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SHREE GURU KRIPA'S INSTITUTE OF MANAGEMENT



MODEL EXAM - 1

CPT – ECONOMICS & MATHS

Total Marks: 100**Time: 2 hours****Total No. of Questions: 100****No. of Printed pages: 8**

1. We mainly study the following in micro economics:
 - (a) Location of a Industry
 - (b) Study of firms
 - (c) Factor pricing
 - (d) All of the above
2. When we study why saving rates are high or low, we are studying:
 - (a) Macro Economics
 - (b) Micro Economics
 - (c) Econometrics
 - (d) Both (a) and (b)
3. Which of the following is not a central problem of the economy?
 - (a) How to produce?
 - (b) When to produce?
 - (c) What to produce?
 - (d) For whom to produce?
4. Effective Demand depends on:
 - (a) Desire
 - (b) Means to purchase
 - (c) Willingness to use those means for that purchase
 - (d) All of above
5. Quantity demanded is a:
 - (a) Flow Concept
 - (b) Stock Concept
 - (c) Both (a) and (b)
 - (d) None of the above
6. Inferior goods have:
 - (a) Positive Income elasticity
 - (b) Negative Income elasticity
 - (c) Zero
 - (d) Both (a) and (b)
7. If two goods are substitutes like tea and coffee, then the cross elasticity is:
 - (a) Negative
 - (b) Zero
 - (c) Positive
 - (d) Less than one
8. If the price of Banana rises from Rs 30 per dozen to Rs. 40 per dozen and the supply increases from 240 dozen to 300 dozens elasticity of supply is: (use arc Elasticity Method)
 - (a) .7
 - (b) .67
 - (c) .65
 - (d) .77
9. If as a result of 90 percent increase in all inputs, the output increase by 75 percent this is a case of
 - (a) Increasing return to a factor
 - (b) Decreasing return to a factor
 - (c) Diminishing returns to scale
 - (d) None of the above
10. NDP does not include:
 - (a) Payment made for direct taxes
 - (b) Depreciation allowance
 - (c) Undistributed profits
 - (d) Corporate dividend tax
11. Which of the following would not be included in GNP?
 - (a) Mohan purchases a shirt to wear
 - (b) Sai Ram purchases a new Mercedes – Benz of S-class
 - (c) Yes bank purchases new computers for its shares business
 - (d) Aditi grows Tulsi plant in her home
12. Full employment is the level at which there is:
 - (a) Normal rate of unemployment
 - (b) Zero unemployment
 - (c) Least supply of labour
 - (d) None of the above
13. In which sector of the Indian Economy will we find a high rate of disguised unemployment?
 - (a) Transport Sector
 - (b) Agricultural Sector
 - (c) Service Sector
 - (d) Mining
14. Service Tax is an instrument of:
 - (a) Fiscal policy
 - (b) Monetary policy
 - (c) Revenue policy
 - (d) None of the above
15. Which of the following is also known as value added method of measuring National Income?
 - (a) Product Method
 - (b) Expenditure Method
 - (c) Income Method
 - (d) Deductive Method
16. In the theory of demographic transition in the first stage:
 - (a) Birth rate falls and death rate falls
 - (b) Birth rate falls and death rate rises
 - (c) Birth rate is high and death rate is high
 - (d) Birth rate rises, death rate falls
17. Indian accommodates ____ % of world population.
 - (a) 10
 - (b) 50
 - (c) 17.5
 - (d) 20
18. At shut down point:
 - (a) Price is equal to AVC
 - (b) Total revenue is equal to TVC
 - (c) Total loss of the firm is equal to TFC
 - (d) All of the above

19. The indifference curve approach does not assume:
(a) Rationality on the parts of consumers
(b) Ordinal measurement of satisfaction
(c) Cardinal measurement of satisfaction
(d) Consistent consumption pattern behavior of consumer
20. Which one of the following agencies in India is responsible for computation of National income?
(a) NCAER
(b) CSO
(c) NSS
(d) RBI
21. Suppose the total cost of production of commodity x is Rs. 1,25,000. Out of this implicit cost is Rs. 35,000 and normal profit is Rs. 25,000. What will be explicit cost of commodity x ?
(a) Rs. 90,000
(b) Rs. 60,000
(c) Rs. 65,000
(d) Rs. 1,00,000
22. Over the planning period, the relative share of area under food grains in gross cropped area in India has:
(a) Decreased
(b) Increased
(c) Remained the same
(d) Increased initially and then decreased
23. Over the planning period the share of industrial sector in the GDP of the India has:
(a) Increased
(b) Decreased
(c) Remained Constant
(d) Remained above 40%
24. Human Development Index is a composite index:
(a) Health, Literacy and employment
(b) National Income, size of population and general price level
(c) National Income, per capita Income and per capita consumption
(d) Physical resource, monetary resource and population size
25. Which of the following is not including in the primary sector?
(a) Fishery
(b) Forestry
(c) Animal Husbandry
(d) None of the above
26. Which of the following is not a commercial crop?
(a) Sugar
(b) Cotton
(c) Oilseeds
(d) None of the above
27. Which of the following was not prevailing in the country at the time of Independence?
(a) Zamindari System
(b) Ryotwari system
(c) Mahalwari system
(d) None of the above
28. Agriculture provides employment to about ____% of people living in the country (2013-14)
(a) 49
(b) 80
(c) 10
(d) 90
29. Which one is a direct tax among the following?
(a) Wealth Tax
(b) Excise Duty
(c) Service Tax
(d) None of the above
30. The other name of Budget line is:
(a) Demand line
(b) Price line
(c) Supply line
(d) None of the above
31. The definition "Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses" was given by:
(a) J. B. Say
(b) Alfred Marshal
(c) Robbins
(d) Paul. A. Samuelson
32. Economics is _____.
(a) Not a normative science.
(b) Not a positive science.
(c) Partly science and partly art
(d) Neither a normative nor a positive science.
33. Which of the following statements is incorrect in case of capitalist economy?
(a) There is equality of income among people in the economy
(b) Profit-motive gets precedence over social motive
(c) Freedom of enterprise about what to produce
(d) Right to own property
34. Which of the following is likely to cause an inward shift in a country's PPC?
(a) Scientist discovering new techniques of production
(b) Workers getting job in making fly-over
(c) War destroying resources of the country
(d) The country finds new techniques of agricultural production

35. The consumer surplus concept is derived from:
(a) Law of demand
(b) Law of Diminishing marginal utility
(c) Indifference curve analysis
(d) All of the above
36. The consumer is in equilibrium when:
(a) When marginal utility is constant
(b) When marginal utility is greater than price of the good
(c) When marginal utility is less than price of the good
(d) When marginal utility is equal to price of the good
37. Which is not the property of Indifference curve analysis?
(a) Indifference curves slope downward to the left
(b) Indifference curves are always convex to the origin
(c) Indifference curves can never intersect each other
(d) A higher indifference curve represents a higher level satisfaction than the lower indifference curve
38. Capital is a:
(a) Stock concept
(b) Flow Concept
(c) Both (a) and (b)
(d) None of the above
39. Which is not the function of an entrepreneur?
(a) Initiating a business enterprise and resource co-ordination
(b) Risk bearing or uncertainty bearing
(c) Innovation
(d) Mobilisation of savings
40. Types of balance of trade are
(a) Favorable balance of trade
(b) Unfavorable balance of trade
(c) Balanced balance of trade
(d) All of the above
41. A full fledged Department of Family Planning was created in India in
(a) 1950
(b) 1951
(c) 1966
(d) 1955
42. ASHA is related to :
(a) Environmental care
(b) Adult care in urban areas
(c) Health care in village
(d) Social care in urban areas
43. Highest density of population is in:
(a) Punjab (b) Maharashtra (c) U. P. (d) Delhi
44. Wealth Tax was abolished in:
(a) 1985
(b) 1998
(c) 2005
(d) False it is still continuing
45. In order to improve production of power, Electricity Act was passed in
(a) 2003
(b) 2005
(c) 2002
(d) 2004
46. Which of the following is correct?
(a) If National Income rises, per capita income must also rise
(b) If population rises per capita income must fall
(c) If National income rises, welfare of the people must rise
(d) none of the above.
47. According to Planning Commission using Mixed Recall period almost ----% people were below poverty line in 2011-12.
(a) 42%
(b) 26%
(c) 37%
(d) 22%
48. About ——— percent of sick units are other than small units
(a) 90%
(b) 10%
(c) 5%
(d) 30%
49. The industrial sector depends on the agricultural sector because:
(a) The agricultural sector provides food and other products for the consumption purpose of industrial sector
(b) The agricultural sector provides market for the industrial products
(c) The agricultural sector provides raw – materials to industry
(d) All of the above
50. PPF stands for:
(a) Private Provident Fund
(b) Personal Provident Fund
(c) Public Provident Fund
(d) Public Presidency Fund
51. If A: B = 2: 3, B : C = 4: 5 and C: D = 6: 7, then A: B: C: D is
(a) 16: 22 : 30: 35
(b) 16: 24: 15: 35
(c) 16: 24: 30: 35
(d) 18: 24: 30: 35

52. If $2s : 3t$ is the Duplicate Ratio of $2s - p : 3t - p$ then –
 (a) $p^2 = 6st$
 (b) $p = 6st$
 (c) $2p = 3st$
 (d) None of these
53. What quantity must be added to the terms of the ratio $p+q:p-q$ to make it equal to $(p + q)^2 : (p - q)^2$
 (a) $(q+p) / 2p$
 (b) $(q-p) / 2p$
 (c) $(q^2 - p^2) / 2p$
 (d) None of these
54. The fourth proportional to $(a+b)$, $(a + b)^2$, $(a-b)$ is
 (a) $(a+b)$
 (b) $(a^2 - b^2)$
 (c) $(a-b)$
 (d) $(a + b)^2$
55. If 4, x and 9 are in proportional then x is equal to
 (a) 36
 (b) 6.5
 (c) 6
 (d) 24
56. 20 litres of a mixture contains milk and water in the ratio 5:3. If 4 litres of this mixture be replaced by 4 litres of milk, the ratio of milk to water in the new mixture would be
 (a) 2:1
 (b) 7:3
 (c) 8:3
 (d) 4:3
57. If $\log\left(\frac{a+b}{2}\right) = \frac{1}{2}(\log a + \log b)$, then
 (a) $a = b/2$
 (b) $a = b$
 (c) $a = b^2$
 (d) $a^2 = b$
58. $\log_3 \sqrt[4]{729 \sqrt[3]{9^{-1} 27^3}}$ simplifies to
 (a) $-\log 3$
 (b) $2 \log 3$
 (c) $\log a$
 (d) $4 \log 2$
59. Solve the equation $17^{3-6x} = 1$ for x
 (a) -3
 (b) $3/2$
 (c) $1/2$
 (d) $-1/2$
60. Solving equation $z^{10} - 33z^5 + 32 = 0$ the following values of z are obtained
 (a) 1, 2
 (b) 2, 3
 (c) 2, 4
 (d) 1, 2, 3
61. The age of a man is three times the sum of the ages of his two sons and 5 years hence his age will be double the sum of their ages. Find the present age of the man?
 (a) 65 years
 (b) 25 years
 (c) 35 years
 (d) 45 years
62. A number consisting of two digits is four times the sum of its digits and if 27 be added to it the digits are reversed. The number is
 (a) 63
 (b) 35
 (c) 36
 (d) 60
63. Solve $x^3 - 7x^2 + 14x - 8 = 0$ given that the roots are in geometrical progression.
 (a) $1/2, 1, 2$
 (b) 1, 2, 4
 (c) $1/2, -2, 2$
 (d) $-1, 2, -4$
64. The distance from the origin to the point of intersection of two straight lines having equations $3x - 2y = 6$ and $3x + 2y = 18$ is
 (a) 3 units
 (b) 5 units
 (c) 4 units
 (d) 2 units
65. The area of the quadrilateral with vertices $(1, 7)$ $(3, -5)$ $(6, -2)$ and $(-4, 2)$ is
 (a) 50
 (b) 55
 (c) 56
 (d) 57
66. What is the smallest integer value of x that satisfies the inequality $4 - 3x < 11$?
 (a) -3
 (b) -2
 (c) -1
 (d) 0
67. If $a < b$ and $c < 0$ then –
 (a) $a/c < b/c$
 (b) $a/c > b/c$
 (c) $a/c = b/c$
 (d) $a/c = 0$

68. A small manufacturing firm produces two types of gadgets A and B, which are first processed in the foundry, and then sent to another machine for finishing. The number of man-hours for the firm available per week are as follows:

	Foundry	Machine-shop
A	10	5
B	6	4
Capacity per week (man hours)	1000	600

Let the firm manufacture x units of A and y units of B. The constraints are:

- (a) $10x + 6y \leq 1000, 5x + 4y \geq 600, x \geq 0; y \leq 0$
 (b) $10x + 6y \leq 1000, 5x + 4y \leq 600, x \geq 0; y \geq 0$
 (c) $10x + 6y \geq 1000, 5x + 4y \leq 600, x \leq 0; y \geq 0$
 (d) $10x + 6y \geq 1000, 5x + 4y \geq 600, x \leq 0; y \leq 0$
69. A sum was put at simple interest, at a certain rate for 3 years. Had it been put at 1 % higher rate it would have fetched ₹63 more. The sum is –
 (a) ₹2,400
 (b) ₹2,200
 (c) ₹2,100
 (d) ₹2,480
70. Mr. Paul borrows ₹25,000 on condition to repay it with C.I. at 7% p.a. in annual installments of ₹3,000 each. The number of years for the debt to be paid off is –
 (a) 10 years
 (b) 12 years
 (c) 11 years
 (d) 13 years
71. A person bought a house paying ₹20,000 cash down and ₹4000 at the end of each year for 25 yrs. At 5% p.a C.I. The cash down price is –
 (a) ₹75,000
 (b) ₹76,000
 (c) ₹76,392
 (d) None of these
72. If. ${}^n P_3 : {}^n P_2 = 3:1$, then n is equal to –
 (a) 7
 (b) 4
 (c) 5
 (d) None of these
73. In how many ways the word 'Article' can be arranged in a row so that the vowels occupy even places?
 (a) 132
 (b) 144
 (c) 72
 (d) 160
74. How many arrangements of the letters of the word 'BHARAT' will not have 'B' and 'H' together" –
 (a) 360
 (b) 240
- (c) 120
 (d) 60
- (b)
75. The number of ways in which 8 different beads be strung on a necklace is –
 (a) 2,500
 (b) 2,520
 (c) 2,250
 (d) None of these
76. In how many ways 6 men can sit at a round table so that all shall not have the same neighbours in any two occasions?
 (a) $5! \div 2$
 (b) $5!$
 (c) $(7!)^2$
 (d) $7!$
77. 6 seats of articled clerks are vacant in a 'Chartered Accountant firm'. How many different batches of candidates can be chosen out of 10 candidates if one candidate is always selected?
 (a) 124
 (b) 125
 (c) 126
 (d) None of these
78. A regular Polygon has 45 diagonals then the no. of sides are –
 (a) 8
 (b) 9
 (c) 10
 (d) 11
79. There are 12 points in a plane of which 5 are collinear. The number of triangles is –
 (a) 200
 (b) 211
 (c) 210
 (d) None of these
80. Which term of the A.P $\frac{3}{\sqrt{7}}, \frac{4}{\sqrt{7}}, \frac{5}{\sqrt{7}}, \dots$ is $\frac{17}{\sqrt{7}}$?
 (a) 13
 (b) 14
 (c) 15
 (d) 16
81. The sum of certain numbers of terms of an AP series $-6, -3, 0, \dots$ is 225. The number of terms is
 (a) 16
 (b) 15
 (c) 14
 (d) 13
82. The four numbers in AP whose sum is 20 and the sum of their squares is 120 are
 (a) 3, 5, 7, 9
 (b) 2, 4, 6, 8
 (c) 5, 9, 13, 17
 (d) None

83. If you save 1 paise today, 2 paise the next day 4 paise the succeeding day and so on, then your total savings in two weeks will be
 (a) ₹ 163
 (b) ₹ 18
 (c) ₹ 163.83
 (d) None of these
84. The $\lim_{n \rightarrow \infty} 1 + \frac{1}{3} + \frac{1}{3^2} + \frac{1}{3^3} + \dots + \frac{1}{3^{n-1}} =$
 (a) $\frac{2}{3}$
 (b) $\frac{3}{2}$
 (c) $\frac{4}{5}$
 (d) None of these
85. If $1 + a + a^2 + \dots \infty = x$, $1 + b + b^2 + \dots \infty = y$ and $1 + ab + a^2b^2 + \dots \infty$ is given by –
 (a) $\frac{xy}{x + y - 1}$
 (b) $\frac{xy}{x - y + 1}$
 (c) $\frac{xy}{x + y + 1}$
 (d) None
86. If $A = \{1, 2, 3\}$, then $P(A)$ is
 (a) 3
 (b) $\{\{1, 2, 3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}, \{1\}, \{2\}, \{3\}, \phi\}$
 (c) $\{1, 2, 3\}$
 (d) $\{\{1, 2, 3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}, \{1\}, \{2\}, \{3\}\}$
87. If A has 70 elements, B has 32 elements and $A \cap B$ has 22 elements then $A \cup B$ is
 (a) 60
 (b) 124
 (c) 80
 (d) None of these
88. If $A \Delta B = (A - B) \cup (B - A)$ and $A = \{1, 2, 3, 4\}$, $B = \{3, 5, 7\}$ then $A \Delta B$ is
 (a) $\{1, 2, 4, 5, 7\}$
 (b) $\{3\}$
 (c) $\{1, 2, 3, 4, 5, 7\}$
 (d) None of these
89. If $n(P) = 3$ and $n(Q) = 4$, then $n(P \times Q)$ is
 (a) 3
 (b) 4
 (c) 12
 (d) 1
90. If $f(x) = x^2 - 1$ and $g(x) = \frac{x+1}{2}$ then $\frac{f(3)}{f(3)+g(3)}$ is
 (a) $\frac{5}{4}$
 (b) $\frac{4}{5}$
 (c) $\frac{3}{5}$
 (d) $\frac{5}{3}$
91. "Is smaller than" over the set of eggs in a box is
 (a) Transitive (T)
 (b) Symmetric (S)
 (c) Reflexive (R)
 (d) Equivalence (E)
92. $\lim_{x \rightarrow 2} \frac{2x^2 - 7x + 6}{5x^2 - 11x + 2}$ is equal to –
 (a) $\frac{1}{9}$
 (b) 9
 (c) $-\frac{1}{9}$
 (d) None of these
93. $\lim_{x \rightarrow t} \left(\frac{x^3 - t^3}{x^2 - t^2} \right)$ is evaluated to be –
 (a) $\frac{3}{2}$
 (b) $\frac{2}{3}$
 (c) $\left(\frac{3}{2}\right)t$
 (d) None of these
94. $\lim_{x \rightarrow p} \frac{(x+2)^{5/3} - (p+2)^{5/3}}{x-p}$ is equal to –
 (a) p
 (b) $\frac{1}{p}$
 (c) 0
 (d) $\frac{5}{3}(p+2)^{2/3}$
95. A function $f(x)$ is defined by $f(x) = (x-2) + 1$ over all real values of x. Now $f(x)$ is –
 (a) Continuous at $x = 2$
 (b) Discontinuous at $x = 2$
 (c) Undefined at $x = 2$
 (d) None of these
96. If $y = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n} + \dots \infty$ then $\frac{dy}{dx} - y$ is
 (a) 1
 (b) -1
 (c) 0
 (d) None of these
97. Differentiate $2^x x^5$ with respect to x.
 (a) $x^5 2^x \log_e 2 + 5.2^x x^4$
 (b) $x^5 2^x \log x + 2^x \log x$
 (c) $2^x \log x + x^5$
 (d) $x^4 \log_e x + 2^x$

98. If $y = x^{x^x}$ then the value of $\frac{dy}{dx}$ is

- (a) $x^{x^x} [x^{x-1} + \log x \cdot x^x (1 + \log x)]$
- (b) $x^{x^x} [x^{x-1} + \log x \cdot (1 + \log x)]$
- (c) $x^{x^x} [x^{x-1} + \log x \cdot x^x (1 - \log x)]$
- (d) $x^{x^x} [x^{x-1} - \log x \cdot x^x (1 - \log x)]$

99. $\int e^{3x+5} dx$ is equal to

- (a) $\frac{e^{3x+5}}{3} + c$
- (b) $\frac{e^{3x}}{5} + c$
- (c) $\frac{-e^{3x+5}}{3} + c$
- (d) None of these

100. Integrate $\int_3^{11} (2x + 3)^{1/2} dx$

- (a) 33
- (b) $100/3$
- (c) $98/3$
- (d) None