

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2012.

M.Sc. Five Year Integrated Programme (Economics)

COURSE CODE : 309

Register Number :

\_\_\_\_\_  
*Signature of the Invigilator*  
(with date)

COURSE CODE : 309

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. AVAHAN – The Indian segment of Bill and Melinda Gates foundation (BMCGF) is engaged in the prevention of
 

(A) Dengue	(B) Polio
(C) HIV/AIDS	(D) Filariasis
2. 'Which one of the following public sector bank's emblem highlights a dog and the word "your faithful and friendly financial partner" in it
 

(A) Punjab National Bank	(B) Syndicate Bank
(C) Bank of India	(D) State Bank of India
3. Which of the following country's central bank has procured 200 metric tons of gold from IMF in October 2009
 

(A) China	(B) Srilanka	(C) India	(D) Singapore
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4. Piramal life science is a/an
 

(A) Life insurance company	(B) Drug research company	(C) Special economic Zone	(D) PSU dealing with healthcare amenities
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5. Bolivar is the monetary unit of
 

(A) Venezuela	(B) Brazil	(C) Bolivia	(D) Belarus
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6. Bluetooth technology allows
 

(A) Wireless communication between equipments	(B) Signal transmission on mobile phones	(C) Landline to mobile phone communication	(D) Satellite television communication
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7. Who discovered the solar system?
 

(A) Newton	(B) Kepler	(C) Aryabhatta	(D) Copernicus
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8. The vitamins which is/are generally excreted in urine is/are
 

(A) Vitamin A	(B) Vitamin B
(C) Vitamin C	(D) Vitamin D and K
9. In computer language, one kilobyte equals
 

(A) 1000 bytes	(B) 1024 bytes
(C) 100 bytes	(D) 8 bytes

10. A computer programmer
  - (A) Enters data into computer
  - (B) Writes programs
  - (C) Changes flow chart into instructions
  - (D) Provides solutions to complex problems
11. The longest river of the world is:
  - (A) Nile
  - (B) Amezan
  - (C) Ganges
  - (D) Brahmaputra
12. The highest mountain in the world is
  - (A) Karakoram-2
  - (B) Everest
  - (C) Alpus
  - (D) Kanchanjangha
13. The great wall is located in
  - (A) United States of America
  - (B) Brazil
  - (C) Germany
  - (D) China
14. The land of rising sun is
  - (A) Japan
  - (B) Norway
  - (C) United Kingdom
  - (D) India
15. Which place is known as the roof of the world
  - (A) Bhutan
  - (B) Nepal
  - (C) Tibet
  - (D) Myanmar
16. Who is the author of "Anand Math" ?
  - (A) Rabindranath Tagore
  - (B) Bankim chandra Chattopadhyaya
  - (C) Sarojini Nayadu
  - (D) Jyotiba Phule
17. Thimpu is the capital of
  - (A) Nepal
  - (B) Bhutan
  - (C) Thailand
  - (D) Myanmar
18. The mass-energy equivalence, relationship  $E = mc^2$  was propounded by
  - (A) Einstein
  - (B) Max Plank
  - (C) Newton
  - (D) Hertz
19. The filament of bulb is made of
  - (A) Tungsten
  - (B) Iron
  - (C) Nichrome
  - (D) Carbon

20. 'Widal test' is used for susceptibility of  
 (A) Malaria (B) Typhoid (C) Cholera (D) Yellow fever
21. Pankaj Advani is associated with  
 (A) Archery (B) Golf  
 (C) Shooting (D) Snooker
22. Who is known as Nightingale of India  
 (A) Asha Bhonsle (B) Begum Akhtar  
 (C) Sarojini Naidu (D) Vijaylaxmi Pandit
23. Which acid is normally found in lemon and grape fruits?  
 (A) Citric acid (B) Tartaric acid  
 (C) Ascorbic acid (D) Lactic acid
24. Who was the founder of Brahmo Samaj?  
 (A) Raja Rammohan Roy (B) Aurobindo Ghosh  
 (C) Vivekanand (D) Dyanand Saraswati
25. The Olympic Games 2012 will be held in  
 (A) Moscow (B) Paris (C) New York (D) London
26. If  $y = \log x$  then  $dy/dx$  is  
 (A)  $1/x$  (B)  $x$  (C) 1 (D) None of these
27. If  $f(x) = (3x^2 + 5x + 2)/(x^3 - 7x + 14)$  then  $f(2)$  is  
 (A) 2 (B)  $11/4$  (C) 3 (D)  $2/3$
28.  $\lim_{x \rightarrow 1} (5x^2 - 2x - 3)/(3x^2 - 2x - 1)$  is  
 (A) 1 (B) 2 (C) 0 (D) None of these
29. If  $A = \begin{bmatrix} 3 & 4 & 7 \\ 5 & 6 & 1 \end{bmatrix}$  and  $B = \begin{bmatrix} 2 & 1 \\ 3 & 5 \\ 6 & 2 \end{bmatrix}$  then what is  $AB$ ?  
 (A)  $\begin{bmatrix} 60 & 37 \\ 34 & 31 \end{bmatrix}$  (B)  $\begin{bmatrix} 60 & 37 \\ 34 & 37 \end{bmatrix}$   
 (C)  $\begin{bmatrix} 57 & 37 \\ 43 & 31 \end{bmatrix}$  (D) None of these

30. Find  $\int_0^2 (3x^2 + 6x - 8) dx$
- (A) 0 (B) -4 (C) 4 (D) 2
31.  $(\log_b a \log_c b \log_a c)$  is equal to
- (A) 0 (B) 1 (C)  $abc$  (D)  $a+b+c$
32.  $(\sin^2 x - \tan^2 x + \sec^2 x + \cos^2 x)$  is equal to
- (A) 2 (B) 1  
(C) 0 (D) None of these
33. Let  $f(x) = \tan(x)$ . What is the domain of  $f(x)$ ?
- (A)  $(-\infty, 0)$  (B)  $(0, \infty)$   
(C)  $(-\infty, \infty)$  (D) None of these
34.  $\lim_{x \rightarrow 0} \left( 1 - \left( \frac{\sin(x)}{x} \right) \right)$  is
- (A) 1 (B) 0  
(C)  $\infty$  (D) None of theses
35. If  $|1-x| \leq 3$  then which one is true
- (A)  $-2 \leq x \leq 3$  (B)  $-1 \leq x \leq 3$   
(C)  $0 \leq x \leq 3$  (D)  $-2 \leq x \leq 4$
36.  $5!$  is
- (A) 0 (B) 60 (C) 40 (D) 120
37.  $1 + x + \frac{1}{2!}x^2 + \frac{1}{3!}x^3 + \frac{1}{4!}x^4 + \dots$  is
- (A)  $\log(1+x)$  (B)  $e^x$   
(C)  $e^{-x}$  (D)  $\log(1-x)$

38. Solution(s) to the equation  $x^3 - x^2 - 4x + 4 = 0$  is/are  
 (A)  $-2, 1, 2$  (B)  $-1, 0, 2$   
 (C)  $-2, 0, 1$  (D)  $-1, 0, 1$
39. Determinant of the matrix  $A = \begin{bmatrix} 2 & 1 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$  is  
 (A) 14 (B) 9 (C) 10 (D) -9
40. If  $\log_{100000} x = -1/5$  then  $x$  is equal to  
 (A)  $1/100$  (B) 1 (C)  $1/10$  (D) 10
41. If  $A, B$  and  $C$  are the matrices of order  $23 \times 25, 25 \times 3, 3 \times 16$  then what is the order of  $ABC$   
 (A)  $23 \times 3$  (B)  $23 \times 16$   
 (C)  $25 \times 23$  (D) None of these
42. What is  $x^{\log(1)}$   
 (A) 0 (B)  $\infty$  (C)  $x$  (D) 1
43. What is the range of the function  $f(x) = |x|$   
 (A)  $(0, \infty)$  (B)  $(0, \infty)$   
 (C)  $(-\infty, \infty)$  (D) None of these
44.  $C_2^5 + P_1^{10}$  is equal to  
 (A) 10 (B) 15  
 (C) 20 (D) None of these
45. What is the number of solution for the equation  $\log_4^{x-1} = \log_2^{x-3}$   
 (A) 0 (B) 1  
 (C) 2 (D) None of these
46. How many words can be formed from letters of the word PUDUCHERRY?  
 (A)  $10!$  (B)  $2 \cdot 10!$  (C)  $10!/(2! \cdot 2!)$  (D)  $10!/(2! \cdot 2!)$

47. What is the probability that a leap year chosen randomly will contain 53 Sundays?  
 (A)  $1/7$  (B)  $2/7$  (C)  $3/7$  (D)  $4/7$
48. Find slope of the line  $4y + 3x = 15$   
 (A)  $-3/4$  (B)  $3/4$  (C)  $-4/3$  (D)  $4/3$
49. Which point lies on the curve  $x^2 + y^2 - 2x - 2y + 2 = 0$   
 (A) (1,1) (B) (-1,1) (C) (1, -1) (D) (0,0)
50. The average of 2,7,6 and  $x$  is 5 and the average of 18, 12,  $x$  and  $y$  is 10. What is the value of  $y$ ?  
 (A) 20 (B) 10 (C) 5 (D) 30

For questions 51 to 68, fill up the blanks choosing the most appropriate from the following four options

51. He \_\_\_\_\_ in his remote colony since 1990.  
 (A) Lives (B) Has been living  
 (C) Has lived (D) Continues to live
52. She has studied French  
 (A) Since 4 years (B) From 4 years  
 (C) For 4 years (D) Since 4 years ago
53. I felt that music was  
 (A) Sweetly and smoothingly (B) Sweet but soothing  
 (C) Sweetly and smoothing (D) Sweet and soothing.
54. He is not in the \_\_\_\_\_ of his master  
 (A) Good books (B) Better book  
 (C) Best book (D) Good book
55. In his lecture he dealt \_\_\_\_\_ the causes of Gulf war  
 (A) With (B) On (C) For (D) About
56. Would you mind \_\_\_\_\_ me with your suggestions  
 (A) Help (C) To help (C) Helping (D) Of helping

57. Mahatma Gandhi was simple and innocent; his behavior was  
 (A) Childish (B) Child like (C) Proud (D) Humble
58. At last we realized  
 (A) What was the truth (B) What the truth was  
 (C) The truth was (D) What was truth
59. I want to see the film as it \_\_\_\_\_ by Satyajit Ray  
 (A) Is being directed (B) Had been directed  
 (C) Was directed (D) Had directed
60. Only three-fourths of the work  
 (A) Are complete (B) Is complete  
 (C) Has completed (D) Have Completed
61. His wife passed away five years ago. Since then he has been living as a  
 (A) Divorcee (B) Widower  
 (C) Misogynist (D) Celibate
62. Every sensible citizen abides \_\_\_\_\_ law of the country  
 (A) To (B) By (C) For (d) With
63. Most of the issues discussed here in the meeting were trivial and only few were  
 (A) Interesting (B) Practical  
 (C) Significant (D) Irrelevant
64. Questions will be answered by a \_\_\_\_\_ of experts  
 (A) Staff (B) Panel  
 (C) Bunch (D) Band
65. The villagers \_\_\_\_\_ the death of their leader by keeping all shops closed  
 (A) Consoled (B) Avenged  
 (C) Mourned (D) Protested
66. No sooner had he entered the room \_\_\_\_\_ the light went out and every one started talking loudly  
 (A) But (B) Than (C) If (D) And

67. He prefers seeing the film ————— reading  
 (A) Than (B) To (C) Over (D) as
68. Ram has been nominated as the person to settle the dispute between the two warring parties; he is the  
 (A) Judge (B) Advocate (C) Arbitrator (D) Barrister

For questions 69 and 70, choose the word nearest in meaning to the given word

69. Fragile  
 (A) Strong (B) Grave (C) Weak (D) Showy
70. Emaciated  
 (A) Very tall (B) Very sleepy (C) Very thin (D) Very aged

For questions 71 to 73, choose the opposite of the given word

71. Extrovert  
 (A) Boaster (B) Mixer (C) Introvert (D) Social
72. Urban  
 (A) Rustic (B) Rural (C) Civil (D) Domestic
73. Genuine  
 (A) rotten (B) Bogus (C) Unsound (D) Impure

For questions 74 to 75, write exact meaning of the underlined idiom

74. It is evident from the minister's statement that heads will roll  
 (A) Transfers will take place  
 (B) People will die  
 (C) Dismissal will occur  
 (D) Heads of department will have to repent
75. His dealings are above board  
 (A) Simple (B) Decent (C) Open (D) Friendly
76. Who is the father of Economics?  
 (A) A.C. Pigou (B) Alfred Marshall  
 (C) Adam Smith (D) J. S. Mill

77. Exchange of goods for goods is known as  
 (A) Mixed economy (B) Barter economy  
 (C) Socialist economy (D) Capitalist economy
78. Consumer Surplus is  
 (A) Potential Price – Actual Price (B) Demand = Supply  
 (C) MC – MR (D) None
79. Law of Demand states that  
 (A) Positive relationship between price and quantity  
 (B) Negative relationship between price and quantity  
 (C) Both (A) and (B)  
 (D) None
80. The proportion of response of demand to change in price is  
 (A) Income elasticity of demand (B) Cross elasticity of demand  
 (C) Price elasticity of demand (D) None
81. The equilibrium price is  
 (A) Supply < Demand (B) Supply > Demand  
 (C) Supply = Demand (D) None
82. The remuneration paid to the capital is  
 (A) Interest (B) Wages  
 (C) Rent (D) Profit
83. Marginal Revenue is the least addition made to the  
 (A) Average revenue (B) Total production  
 (C) Total revenue (D) Total cost
84. A firm can achieve equilibrium when its  
 (A) MC = MR (B) MR = AR  
 (C) AC = MC (D) MR = AC

85.  $Y = C + I$  is a  
 (A) Function (B) Identification  
 (C) Formula (D) None
86. Monetary policy is controlled by  
 (A) Central government (B) State government  
 (C) Central bank (D) Private bank
87. According 2001 Census, the population of India was  
 (A) 236 million (B) 890 million  
 (C) 1000 million (D) 1027 million
88. Nearly 64% of labour force in India is engaged in  
 (A) Agriculture (B) Industry  
 (C) Foreign trade (D) Service
89. The goods which are non-rival in consumption are called  
 (A) Private goods (B) Free goods  
 (C) Public goods (D) Non-economic goods
90. Keynesian economics lays more emphasis on  
 (A) Monetary policy (B) Interest-rate determination  
 (C) Fiscal policy (D) Free market mechanism
91. When government expenditure exceeds total government receipts, the budget deficit is  
 (A) Positive (B) Negative  
 (C) Zero (D) Intermediate
92. Wagner's law predicts that the development of an ————— will be accompanied by an increased share of public expenditure in 'gross national product'.  
 (A) Industrial economy (B) Agricultural economy  
 (C) Capitalist economy (D) Both (A) and (C)
93. If a country devalues its currency; it stands to gain as a result of  
 (A) Increased imports at lower prices (B) Increased exports  
 (C) Fall in domestic price (D) Increased domestic production

94. Which of the following is not a factor of production?  
(A) Land (B) Labour (C) Capital (D) Money
95. All of the following are determinants of supply except  
(A) Price (B) Income level  
(C) Objectives of the firm (D) Level of technology
96. All of the following are determinants of demand except  
(A) Price (B) Taste  
(C) Supply (D) Price of other goods
97. Low agricultural productivity in developing countries is mainly caused by  
(A) Shortages of inputs, including land  
(B) Migration from rural areas to urban areas  
(C) Lack of effective demand for food products  
(D) over investment in farm equipment
98. Macroeconomics deals with  
(A) Economic aggregates  
(B) The behaviour of the electronics industry  
(C) The behaviour of firms  
(D) The activities of individual units
99. Inflation is  
(A) An increase in the overall price level  
(B) A decrease in the overall price level  
(C) An increase in the overall level of economic activity  
(D) Decrease in the overall level of economic activity
100. Unemployment means that  
(A) There are some people who will not work at the going wage rate  
(B) At the going wage rate, there are people who want to work but cannot find work  
(C) There is excess demand in the labour market  
(D) None of the above
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