Disclaimer: Questions asked in the examination may have wrong/inadequate information and/or ambiguous language. In that case the answers provided by the institute may differ from these ideal answers. Every effort has been made taken to give best answers. Still if you find some errors please bring them to our notice through e-mail.

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CPT – June 2010 Question Paper (Based on Memory)

2nd Session **Marks:** 100 Marks **Time:** 2 hrs.

Part A - Economics

Introduction to Economics

1. Micro Economics is also called
a) Demand theory b) price theory c) economic theory d) none of these

2. If opportunity cost is constant then ____
a) PPC is concave b) PPC is convex c) PPC is straight line d) None of these

Analysis of Demand

3. Which goods are named after sir Giffen
a) Superior b) Normal c) Luxury d) Inferior

Elasticity of Demand

4. Find Income elasticity of demand when demand increases by 20% and income decreased by 10%
a) -2 b) 3 c) 2 d) 4

5. In case of luxury goods income elasticity
a) Positive b) Negative c) Positive but >1 d) Positive but <1

Theory of Consumer's Behaviour

6. Indifference curve analysis is based on ____
a) Cardinal utility b) Ordinal utility c) both (a) and (b) d) None of these

7. Law of diminishing marginal utility apply to
a) Manufacturing b) agriculture
c) neither (a) nor (b) d) all economic activities upto certain limit

8. The Law of equi – marginal utility is also known as ____
a) Diminishing marginal utility b) Law of proportions
c) Law of consumer's surplus d) Law of increasing returns

9. If the indifference curves shape is L, than the commodities are ____
a) Perfect liabilities b) Perfect complementaries
c) Close Substitutes d) Unrelated goods

Production Analysis

10. If output increase by 20% for 20% increase in input, then it is called ____
a) Law of increasing returns to scale b) Law of decreasing returns to scale
c) Law of constant returns to scale d) None of these

11. Law of increasing returns occur due to ___
a) Indivisibility b) Specialisation c) Economies of scale d) None of these

Markets

12. When supply increases with demand remaining constant then ____
a) both price and demand increases b) price increases demand decreases
c) price decreases and demand increases d) price and demand decreases

13. If increase in supply is more than increase in demand then ____
a) Increase in price and quantity b) Decrease in price and quantity
c) Increase in price and decrease in quantity d) Decrease in price and increase in quantity

Price & Output Determination under different Markets

14. Price rigidity exists in which of the following type of markets?
a) Perfect Competition b) Monopoly
c) Monopolistic Competition d) Oligopoly

15. Which of the following is not a feature of imperfect competition ____
a) Homogenous product b) Price war
c) Product differentiation d) None of these

16. Price discrimination is found in ___
a) Perfect Competition b) Monopolistic Competition c) Monopoly d) Oligopoly

Nature of Indian Economy

17. A developed economy uses ____ techniques of production
a) Labour intensive b) Capital intensive c) Home based d) Traditional

Role of different sectors in Indian Economy

18. In which five year plan the importance given to basic and heavy industries?
a) 1st five year plan b) 2nd five year plan c) 3rd five year plan d) 4th five year plan

19. In the occupational structure, the major contribution is provided by which sector?
a) Agriculture b) Industry c) Service d) Animal Husbandary

20. Tourism sector includes in ____
a) Primary sector b) Tertiary sector c) Secondary sector d) None of these

21. Which of the following is associated with the land reforms introduced after independence
a) Abolition of intermediaries b) Tenancy reforms
c) Ceiling on Land holdings d) All of these

National Income In India

22. $GDP_{FC} = GDP_{MP} - (\ ) +$ subsidies
a) Direct Taxes b) Indirect Taxes c) Both (a) and (b) d) none

23. Real NNP_{FC} is valued at ____
a) Current prices b) Constant prices c) Both (a) & (b) d) None

Unemployment

24. The unemployment which is caused by the introduction of new machines, improved production techniques, labour saving devices etc called
a) Frictional b) Technological c) Casual d) Structural

Poverty

25. In uban areas a person is said to be below the poverty line, if his daily consumption of calories is less than_
a) 2400 b) 2100 c) 2600 d) 2800

Balance of Payment

26. Difference between visible imports and visible exports of a nation ___
a) Balance of trade b) Balance of payments
c) Balance of current account d) None of these

Money

27. Which of the following represents M_3
a) Narrow Money b) Board Money c) Near Money d) None of these

Commercial Banks & Reserve Bank of India

28. RBI Rediscounts the bills with banks
a) Repo rate b) Bank rate c) CRR d) SLR

29. Monetary policy is done by ___
a) Ministry of finance b) RBI c) Planning commission d) Government

Part B - Quantitative Aptitude

Sets

30. If $A = \{x : x^2 - 3x + 2 = 0\}, B = \{x : x^2 + 4x - 12 = 0\}$ then find B – A = _____
a) {-6} b) {1} c) {1, 2} d) {-2, 6}

Functions

31. If $f : A \to R$ is a real valued function defined by $f(x) = \frac{1}{x}$ then domain of f is ____
a) R b) R – {1} c) R – {0} d) R – N

32. The function $y = |x|$ is ____
a) Discontinuous at x = 0
b) Continuous every where except x = 0
c) Continuous every where
d) None

Logarithms

33. If $\log_a^b + \log_a^c = 0$ then ____
a) b = c b) b = - c c) b + c = 1 d) b and c are reciprocal

Theory of Indices

34. If $2^x - 2^{x-1} = 4$ then find x^x
a) 7 b) 3 c) 27 d) 9

Ratio & Proportions

35. If two numbers are in the ratio 49 : 68 and a numbers is added to it then the ratio becomes 3 : 4. The number is ____
a) 3 b) 5 c) 8 d) 9

36. If the number of students in two classes are in the ratio 5 : 7. If 10 students are subtracted from each class, the ratio becomes 4 : 6. Then the number of students in each class is ____
a) 30, 40 b) 45, 60 c) 40, 60 d) 50, 70

Quadratic Equations

37. The roots of the equation $3x^2 - 14x + k = 0$ are reciprocal then find k
a) k = -3 b) k = 0 c) k = 3 d) k = 14

Linear Inequations

38. Solution of inequality $\frac{5-2x}{3} \le \frac{x}{6} - 5$ then
a) $x \ge 8$ b) $x \le 8$ c) x = 8 d) none

Arithmetic Progressions

39. The number 144 is dividend into 3 parts in A.P. such that largest number is double the smallest number then find the smallest number ____
a) 48 b) 36 c) 13 d) 32

40. If a_1a_2,a_3 represents first, second, third terms in A.P. if the first term is 2 and $(a_1+a_2)\,a_3$ is minimum then the common difference is ___

a) $\frac{5}{2}$ b) $-\frac{5}{2}$ c) $\frac{2}{5}$ d) $-\frac{2}{5}$

Geometric Progressions

41. Sum of the series $1+\frac{4}{5}+\frac{7}{5^2}+\frac{10}{5^3}+.....$

a) $\frac{15}{36}$ b) $\frac{35}{16}$ c) $\frac{35}{28}$ d) $\frac{15}{16}$

Permutations & Combinations

42. The Number of ways of arranging 6 boys and 4 girls in a row, so that all the girls are together __

a) 6!, 4! b) 2, 7!, 4! c) 7!, 4! d) 2 (6!, 4!)

43. The Number of numbers not exceeding 1000 formed by using the number 1,2,3,4,5,6,7,8,9 without repetition

a) 384 b) 585 c) 364 d) 529

Limits

44. $\lim\limits_{x\to\infty}\frac{\sqrt{2x^2+3}}{4x+1}$

a) $\frac{1}{2\sqrt{2}}$ b) $2\sqrt{2}$ c) $\sqrt{2}$ d) 0

Derivatives

45. If $x^2+y^2=4$ then ____

a) $y\frac{d^2y}{dx^2}+\left(\frac{dy}{dx}\right)^2+1=0$ b) $y\frac{d^2y}{dx^2}+2\left(\frac{dy}{dx}\right)^2+1=0$

c) $y\frac{d^2y}{dx^2}+2\left(\frac{dy}{dx}\right)^2+2=0$ d) None of these

Integrations

46. $\int_1^2\frac{x\,dx}{x^2+2}=$ ____

a) $\log\sqrt{2}$ b) $\log\sqrt{3}$ c) $\log\frac{1}{\sqrt{2}}$ d) $\frac{1}{\sqrt{3}}$

47. $\int\frac{dx}{\sqrt{3x+4}-\sqrt{3x+1}}$

a) $\frac{2}{3}\left[(3x+4)^{\frac{3}{2}}+(3x+1)^{\frac{3}{2}}\right]+C$ b) $\frac{2}{3}\left[(3x+4)^{\frac{3}{2}}-(3x+1)^{\frac{3}{2}}\right]+C$

c) $\frac{2}{27}\left[(3x+4)^{\frac{3}{2}}+(3x+1)^{\frac{3}{2}}\right]+C$ d) none of these

Statistical Description of Data

48. Using ogive curve we can find ____

a) Median b) Quartiles c) Both (a) & (b) d) None

49. Histogram is used for finding _____
a) Mean b) Median c) Mode d) None

50. The primary rules that should be observed in classification
1) as far as possible the class should be of equal length
2) The classes should be exhaustive
3) The classes should be in ambiguously defined
a) 1 & 2 b) 2 & 3 c) 1 & 3 d) 1, 2 & 3

Measures of Central Tendency

51. The mean of 100 observations is 110, the mean of 50 observations 125, the mean of other 50 observations is _____
a) 105 b) 110 c) 115 d) none

52. The H.M. of $1, \frac{1}{2}, \frac{1}{3}, ...\frac{1}{n}$ is
a) $\frac{2}{n+1}$ b) $\frac{n+1}{2}$ c) $\frac{1}{n+1}$ d) none

Correlation

53. If the correlation between –x & 2y is r then correlation between u and v where $u = \frac{x-5}{10}, v = \frac{y-7}{2}$ is
a) r b) –r c) Both (a) & (b) d) None of these

54. If 'P' is correlation coefficient is then P^2 is :
a) Coefficient of determination b) Coefficient of non-determination
c) Coefficient of Alienation d) None

Regression

55. If $x + 2y = 5$, and $2x + 3y = 8$ are two regression lines then regression line y on x is
a) x + 2y -5 =0 b) 2x + 3y -8 =0 c) Any of these d) None of these

56. ____ of regression coefficients is greater than or equal correlation coefficient
a) A.M. b) G.M. c) H.M. d) None

Index Numbers

57. Consumer price index number is also known as ____
a) Simple Index Number b) Cost of living Index Number
c) Base Shifting d) None of these

58. Given Paasche's Index Number – 150 and Dorbish and Bowley's Index Number – 145 then the fisher's Ideal Index Number is _____
a) 175.91 b) 160.44 c) 144.91 d) None

Probability

59. Find the sum of 2 dice ($x \geq 7$) when 2 dice are thrown simultaneously.
a) $\frac{5}{12}$ b) $\frac{7}{12}$ c) $\frac{11}{15}$ d) $\frac{3}{8}$

60. If $P(A)=\frac{1}{4}, P(B) = \frac{2}{5}, P(A \cup B) = \frac{1}{2}$ $P(\bar{A} \cap \bar{B})$
a) $\frac{1}{2}$ b) $\frac{1}{3}$ c) $\frac{1}{4}$ d) None

61. In a pack of playing cards with joker then getting spade king ____
a) $\frac{4}{52}$ b) $\frac{4}{13}$ c) $\frac{1}{52}$ d) $\frac{1}{54}$

Theoretical Distributions

62. Variance of Standard Normal Distribution is ___

a) 1 b) μ c) σ^2 d) 0

63. E (13 x + 9)

a) 13 b) 9 c) 13 E(x) +9 d) 0

64. For a P.D. P(x=3) = 5, P(x=5) then S.D.

a) 4 b) 2 c) 16 d) $\sqrt{2}$

65. In B.D. n=9, p = $\frac{1}{3}$. What is value of σ^2

a) 8 b) 4 c) 2 d) 6

Sampling

66. Other than sampling errors are ____

a) Enumeration error b) Formula error c) Human error d) Non sampling error

67. The selection of each element have equal probability in type of sampling ___

a) Random sampling b) Stratified sampling c) Systematic sampling d) None of the above

68. Standard Deviation of sample is ___

a) Sample b) Stratified Sampling c) Standard Error d) None of these

THE END

Part A – ECONOMICS

1.	B	2.	C	3.	D	4.	A	5.	C
6.	B	7.	D	8.	B	9.	B	10.	C
11.	C	12.	C	13.	D	14.	D	15.	A
16.	C	17.	B	18.	B	19.	A	20.	B
21.	D	22.	B	23.	B	24.	B	25.	B
26.	A	27.	B	28.	B	29.	B		

Part B - QUANTITATIVE TECHNIQUES

30.	A	31.	C	32.	C	33.	D	34.	C
35.	C	36.	D	37.	C	38.	A	39.	D
40.	B	41.	B	42.	C	43.	B	44.	A
45.	A	46.	A	47.	C	48.	C	49.	C
50.	D	51.	D	52.	A	53.	B	54.	A
55.	A	56.	A	57.	B	58.	C	59.	B
60.	A	61.	C	62.	A	63.	C	64.	B
65.	D	66.	D	67.	A	68.	C	69.	

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