR should be decreased and Bank Rate should be increased
  - C. CRR should be increased and Bank Rate should be increased
  - D. CRR should be decreased and Bank Rate should be decreased
- [1.5]**
- Q. 19)** The Phillips Curve is a graphical depiction of the
- A. Positive relationship between inflation and output
  - B. Negative relationship between inflation and the output
  - C. Negative relationship between inflation and unemployment
  - D. Negative relationship between unemployment and output
- [1.5]**
- Q. 20)** India has run a trade deficit with Japan for some time. To eliminate this gap, it is necessary for the Rupee to \_\_\_\_\_ against the yen.
- A. Strengthen
  - B. Weaken
  - C. Compete
  - D. None of the above
- [1.5]**
- Q. 21)** According to the latest World Bank's estimates, India is the \_\_\_\_\_ largest economy, Just behind \_\_\_\_\_.
- A. Fifth , UK
  - B. Fifth , France
  - C. Sixth, UK
  - D. Sixth, Germany
- [1.5]**
- Q. 22)** What is GDP Deflator?
- A. Nominal GDP – Real GDP
  - B. Nominal GDP – Depreciation
  - C. Nominal GDP / Real GDP
  - D. Real GDP / Nominal GDP
- [1.5]**
- Q. 23)** Other things being equal, which one of the following statements is always TRUE?
- A. An appreciation of a country's exchange rate will increase its import volumes and decrease its export volumes
  - B. An appreciation of a country's exchange rate will increase its import expenditure and decrease its export revenues
  - C. A depreciation of country's exchange rate will decrease its import volumes and decrease its export volumes
  - D. A depreciation of a country's exchange rate will decrease its import expenditure and decrease its export revenues
- [1.5]**

- Q. 24)** The following data on the relationship between national income (Y) and consumer expenditure (C) in a closed economy with no taxes:
- |   |     |     |     |
|---|-----|-----|-----|
| Y | 500 | 600 | 700 |
| C | 400 | 480 | 560 |
- What is the value of the simple Keynesian multiplier?
- A. 0.8
  - B. 1.25
  - C. 4
  - D. None of the above
- [1.5]**
- Q. 25)** One way of reducing the natural level of unemployment would be to increase:
- A. Unemployment benefit
  - B. Government consumption expenditure
  - C. Information on job availability
  - D. The money supply
- [1.5]**
- Q. 26)** If an increase in the level of the money supply results in no change in either the nominal or real value of national income, then which of the following is TRUE?
- A. Interest rates must have risen
  - B. The velocity of circulation must have fallen
  - C. The price level must have risen by the same proportion as the increase in the money supply
  - D. Taxes must have risen
- [1.5]**
- Q. 27)** If a country can produce 10 units of product A or 4 units of product B the opportunity cost of 1 unit of B is:
- A. 0.4A
  - B. 10A
  - C. 2.5A
  - D. 1B
- [1.5]**
- Q. 28)** If an Indian firm wishes to avoid the risk of exchange rate movements, and is due to receive US Dollars in 90 days, it could-
- A. Purchase US dollars 90 days from now at the spot rate
  - B. Enter into a 90-day forward purchase of US dollars for Rupee
  - C. Enter into a 90-day forward sale of US dollars for Rupee
  - D. Sell US dollars 90 days from now at the spot rate
- [1.5]**
- Q. 29)** Which among these is a cost-push Inflation factor?
- A. Increase in public spending
  - B. Increased velocity of circulation
  - C. Income Tax reduction
  - D. Imposition of Indirect Tax
- [1.5]**

- Q. 30)** Foreign investment entails \_\_\_\_\_ change in the capital account of the country making the investment.
- A. Negative  
B. Positive  
C. No  
D. Uncertain [1.5]
- Q. 31)** Explain with help of diagram- monopolistic competition leads to a less efficient allocation of resources than under perfect competition. [4]
- Q. 32)** Consider a monopolist where the market demand curve for the produce is given by
- $$P = 520 - 2Q.$$
- This monopolist has marginal costs that can be expressed as  $MC = 100 + 2Q$ ,  $MR = 520 - 4Q$  and total costs that can be expressed as  $TC = 100Q + Q^2 + 50$ .
- i) Given the above information, what is this monopolist's profit maximizing price and output if it charges a single price? (2)
- ii) Calculate this single price monopolist's profit. (2)
- iii) At the profit maximizing quantity, what is this monopolist's average total cost of production (ATC)? (1)
- iv) At the profit maximizing quantity, what is the profit per unit for this single price monopolist? (1)
- [6]**
- Q. 33)** i) Describe the term "loss leader" and the main factor that a firm should consider in using a "loss leader" as a successful pricing strategy. (1.5)
- ii) List six factors that lead to plant economics of scale. (3)
- [4.5]**
- Q. 34)** Research has shown that plastic is not biodegradable, therefore it always exists, crowding our landfills and polluting our oceans. Assess with the use of diagram, how the use of plastic will result in dead weight welfare loss to society. [5]
- Q. 35)** Discuss whether price discrimination is in the public interest. [4]
- Q. 36)** Give four reasons why an oil and natural gas company might form a strategic alliance with a research laboratory to develop more commercially viable recovery processes. [4]
- Q. 37)** Let the Consumption Function be expressed as:
- $C = 40 + 0.8 Y_d$   
Autonomous Investment be  $I = 60$   
Government Expenditure be  $G = 10$   
Direct Taxes be  $T = 10$

And net transfer received by private sector be  $Tr = 5$

Calculate the equilibrium level of national Income.

[4]

**Q. 38)** Given the following data calculate the following:

- a) Net Domestic income
- b) Gross Domestic Income
- c) Net National Income
- d) Net National Product at Market Price

<u>Items</u>	<u>Rs. (Crore)</u>
Indirect Taxes	9,000
Subsidies	1,800
Depreciation	1,700
Mixed Income of Self Employed	28,000
Operating Surplus	10,000
Net Factor Income from Abroad	(300)
Compensation of Employees	24,000

[4]

**Q. 39)** i) Explain 8 differences between the Central Bank and the Commercial Bank.

(4)

ii) Macroeconomic policy can be broadly divided into monetary policy and fiscal policy. "Monetary policy is policy that employs the Central Bank's control over the supply and cost of money as an instrument for achieving the objectives of economic policy". Roughly we may say that monetary policy is credit control policy. In this context –

a) Explain the term Qualitative Credit Control measures adopted by the Central Bank.

(1.5)

b) Explain briefly Qualitative Credit Control Instruments used by the Central bank.

(3)

[8.5]

**Q. 40)** i) Explain the term Exchange Rate Index.

(1)

ii) Equilibrium Exchange rate in the foreign exchange market is often unfavorable to less developed countries. Why?

(2)

[3]

**Q. 41)** Prof Keynes mentioned four characteristics of the consumption function –

- a) Consumption function represents a fixed and specific relationship between national income and total expenditure.
- b) Marginal propensity to consume is greater than 0 but less than 1.
- c) Average propensity to consume decreases as national income increases.
- d) Marginal propensity to consume will remain constant or decrease along with the increase in the National Income.

Explain that all of the above characteristics hold true with the help of Consumption Function Curve.

[8]

\*\*\*\*\*