

**Entrance Examination, June, 2007**

**M A (Economics)**

**Time: 2 Hours**

**Maximum Marks: 100**

**HALL TICKET NUMBER**

**Instructions:**

1. Write the hall ticket number in the space provided above and also on the OMR answer sheet
2. Answers are to be marked on the OMR answer sheet only, following the instructions provided there upon
3. Handover both the question paper booklet and OMR answer sheet at the end of the examination
4. Use of calculators is permitted.
5. There are 100 questions in this paper: 25 questions in PART- A and 75 questions in PART- B
6. Each correct answer carries 1 mark. Each wrong answer carries 0.25 negative mark
7. This question paper contains a total of 19 pages excluding the OMR sheet.
8. The question paper has two parts – Part-A and Part-B. Marks obtained in Part-A will determine the merit rank in case of a tie in the total number of marks obtained.

**PART - A**

1. If the output of a firm falls by less than half when it halves its employment of all factors of production, it must be operating under the conditions of :
  - A) increasing returns to scale.
  - B) decreasing returns to scale.
  - C) constant returns to scale.
  - D) increasing returns to scale with respect to the variable factors of production.

2. A production function shows:
- A) the minimum output given the quantity of inputs
  - B) the maximum inputs required to produce a given quantity of output.
  - C) the maximum inputs required to produce the profit maximizing quantity of output.
  - D) the maximum output given the quantity of inputs.
3. If isoquants are drawn as L-shaped, then it implies that:
- A) the two inputs are perfect substitutes to each other.
  - B) the MRTS is constant.
  - C) the inputs must be used in fixed proportions
  - D) none of the above.
4. If a fisherman must sell all of his daily catch before it spoils for whatever price he is offered, once the fish are caught, the fisherman's price elasticity of supply for fresh fish is:
- A) Zero
  - B) Infinite
  - C) One
  - D) Unable to determine from this information.
5. The conditions necessary for a monopolist to be able to price discriminate include:
- A) Segmentable markets.
  - B) Differences in price elasticity of demand among the segments.
  - C) Inability of consumers to transfer products.
  - D) All of the above.
6. The 'compensated' demand curve is the demand curve that:
- A) shows only the income effect.
  - B) shows only the substitution effect.
  - C) shows both income and substitution effects
  - D) shows the demand curve for a Giffen good.
7. Suppose the price elasticity of demand for a good has been estimated to be -2. If quantity demanded increased by 10%, price must have changed to become:
- A) 5% lower
  - B) 5% higher
  - C) 10% higher
  - D) 10% lower

8. For real numbers  $a, b, c, d$  with  $b, d \neq 0$ ,

- A)  $(a/b) + (c/d) = (ad + bc) / bd$
- B)  $(a/c) + (c/d) = (ad + bc) / bd$
- C)  $(a/d) + (d/b) = (ad + bc) / bd$
- D)  $(a/b) + (c/b) = (ad + bc) / bd$

9. If  $0 \leq a \leq b$ , then

- A)  $a^2 \leq ab$
- B)  $ab \leq b^2$
- C)  $a^2 \leq b^2$
- D) All of them are true

10. Let a rectangle have sides  $X$  and  $Y$  as length and breadth respectively. If a square of the same area is to be formed, then the length of each side will be:

- A)  $(XY)^{1/2}$
- B)  $X^2$
- C)  $Y^2$
- D)  $X(Y)^{1/2}$

11. The factors of  $x^2 + 6x + 5$  are:

- A)  $(x + 1)$  and  $(x + 5)$
- B)  $(x + 2)$  and  $(x + 1)$
- C)  $(x + 5)$  and  $(x + 2)$
- D)  $(x + 5)$  and  $(x + 3)$

12. Solve the inequality  $-2x + 3 < 11$ .

- A)  $x < -4$
- B)  $x < 4$
- C)  $x > -4$
- D)  $x > 4$

13. The ordered pair  $(3, 0)$  is found

- A) on the  $y$ -axis.
- B) in the second quadrant.
- C) in the fourth quadrant.
- D) on the  $x$ -axis.

14. Which of the following includes net indirect taxes and depreciation?
- A) GDP at MP
  - B) GNP at FC
  - C) NDP at MP
  - D) NNP at FC
15. Simplify the expression  $\ln(e^{7 \ln x})$
- A)  $\ln 7$
  - B) 7
  - C)  $x$
  - D)  $7 \ln x$
16. An economy is growing every year by 10 per cent and its population is growing every year by 2 per cent. Then its per capita income will double in approximately
- A) in 20 years
  - B) in 15 years
  - C) in 12 years
  - D) in 9 years
17. In the classical framework, if real output increases by 6 per cent and price level changes by 11 per cent. How much would have nominal money supply changed approximately? Assume  $v$  constant.
- A) 6.6 per cent
  - B) 17.0 per cent
  - C) 5.0 per cent
  - D) 2.0 per cent
18. Which of the following statements is not true?
- A) A square matrix may be inverted only if it is not singular.
  - B) A non-singular matrix is invertible. Only if it is symmetric.
  - C) Even a rectangular matrix may be inverted using methods of generalized inverse.
  - D) The transpose of inverse of a non-singular matrix is the inverse of its transpose.
19. In the short-run, a competitive firm's supply curve is:
- A) its average variable cost curve to the right of the marginal cost curve
  - B) its marginal cost curve above the average variable cost curve
  - C) its marginal cost curve above its average cost curve
  - D) the horizontal summation of the marginal cost curves

20. If a monopolist had no costs, the best possible price would be where demand is:
- A) infinitely elastic
  - B) relatively (but not perfectly) elastic
  - C) unit elastic
  - D) relatively (but not completely) inelastic
21. If a profit-maximizing firm's marginal product of labour equals one ton of output, while the marginal product of capital equals 7 tons of output and the use of capital is priced at Rs. 14 per unit, then:
- A) the price of labour must be Rs. 2
  - B) the price of labour must be Rs. 7
  - C) the price of labour must be Rs. 14 as well
  - D) none of the above.
22. A conclusion that monopolistic competition will be characterized by excess capacity means that the firm:
- A) produces output less than the profit-maximizing level of output.
  - B) produces output more than the profit-maximizing level of output.
  - C) does not operate its plant at the minimum point of the long-run average cost curve..
  - D) does not operate its plant at the minimum point of the long-run marginal cost curve.
23. The basic assumption of the kinked demand model is:
- A) each duopolist assumes that his/her rival's price is invariant with respect to his/her own price
  - B) each duopolist assumes that his/her rival's price is invariant with respect to his/her own output
  - C) duopolists recognize their mutual interdependence and agree to act in unison
  - D) each duopolist assumes that if he/she lowers the price, his/her rivals will do the same but that if he/she raises the price, his/her rivals may not follow suit.
24. When a good is an inferior good, the 'non-compensated' demand curve will be:
- A) relatively more elastic than the compensated demand curve.
  - B) relatively more inelastic than the compensated demand curve.
  - C) equally elastic but with a different intercept than the compensated demand curve.
  - D) parallel to the compensated demand curve and to the right.

25. The expenditure multiplier is larger when,

- A) MPS is lower
- B) MPC is lower
- C) real wages are lower
- D) money supply is lower

### PART- B

26. A person spends all his/her wealth on two goods. If one of them is an inferior good, then the following is true of the other good:

- A) It can be a Giffen good
- B) It can not be an inferior good
- C) It can not be a Giffen good but can be an inferior good
- D) Need more information

27. Which of the following market structure mimics the price as in a perfectly competitive market?

- A) Bertrand model
- B) Cournot model
- C) Monopolistic competition
- D) Stackelberg leader-follower model

28. The price elasticity of demand is unitary at all points in :

- A) a linear demand function
- B) a quadratic demand function
- C) a rectangular hyperbola function
- D) a cubic demand function.

29. Minimum balance between 10<sup>th</sup> and the last day of a month qualifies for interest for that month. The annual rate of interest is 6%. The following shows a part of statement for Ms Rita for the months from January to the end of the June.

Date	Withdrawals	Deposits	Balance
1 January	---	Rs. 500	Rs. 500
9 January	---	Rs. 4,500	Rs. 5,000
7 April	Rs. 3,000	---	Rs. 2,000
19 June	---	Rs. 18,000	Rs. 20,000

What is the interest earned by Ms Rita during January to June?

- A) Rs. 195  
 B) Rs. 105  
 C) Rs. 75  
 D) Rs. 155
30. Looking at the following data pertaining to the students of an M A course:

Class	No. of Students	Mean weight (in kgs)
M A (I year)	35	52
M A (II year)	25	60

What is the mean weight of all the M A students?

- A) 56.1 kgs.  
 B) 55.3 kgs.  
 C) 54.8 kgs.  
 D) 54.1 kgs.
31. A principal amount of Rs. 350 becomes Rs. 700 in 5 years when there is compound rate of interest. What will the amount be in 20 years?
- A) Rs. 1400  
 B) Rs. 1750  
 C) Rs. 5600  
 D) None of the above

32. The relation "... is perpendicular to ...", defined on a set of straight lines, is :

- A) a reflexive relation  
 B) a symmetric relation  
 C) a transitive relation  
 D) an equivalence relation

33. Consider three matrices A, B, C. A is a  $2 \times 3$  matrix and B and C are  $3 \times 3$  matrices. Given the above, which of the following is true?
- A)  $A + B = B + A$
  - B)  $A \cdot B = B \cdot A$
  - C)  $A \cdot (B + C) = A \cdot B + A \cdot C$
  - D) All of the above
34. Let  $\alpha$  and  $\beta$  represent the slope coefficients in the regression of X on Y, and Y on X respectively. Then, the product  $\alpha \cdot \beta$  is equal to:
- A) the coefficient of correlation between X and Y
  - B) square of the coefficient of correlation between X and Y
  - C) unity
  - D) square root of the coefficient of correlation between X and Y
35. When the marginal physical productivity of labour is zero or negative, the situation is known as:
- A) Frictional unemployment
  - B) Technological unemployment
  - C) Disguised unemployment
  - D) Structural unemployment.
36. India's X<sup>th</sup> Five Year Plan coincided with the period:
- A) 1997-2002
  - B) 2002-2007
  - C) 2000-2005
  - D) 2003-2008
37. Which among the following has the largest area?
- A) Assam
  - B) Nagaland
  - C) Arunachal Pradesh
  - D) Tripura
38. The literacy rate in percent in India, according to the 2001 Census is:
- A) about 65 percent
  - B) about 60 percent
  - C) exactly equal to 56 percent
  - D) between 50 to 55 percent.



39. According to the classical theory of trade, trade takes place between countries because of differences in
- A) labour productivities
  - B) domestic demand
  - C) scale of production
  - D) supply of output
40. Which of the following are known as the Bretton Woods institutions?
- A) IMF and IBRD
  - B) IMF and WTO
  - C) GATT and WTO
  - D) IBRD and WTO
41. Outward-looking strategy of development means:
- A) depending more on external market
  - B) depending more on domestic market
  - C) depending on both external and domestic markets
  - D) restricting foreign trade
42. Planning Commission defines poverty in India in terms of:
- A) minimum caloric intake
  - B) minimum income
  - C) employment
  - D) minimum expenditure
43. Devaluation of currency refers to
- A) lowering of the value of domestic currency in terms of the foreign currencies
  - B) raising the value of domestic currency in terms of the foreign currencies
  - C) decreasing money supply
  - D) controlling fiscal deficit
44. Leontief paradox refers to a situation in which:
- A) a country rich in capital resources exporting labour-intensive commodities
  - B) a country rich in capital resources exporting capital-intensive commodities
  - C) a country rich in labour resources exporting labour-intensive commodities
  - D) None of the above

45. Current account of balance of payments comprises of:
- A) exports and imports of goods
  - B) exports and imports of goods and services
  - C) exports and imports of services
  - D) net capital flows
46. One of the following is called as paper gold:
- A) US Dollar
  - B) British Pound Sterling
  - C) SDRs
  - D) Euro
47. The Heckscher-Ohlin theory of trade states that trade takes place between nations because of differences in
- A) technologies
  - B) labour productivities
  - C) factor endowments
  - D) comparative cost advantages
48. The book titled, “ An enquiry into the nature and causes of wealth of nations “ written by Adam Smith, was first published in the year:
- A) 1779
  - B) 1776
  - C) 1812
  - D) 1915
49. In which of the following taxes, the impact and incidence are on different persons?
- A) Income tax
  - B) Entertainment tax
  - C) Expenditure tax
  - D) Property tax
50. In which of the following budgets in India, the lower limit of taxable income was raised to rupees one lakh and ten thousand?
- A) Budget 2004-05
  - B) Budget 2005-06
  - C) Budget 2006-07
  - D) Budget 2007-08

51. In the Indian economy, while green revolution was associated with achieving self-sufficiency in food grains, the yellow revolution has been associated with:

- A) Paddy
- B) Potato
- C) Edible oils
- D) Chillies

52. The PL-480 Agreement in 1956 between India and USA was related to:

- A) Imports of pulses and Linseed by India
- B) Imports of food grains by India
- C) Exports of cotton by India to USA
- D) Imports of machinery and equipment by India from USA

53. "Asian Drama" was written by:

- A) H W Singer
- B) Gunnar Myrdal
- C) Arthur Lewis
- D) D R Gadgil

54. If a nation has a comparative advantage in the production of a good,

- A) It can produce that good at a lower opportunity cost than its trading partner
- B) It can benefit by restricting imports of that good.
- C) It can produce that good using fewer resources than its trading partner.
- D) It must be the only country with the ability to produce that good.

55. The price elasticity of demand for a good having an inverse demand function,  $P = 4 - 0.2 Q$ , ( $Q$  is the quantity of the good,  $P$  is the price) at  $P = 2$  is:

- A) 3
- B) 2
- C) -1
- D) -2

56. If  $dy/dx = 3 \cdot e^x - 0.5 \cdot x$ , then

- A)  $y = 3 \cdot e^x - 0.5$
- B)  $y = 3 \cdot \ln x - 0.5$
- C)  $y = 3 \cdot e^x - 0.25 x^2 + c$
- D)  $y = 3 \cdot \ln x - 0.25 x^2 + c$

where  $c$  is an arbitrary constant.

57. Which of the following is true?
- A) If WARP (weak axiom of revealed preference) holds for every individual, it holds for the economy as a whole.
  - B) Even if WARP holds for every individual, it may not hold for the economy as a whole.
  - C) WARP always holds for the economy as a whole.
  - D) None of the above.
58. Suppose the government increases its purchases by Rs.16 billion. If the multiplier effect exceeds the crowding-out effect, then
- A) the aggregate supply curve shifts to the right by more than Rs.16 billion
  - B) aggregate demand curve shifts to the left by more than Rs.16 billion.
  - C) the aggregate demand curve shifts to the right by more than Rs.16 billion
  - D) the aggregate supply curve shifts to the left by more than Rs.16 billion.
59. What is the mathematical expectation of the number on a die when thrown?
- A) 3.5
  - B) 0.17
  - C) 0.5
  - D) 3.0
60. A null hypothesis is a hypothesis:
- A) which does not permit arbitrariness in testing for its rejection.
  - B) which is tested for possible rejection under the assumption that it is true
  - C) which carries a higher likelihood for its acceptance
  - D) which is based on critical region.
61. Average cost function for a firm is given as:  $y = 13 + 3x^2 + 0.5x$  where, y is average cost and x is output. Considering only strictly positive values of output, this average cost function,
- A) has a minimum value but no maximum value.
  - B) has a maximum value but no minimum value.
  - C) has both a maximum value and a minimum value.
  - D) has no maximum value and also no minimum value.
62. VAT is imposed-
- A) directly on consumer
  - B) on final stage of production
  - C) on first stage of production
  - D) on all stages between production and final sale

63. If two dice are thrown, what is the probability that their sum is greater than 8?
- A)  $5/18$
  - B)  $1/3$
  - C)  $1/2$
  - D)  $2/9$
64. If a country's policy makers were to continuously use expansionary monetary policy in an attempt to hold unemployment below the natural rate, the long-run result would be
- A) an increase in the level of output.
  - B) a decrease in the unemployment rate.
  - C) an increase in the rate of inflation.
  - D) all of the above.
65. Gross fiscal deficit in India is defined as:
- A) Revenue deficit + Capital outlay - Disinvestment
  - B) Primary deficit + Interest payments
  - C) Primary deficit + Revenue deficit + Interest Payments
  - D) None of the above
66. If the stock market reflects all available information in a rational way, then
- A) shares are overvalued.
  - B) it becomes easy for the investors to predict the future stock prices.
  - C) stock market is said to follow a random walk..
  - D) shares are undervalued.
67. An export subsidy should have the opposite effect of
- A) a government budget deficit.
  - B) capital flight.
  - C) an increase in private saving.
  - D) a tariff.
68. Foodgrain production (in million tonnes) in India during 2005-06 touched:
- A) 190.0
  - B) 208.3
  - C) 260.0
  - D) 150.9

69. According to the quantity theory of money, an increase in money supply will
- A) increase the interest rate.
  - B) decrease the price level.
  - C) increase the price level.
  - D) decrease the interest rate.
70. The Special Economic Zones (SEZ) Act, 2005 in India provides for:
- A) Single window clearance for setting up a unit in SEZs.
  - B) Simplified compliance procedures and documentation with an emphasis on self certification.
  - C) Dispensing with the requirement for bank guarantees to reduce transaction costs.
  - D) All the above.
71. Chi-square test may be applied:
- A) to test goodness of fit
  - B) to test the significance of correlation coefficient
  - C) to test the differences in sample means
  - D) All the above.
72. Stagflation signifies coexistence of:
- A) rising prices and rising output
  - B) rising prices and falling output.
  - C) falling prices and falling output.
  - D) falling prices and rising output.
73. An inflation tax is:
- A) usually levied by governments with balanced budgets.
  - B) an explicit tax paid quarterly by businesses based on the amount of increase in the prices of their products
  - C) a tax borne only by people who hold interest bearing savings accounts
  - D) a tax on people who hold money.
74. If there is a general shortage of liquidity in the money market then
- A) call money rates will fall and the central bank is expected to reduce the supply of liquidity to the banks
  - B) call money rate will rise and the central bank may be expected to increase the supply of liquidity to the banks
  - C) short-term interest rates will rise, leading to an increase in long-term interest

- D) long-term interest rates will rise and the central bank should raise its interest rate in response
75. A free rider is a person who
- A) receives the benefit of a good but avoids paying for it.
  - B) pays for a good but fails to receive any benefit from the good.
  - C) fails to produce goods but is allowed to consume goods.
  - D) produces a good but fails to receive payment for the good.
76. Broad money ( $M_3$ ) in India consists of:
- A) . Currency with the public, demand deposits with banks, other deposits
  - B) Currency with the public, Term deposits with banks, Demand deposits with banks, other deposits with the RBI
  - C) Currency in circulation, Bankers' deposits with RBI, Other deposits
  - D) Currency with the public, demand deposits with banks, postal savings deposits
77. The percentage share of services in real GDP in India during 2005-06 was
- A) 56.3
  - B) 58.3
  - C) 59.7
  - D) 60.7
78. The activities of stock market in India are regulated by:
- A) Credit Corporation of India Limited
  - B) Securities and Exchange Board of India
  - C) National Stock Exchange
  - D) Reserve Bank of India
79. As on March 31, 2006, India's foreign exchange reserves stood at (in billion US \$) :
- A) 179.32
  - B) 112.96
  - C) 151.62
  - D) 141.51

80. India's current account balance (as a proportion to GDP) during 2005-06 was
- A) - 2.0 %
  - B) - 1.3 %
  - C) 4.0 %
  - D) 2.5 %
81. During May to October, a baby is exposed to 50% chance of catching cold, 50% chance of suffering from diarrhea and 50% chance of developing boils. If these are independent events, what is the probability of the baby suffering from at least one of these problems during this period?
- A)  $3/2$
  - B)  $7/8$
  - C)  $1/2$
  - D)  $1/8$
82. If the dot product of two vectors is zero, then
- A) they are parallel to each other
  - B) They are perpendicular to each other
  - C) They make an acute angle
  - D) They make an obtuse angle.
83. Let X be non empty finite set and A,B be subsets of X such that their number of elements are  $n(X) = 45$ ,  $n(A) = 27$ ,  $n(B) = 33$ . Then:
- A)  $A \cap B \neq \emptyset$
  - B)  $A \cup B = X$
  - C)  $A \subset B$
  - D)  $X \subset (A \cup B)$
84. For an  $m \times n$  matrix P
- A) rank P = m
  - B) rank P = n
  - C) rank P =  $\min \{ m, n \}$
  - D) rank P  $\leq \min \{ m, n \}$
85. An indicator of inflation in India is:
- A) Wholesale Price Index (WPI)
  - B) Consumer Price Index (CPI)
  - C) GDP deflators
  - D) Reverse repo rate



86. If you are given ten time series observations, and the 6<sup>th</sup> observation is missing (not available), it is possible to estimate the missing observation using:
- A) Interpolation techniques
  - B) Extrapolation techniques
  - C) Forecasting techniques
  - D) All the above
87. Fisher's ideal index number:
- A) is superior to Laspeares and Pasche index numbers
  - B) satisfies time and factor reversal tests
  - C) is a superlative index number
  - D) All the above
88. The issues associated with capital account convertibility were examined by
- A) Narasimham Committee
  - B) Tarapore Committee
  - C) Rangarajan Committee
  - D) Y V Reddy Committee
89. A probability distribution which deals with the occurrence of rare events :
- A) Bernouli distribution
  - B) Poisson distribution
  - C) Pareto
  - D) Exponential distribution
90. The 12<sup>th</sup> Finance Commission covers the period:
- A) 2005-06 to 2009-10
  - B) 2001-02 to 2006-07
  - C) 2006-07 to 2010-11
  - D) None of the above
91. The Phillips curve shows that
- A) the business cycle has been eliminated.
  - B) an increase in inflation temporarily increases unemployment.
  - C) inflation and unemployment are unrelated in the short run.
  - D) a decrease in inflation temporarily increases unemployment.

92. Which of the following products would be least capable of producing an externality?
- A) inoculations against disease
  - B) cigarettes
  - C) food
  - D) education
93. Which of the following will not shift a country's production possibilities frontier outward?
- A) an advance in technology
  - B) an increase in the labour force
  - C) an increase in the capital stock
  - D) a reduction in unemployment
94. When wealthy alumni provide charitable contributions to their universities to reduce the tuition payments of current students, it is an example of
- A) an attempt to internalize a positive externality.
  - B) an attempt to internalize a negative externality.
  - C) a Pigovian tax
  - D) a command-and-control policy.
95. Which of the following is an example of a public good?
- A) Light house
  - B) Whales in the ocean
  - C) Public phone
  - D) Apples on a tree in a public park
96. The equation  $2x^2 - 6\sqrt{2}x + 9 = 0$  has
- A) distinct real roots
  - B) identical real roots
  - C) distinct complex roots
  - D) identical complex roots

97. Which of the following statements is true concerning National Investment Fund (NIF)?
- A) The proceeds from disinvestments of central public sector enterprises are to be channelised in to NIF.
  - B) NIF is a professionally managed institution.
  - C) Part of the income from NIF is to be used for financing specific social sector projects
  - D) All the above
98. Which of the following sub-sectors has the highest share of services in GDP during 2005-06 in India?
- A) Trade, hotels, transport and communication
  - B) Financing, insurance, real estate and business services
  - C) Community, social and personal services
  - D) Construction.
99. Banking Ombudsman Scheme has been in operation since:
- A) 2002
  - B) 1995
  - C) 2006
  - D) 1991
100. Which of the following is **not** a measure of monetary policy?
- A) Reduction of bank rate
  - B) Increasing the CRR
  - C) Reducing income tax rate
  - D) Increasing money supply

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