

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2012.

Ph.D. (ECONOMICS)

COURSE CODE : 108

Register Number :

Signature of the Invigilator
(with date)

COURSE CODE : 108

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. If nominal GDP increases, which of the following will always take place?
 - (A) Prices will have increased but output will have fallen or remained the same
 - (B) Both output and prices will have increased
 - (C) Output will have increased but prices will have fallen or remained the same.
 - (D) None of the above

2. A fall in the government's budget deficit will lower
 - (A) Saving and GDP
 - (B) Equilibrium GDP and consumption
 - (C) Consumption and saving
 - (D) All the above are correct

3. Suppose nominal GDP is Rs.566 crores in 1986, Rs. 600 crores in 1987 and Rs 642 crores in 1988. If 1986 is the base year, the price index is 105 in 1987, and real growth in 1988 is 3%, from this information, the price index in 1988 is
 - (A) Less than 109
 - (B) 109
 - (C) Greater than 109 but less than 110
 - (D) 110 or over

4. In the classical model, output varies in response to
 - (A) Variation in money supply
 - (B) Variation in prices
 - (C) Both (a) and (b) are correct
 - (D) Both (a) and (b) are wrong

5. In the classical framework, a cut in marginal income tax rate
 - (A) Increases labour supply
 - (B) Reduces real wage
 - (C) Increases output
 - (D) All are true.

6. In the simple Keynesian model of the determination of income, the price level is assumed to be
 - (A) Endogenous and to remain constant
 - (B) Exogenous and to remain constant
 - (C) Exogenous and to gradually change
 - (D) Endogenous and to gradually change.

7. If investment is interest elastic, then a decrease in the rate of interest
 - (A) Increase the level of investments which then decrease the level of income
 - (B) Increase the level of investments which then increase the level of income
 - (C) Decrease the level of investments which then decrease the level of income
 - (D) Decrease the level of investments which then increase the level of income

8. Let the multiplier be 4 and γ be interest elasticity of investment. An increased government spending of Rs. 500 results in increased income of Rs. 2000 provided
- γ is close to infinity
 - γ is zero
 - Interest elasticity of money demand is close to infinity
 - None of the above
9. Fiscal policy is more effective if
- Income elasticity of money demand is zero
 - Interest elasticity of money demand is higher
 - Investment demand is interest inelastic
 - All of the above are true
10. Crowding-out effect is stronger if
- investment is more interest elastic
 - investment is less interest elastic
 - investment is interest inelastic
 - none of the above
11. If Ricardian equivalence holds good, then a tax cut tends to induce
- Consumption expenditure
 - Investment expenditure
 - Money supply to rise
 - None of the above
12. The IS equation is $Y = 500 - 2000i$, which of the following sets of interest and income does not represent a point on the IS schedule?
- $i = 0.07$ and $y = 360$,
 - $i = 0.05$ and $y = 400$,
 - $i = 0.02$ and $y = 450$,
 - $i = 0.10$ and $y = 300$
13. The slope of LM schedule is smallest when,
- There is no speculative demand for money and transaction demand for money is completely interest inelastic
 - The speculative and transaction demand for money is are interest inelastic
 - There is a small transaction demand for money and the speculative demand for money is interest inelastic
 - The demand for money is highly interest inelastic

14. An increase in the marginal propensity to import will
- (A) Lower the multiplier and reduce equilibrium income
 - (B) Raise imports and raise equilibrium income
 - (C) Raise the multiplier and reduce equilibrium income
 - (D) Lower imports and raise equilibrium income
15. If business firms are more optimistic during the expansion phase of the business, they
- (A) Raise their expected rates of return on projects and investment decreases.
 - (B) Lower their expected rates of return on projects and investment increases
 - (C) Lower their prices and increase investment
 - (D) Raise their expected rates of return on projects and investment increases
16. Suppose that steel produced this year is used to produce a car sold next year. The value of the steel _____ included in GDP this year as _____
- (A) Is; an adjustment to inventories
 - (B) Is not; an adjustment to inventories
 - (C) Is; an intermediate good
 - (D) Is not; an intermediate good
17. The yield curve exhibits
- (A) The yield on stocks vs. the yield on bonds
 - (B) The yield on stocks vs. the yield on treasury bills
 - (C) The yield on bonds vs. the yield on treasury bills
 - (D) The yield on treasury bills vs. the yield on bank accounts
18. The real interest rate is the
- (A) Nominal interest rate less the expected rate of inflation
 - (B) Nominal interest rate plus the expected rate of inflation
 - (C) Observed interest rate less the expected rate of inflation
 - (D) Both (a) and (c) above

19. A reduction in inventory is
- (A) Not considered in the national income accounts
 - (B) Entered as positive investment in the national accounts
 - (C) Entered as negative investment in the national accounts
 - (D) Entered as a depreciation item in the national accounts
20. Rational expectations implies that
- (A) The short run Phillips curve becomes vertical
 - (B) People no longer persistently over- or under-estimate inflation
 - (C) The short run trade-off of inflation versus unemployment disappears
 - (D) Movements up the long-run Phillips curve are faster than movements down it
21. Interest rate parity claims that
- (A) Real interest rates are identical across countries
 - (B) Nominal interest rates are identical across countries
 - (C) Real interest rates are identical across countries except for a risk differential
 - (D) Nominal interest rates are identical across countries except for a risk differential
22. Under flexible exchange rates a small open economy should
- (A) Lose control of its monetary policy
 - (B) Be insulated from its trading partners' inflation
 - (C) Tend to experience the inflation of its trading partners
 - (D) Find that changes in its interest rates match changes in its trading partner's interest rates
23. If we are at full employment and the rate of growth of our money supply increases, in the long run we should expect
- (A) A fall in bond prices and our exchange rate
 - (B) An increase in bond prices and our exchange rate
 - (C) An increase in bond prices and a fall in our exchange rate
 - (D) A fall in bond prices and an increase in our exchange rate
24. In countries experiencing hyperinflation we should see
- (A) Low interest rates and a depreciating currency
 - (B) High interest rates and a depreciating currency
 - (C) Low interest rates and an appreciating currency
 - (D) High interest rates and an appreciating currency

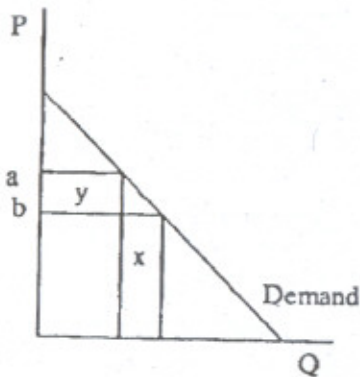
25. "The surest way to sustain the exchange value of our currency is to maintain its purchasing power at home." The rationale behind this statement is that PPP says that
- (A) Low inflation will cause our exchange rate to fall slowly
 - (B) Zero inflation will cause our exchange rate to be constant
 - (C) High inflation will cause our exchange rate to rise quickly
 - (D) Inflation lower than our trading partners inflation causes our exchange rate to rise
26. The central bank, which handles the foreign exchange reserve fund for the government, sells reserves and buys dollars when it wants to
- (A) Lower the interest rate
 - (B) Stimulate economic activity
 - (C) Stimulate demand for exports
 - (D) Prevent the exchange rate from falling
27. A country that is buying its own currency to maintain a given exchange rate
- (A) Has a flexible exchange rate
 - (B) Has an undervalued currency
 - (C) Has a balance of payments surplus
 - (D) Is automatically decreasing its money supply
28. A country with an undervalued currency
- (A) Is hurting exporters
 - (B) Will have a balance of payments deficit
 - (C) Will accumulate reserves of foreign currency
 - (D) Will experience downward pressure on its exchange rate
29. A sterilization policy applied after a decrease in the money supply should cause
- (A) The exchange rate to flex
 - (B) No change in our foreign exchange reserves
 - (C) Our foreign exchange reserves continually to fall
 - (D) Our foreign exchange reserves continually to rise
30. The existence of the international sector causes fiscal policy to
- (A) Be weaker, but only under fixed exchange rates
 - (B) Be stronger, but only under fixed exchange rates
 - (C) Be stronger, but only under flexible exchange rates
 - (D) Be completely ineffective, but only under a fixed exchange rate

31. As its output increases, a firm's short-run marginal cost will eventually increase because of
- (A) Diseconomies of scale
 - (B) Inefficient production
 - (C) The firm's need to break even
 - (D) Diminishing returns
32. At any given point on an indifference curve, the absolute value of the slope equals
- (A) Unity-otherwise there would be no indifference
 - (B) The marginal rate of substitution
 - (C) The consumer's marginal utility
 - (D) None of the above
33. An indifference curve is
- (A) A collection of market baskets that is equally desirable to the consumer
 - (B) A collection of market baskets that the consumer can buy
 - (C) A curve whose elasticity is constant for every price
 - (D) A curve which passes through the origin and includes all of the market baskets that the consumer regards as being equivalent
34. If the prices of both goods increase by the same percent, the budget line will
- (A) Shift parallel to the left
 - (B) Shift parallel to the right
 - (C) Pivot about the x axis
 - (D) None of the above
35. Cardinal utility theory assumes that consumers can
- (A) Rank baskets of goods as to their preference
 - (B) Determine the number of utils that can be derived from consuming all goods
 - (C) Determine the marginal rate of substitution between goods
 - (D) All of the above
36. The income effect of a price change
- (A) Is always positive
 - (B) Is always negative
 - (C) May be positive or negative
 - (D) Is associated with a change in nominal income

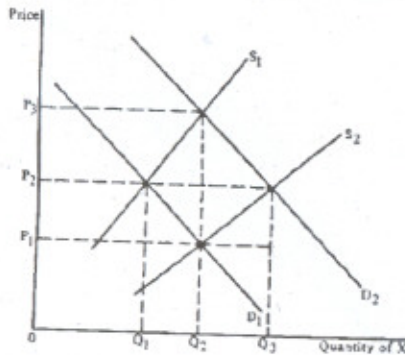
37. If the demand curve for a good is downward sloping, then the good must be
 (A) Normal (B) Inferior
 (C) Giffen (D) Either (a) or (b)
38. Price elasticity at a given price is not affected by
 (A) The price of substitutes (B) A change in supply
 (C) A change in tastes (D) The consumer's income
39. If the income elasticity of demand is +4
 (A) The good is an inferior good (B) The good is an inelastic normal good
 (C) The good is an elastic normal good (D) The good is an elastic inferior good
40. A negatively sloped isoquant implies
 (A) Products with negative marginal utilities
 (B) Products with positive marginal utilities
 (C) Inputs with negative marginal products
 (D) Inputs with positive marginal products
41. Which of the following would cause the demand curve for an input to shift?
 (A) A change in technology
 (B) A change in demand for the product being produced
 (C) An increase in the number of firms in the industry
 (D) All of the above
42. A monopsony is
 (A) The sole supplier of an input (B) The sole supplier of an output
 (C) The sole buyer of some type of input (D) A unionized industry
43. A competitive firm will hire inputs up to the point where
 (A) The price of the input equals its marginal physical product of the input
 (B) The marginal product of the input reaches a maximum
 (C) The price of the input equals the value of the marginal product of the input
 (D) The price of the input equals the price of the output
44. The kinked demand curve is used to
 (A) Illustrate the difference between pure and differentiated oligopoly
 (B) Explain the stability of oligopolistic prices
 (C) Illustrate the nature of zero-sum games
 (D) Illustrate the linear programming problem faced by the firm

45. A typical Cournot solution is defined as
- (A) One in which the solution is identical to the purely competitive market
 - (B) One in which the solution is identical to the monopoly solution
 - (C) One in which the output is above the monopoly and below the purely competitive result
 - (D) None of the above
46. If a monopoly is unable to cover its short-run variable costs, it should
- (A) Shut down
 - (B) Raise price
 - (C) Lower price
 - (D) Increase output
47. If the monopolist maximizes profits when marginal revenue equals marginal cost equals average cost, economic profits must be
- (A) Negative
 - (B) Positive
 - (C) Zero
 - (D) either (a) or (c)
48. The statement that marginal cost = marginal revenue leads to profit maximization of loss minimization is true
- (A) All the time
 - (B) Only in the long run
 - (C) Only if marginal cost is rising at the point of equality
 - (D) Only if average total cost is falling at the point of equality
49. In the short run, no firm operates with a loss, unless
- (A) Variable cost equals fixed cost
 - (B) Variable cost falls short of fixed cost
 - (C) Total revenue covers variable costs
 - (D) Total revenue covers fixed cost

50. In the figure below, for the demand curve shown, marginal revenue for the price reduction from a to b can be measured by
- (A) Adding $x + y$ (B) Subtracting x from y
- (C) Measuring only x (D) Subtracting y from x



Answer 51 and 52 from the figure:



51. If the initial demand and supply curves are D_1 and S_1 , equilibrium price and quantity are
- (A) OP_2 and OQ_3 (B) OP_1 and OQ_2 (C) OP_2 and OQ_1 (D) OP_3 and OQ_2
52. If the demand curve shifts from D_1 to D_2 , one could say that
- (A) The quantity demanded has decreased to Q_1 and price has fallen to P_2
- (B) There had been an increase in demand for X
- (C) The price of a good which is a substitute for X must have fallen
- (D) The higher price of X (P_3) has caused the quantity demanded of X to fall from OQ_3 to OQ_2
53. The slope of the total variable cost curve equals
- (A) Average variable cost (B) Marginal cost
- (C) Average cost (D) Marginal physical product

54. In the short run, a firm's fixed cost
- (A) Is zero
 - (B) Cannot be avoided
 - (C) Can be avoided only by cutting production to zero.
 - (D) Is not correctly described by any of the above
55. An isocost line identifies
- (A) The least costly combination of inputs needed to produce a given level of output
 - (B) The relative prices of inputs
 - (C) The technological relationships among inputs
 - (D) The rate at which one input can be substituted for another in the production process
56. The demand curve for labor is derived from
- (A) The market labor demand curve
 - (B) The demand curve for the output produced by the labor
 - (C) The labor supply curve of the firm
 - (D) The market labor supply curve
57. Which of the following indicates the two goods are complements?
- (A) A positive income elasticity
 - (B) A horizontal demand curve
 - (C) A negative cross price elasticity
 - (D) A positive cross price elasticity
58. At a Nash Equilibrium
- (A) The supply curve intersects the demand curve
 - (B) The equilibrium is unstable and each party would like to switch strategies
 - (C) Neither party has an incentive to deviate from his or her strategy
 - (D) No additional output could be possibly produced
59. The condition that $P = MC$ is direct requirement for which type of efficiency?
- (A) Distributive efficiency
 - (B) Technical efficiency
 - (C) Efficiency in production
 - (D) Allocative efficiency
60. Indifference curves that intersect would be illogical constructs because
- (A) More is better than less.
 - (B) Of diminishing marginal utility.
 - (C) Of the transitivity property of indifference theory.
 - (D) Of both a and c above.

61. The matrix $\begin{bmatrix} a & b & c \\ d & d & e \\ e & e & f \end{bmatrix}$ is known as
- (A) Square matrix (B) A symmetric matrix
(C) A scalar matrix (D) Orthogonal matrix
62. If A is an $n \times n$ matrix and α is a real number, then
- (A) $\alpha A = \alpha^n A$ (B) $\alpha|A| = \alpha^n|A|$ (C) $|\alpha A| = \alpha^n|A|$ (D) $|\alpha|A| = \alpha^n|A|$
63. The value of the determinant $\begin{vmatrix} 2 & 1 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix}$ is equal to
- (A) -9 (B) 9 (C) 10 (D) -10
64. If $AR = (15 - Q)$ then MR is equal to
- (A) $15 - Q^2$ (B) $15Q - Q^2$ (C) $15Q - Q$ (D) $15Q^2 - Q$
65. If $Z = 3y$ where $Z = 3y^2$ then $\frac{dz}{dx}$ is equal to
- (A) $(2x + 5)$ (B) $10(2x + 5)$ (C) $12(2x + 5)$ (D) $11(2x + 5)$
66. If $y = x^5 + x$, then $\frac{dy}{dx}$ is equal to
- (A) $\frac{1}{5x^4 + 1}$ (B) $5x^4 + 1$ (C) $5x^4$ (D) x^{5+x}
67. $\int_1^5 3x^2 dx$ is equal to
- (A) 120 (B) 124 (C) 110 (D) 100
68. $\int_1^\infty \frac{dy}{dx}$ is equal to
- (A) $\log b$ (B) $\log 1$ (C) $\frac{\log 1}{\log b}$ (D) $\frac{\log b}{\log 1}$
69. The 1st order condition for profit maximization is
- (A) $MR = AR$ (B) $MR = MC$ (C) $MC = AC$ (D) $AC + MR$

70. For a relative maximum, the second derivative value at x_0 is
 (A) $f'(x_0) < 0$ (B) $f'(x_0) = 0$ (C) $f''(x_0) > 0$ (D) $f''(x_0) < 0$
71. In pursuance with the recommendations of Narsimhan Committee, the RBI has framed new guidelines
 (A) To govern entry of new private sector banks to make the banking sector more competitive
 (B) To reduce the freedom given to banks to rationalize their existing branch network
 (C) To set up more foreign exchange banks
 (D) To lend more easily for industrial development
72. National Agricultural Insurance Scheme replacing Comprehensive Crop Insurance Scheme was introduced in the year
 (A) 1997 (B) 1998 (C) 1999 (D) 2000
73. For 11th plan period 2007 – 2012 savings rate has been targeted at _____
 (A) 30.8% (B) 31.6% (C) 34.8% (D) 33.6%
74. In 2010-11, contribution of service sector in country's GDP is estimated at about
 (A) 48.6% (B) 50.6% (C) 57.3% (D) 52.
75. Revenue Deficit as a per cent of GDP in Budget 2011-12 has been estimated at _____
 (A) 4.2% (B) 6.8% (C) 6.0% (D) 4.6%
76. GST would be introduced from _____
 (A) January 1, 2012 (B) August 1, 2011
 (C) April 1, 2012 (D) August 15, 2011
77. Inflation in India is measured on which of the following indexes/indicators?
 (A) Cost of Living Index (B) Consumer Price Index
 (C) Wholesale Price Index (D) Gross Domestic Product

78. The World Trade Organization was formed on
 (A) 1995 (B) 1945 (C) 1948 (D) 1991
79. Which among following is not a component of international reserve
 (A) Foreign currency assets (B) SDR
 (C) Gold (D) CRR
80. Inflation in India is measured on which of the following indexes/indicators?
 (A) Cost of Living Index (B) Consumer price index
 (C) Wholesale Price Index (D) Gross Domestic Product
81. The second central moment of x is
 (A) $\frac{\sum(x-\bar{x})^2}{N}$ (B) $\frac{\sum(x-\bar{x})^3}{N}$ (C) $\frac{(x-\bar{x})^2}{N}$ (D) None of these
82. 3rd quartile value of a data is equal to
 (A) 25th percentile (B) 50th percentile
 (C) 75th percentile (D) 10th percentile
83. A study found a correlation of $r = -0.61$ between the gender of a worker and his or her income. You conclude that:
 (A) Women earn more than men on average
 (B) Women earn less than men on average.
 (C) An arithmetic mistake was made; this is not a possible value of r .
 (D) This is nonsense because r makes no sense here.
84. Suppose X and Y are independent random variables. The variance of X is equal to 16; and the variance of Y is equal to 9. Let $Z = X - Y$. What is the standard deviation of Z ?
 (A) 2.65 (B) 5.00 (C) 7.00 (D) 25.00
85. The Central Limit Theorem states that:
 (A) If n is large then the distribution of the sample can be approximated closely by a normal curve
 (B) If n is large, and if the population is normal, then the variance of the sample mean must be small.
 (C) If n is large, then the sampling distribution of the sample mean can be approximated closely by a normal curve
 (D) If n is large, then the variance of the sample must be small.

86. A random sample of 15 people is taken from a population in which 40% favor a
Suppose a die is tossed 5 times. What is the probability of getting exactly 2 fours?
- (A) 0.028 (B) 0.161 (C) 0.167 (D) 0.333
87. For testing the structural stability in a multiple regression model, one can use
- (A) T-test (B) Dickey-Fuller Test
(C) Chow test (D) None of the above
88. For testing joint significance of partial slope coefficients in a multiple regression
model, one can use
- (A) t-test (B) F-test
(C) Both (a) and (b) (D) None of the above
89. The following can be used to assess the stationarity of a stochastic process
- (A) Unit root tests (B) Correlogram
(C) Both (a) and (b) (D) None of the above
90. Which of the following contains qualitative dependent variable?
- (A) Linear probability model (B) Probit model
(C) Logit model (D) All of the above
91. Simplest form of stationary process is
- (A) White noise process (B) Random walk with drift
(C) Both (a) and (b) (D) None of the above
92. For a purely white noise process, autocorrelations at various lags hover around
- (A) One (B) Zero
(C) Hundred (D) None of the above
93. Spurious regression is related to
- (A) Non-stationary process (B) Stationary process
(C) Stochastic process (D) None of the above

94. Which of the following test use non-parametric statistical methods?
 (A) Dickey-Fuller test (B) Augmented Dickey-Fuller test
 (C) Phillips-Perron test (D) None of the above
95. Coefficient of determination in a simple regression model measures
 (A) The correlation between the dependent variable and the error term
 (B) The regressed sum of squares as a proportion of the total sum of squares
 (C) The error sum of square as a proportion of the total sum of squares
 (D) None of the above
96. Given two unbiased estimators, the estimator with the lower variance is considered as
 (A) Consistent (B) Efficient
 (C) Biased (D) None of the above
97. If the expected or mean value of an estimator equals its true value, then the estimator is said to be
 (A) Consistent (B) Efficient
 (C) Unbiased (D) None of the above
98. When two explanatory variables in a multiple regression model have exact linear relationship, there exist the problem of
 (A) Autocorrelation (B) Multicollinearity
 (C) Simultaneity (D) None of the above
99. Which of the following is a log-linear model?
 (A) $Y_t = \beta_0 + \beta_1 \ln X_t + u_t$ (B) $\ln y_t = \beta_0 + \beta_1 X_t + u_t$
 (C) $\ln y_t = \beta_0 + \beta_1 \ln X_t + u_t$ (D) None of the above
100. In simple regression model, if the variance of error term is constant, then errors are said to be
 (A) Homoscedastic (B) Heteroscedastic
 (C) Serially correlated (D) None of the above
-