

M.K.G CA EDUCATION

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MATH ASSIGNMENT NO. 7

Maximum Marks: - 100

Time: 2 Hours

1. If MADRAS is coded as NBESBT How is BOMBAY can be coded
2. In a code language if COULD is written as BNTKC and MARGIN is written as LZQFHM How would MOULDING be written
3. In a certain code MONKEY is coded as XDJMNL How TIGER can be written in the same coding.
4. In a certain code COMPUTER is coded as RFUVQNPC how is MEDICINE coded in same code
5. If VICTORY is coded as YLFWRUB how can SUCCESS be coded
6. If TOGETHER is coded as RQEGRJCT in the same way PAROLE can be coded as
7. If BOMBAY is coded as MYMYMY in the same code TAMIL NANU may be coded as
8. If FRIEND is coded as HUMJTK, the word CANDLE may be coded as
9. If COUNSEL is coded as BITIRAK how GUIDANCE is coded in the same way
10. If DELHI is coded as 73541 and CALCUTTA is coded as 82589662 how CALICUT can be coded
11. If RIPPLE is coded as 613382 and LIFE is coded as 8192 how the word PILLER is coded
12. If the word TWENTY is coded as 863985 and ELEVEN is coded as 323039 how the word TWELVE can be coded
13. If PALE is coded as 2134, EARTH is coded as 41590 how the word PEARL is coded
14. If an ENTRY is coded as 12345 and STEADY is coded as 931785 How the word SEDATE can be coded
15. If ENGLAND is written as 1234526 and FRANCE is coded as 785291 how is the GREECE is coded
16. If AIR is called green, GREEN is called blue, BLUE is called sky, SKY is called yellow, YELLOW is called water WATER is called PINK What is the colour of clear sky
17. If SKY is called sea. Sea is called water, WATER is called AIR air is called cloud and cloud is called river then what do we drink when thirsty
18. If train is called bus, BUS is called tractor, TRACTOR is called car, CAR is called scooter, SCOOTER is called bicycle, BICYCLE is called moped what is used to plough a field
19. In a certain language 'col tip mot' means 'singing is appreciable'; 'mot baj min' means 'dancing is good' and 'tip nop baj' means 'singing is dancing' what is 'good' stands in coding
20. In a coding 'oka peru' means 'fine cloth'; 'meta lisa' means 'clear water' and 'dona lisa peru' means 'fine clear weather' What is code for weather.

21. In a certain coding 467 means; leaves are green ‘ ;485 means ‘green is good ‘;639 means ‘they are playing ‘ which digit stands for Leaves
22. In a certain code 526 means ‘sky is blue ‘24 means ‘blue colours’ and 436 means ‘Colour is fun ‘which digit is for ‘fun’
23. In a certain code TEACHER is coded as VGCEJGT how the word DULLARD be coded
24. If CORNER is coded as GSVRIV how can the word CENTRAL be coded
25. If the word MADRAS is coded as ARSARS how the word ARKONAM is written
26. If DELHI is coded as CCIDD how would you encode BOMBAY
27. In a certain code NATURE is coded as MASUQE how is FAMINE Coded in the same rule
28. If KINDLE Is coded as ELDNIK how the word EXOTIC will be coded
29. If HEATER is coded as KBDQHO how the cooler will be coded
30. In a coding system DISTANCE is coded as IDTUBECN and DOCUMENT is coded as ODDVNTNE how the word THURSDAY will be coded in the same way
31. 10, 30, 68, 130, 222, 350
32. 6, 24, 60, 120, 210, 336.....
33. 65536, 256, 18, 4.....
34. 1, 5, 14, 30 ,55 91.....
35. EXAM is coded as 39 PAPER is coded as 51 Then how the word PASS would be coded
36. If RED IS CODED AS 6720 THEN GREEN would be coded as
37. 160, 80, 120, 300.....
38. 49, 216, 625, 1024, 729.....
39. 71, 216, 868, 4345.....
40. 21,35,30,44,39.....
41. 41, 13, 17, 33, 97,, 1377
42. 2, 5, 9, 19, 37.....

On the basis of following information answer the following questions from (43-47)

P, Q, R, T, U, V, W and M are sitting in two rows facing each Other. Each row has 4 persons. P is between U and V and facing North. Q who is immediate left of M is facing W R is between T and M and W is to the immediate right of V

43. Who is sitting in front of R
44. Who is to the immediate right of R
45. Right the pairs sitting in front of each other
46. Right the pairs sitting diagonally opposite to each other
47. Who are sitting at the extreme corners facing south

On the basis of following information answer the questions (48-52)

P, T, V, R, M, D, K and W are sitting around a circular table facing the centre. V is second to the left of T. T is fourth to the right of M, D and P are not immediate neighbor of T. D is third to the right of P W is not an immediate neighbor of P who is to the immediate left of K

48. Who is second to the left of K
49. Who is to the immediate right of V
50. Who is exactly in the middle of K and P
51. Who is to the third left of K
52. What is the position of R with respect to V

Complete the series

53. 5, 9, 21, 37, 81 -----
54. 1, 2, 18, 99, 255, 880 -----
55. 1, 2, 10, 37, 101, 226, 442, -----
56. 1, 2, 34, 277, 1301, 4426 -----
57. 2, 12, 36, 80, 150, 252, 392, -----
58. 1, 4, 27, 256, 3125, 46656 -----
59. ab-aa-aaa-a-ab-a.
60. 6, 11, 21, -----, 56, 81
61. Find semi quarterly installment if Rs Rs 32 lakh is repayable in 5 years if rate of interest is 10% and first installment is due from immediate effect.
62. Find issue price of 12% bond of Rs 2000 redeemable after 8 years @ 10% premium if opportunity cost is 14% p a
63. If the word SUGGESTED is written in different ways find probability no two vowels are together.
64. In a marriage halls 6 couples are there, two persons are selected find probability of being one male and one female but not a couple.
65. A 5 digit number is formed with 0 2 3 5 6 and 9 find probability number is not divisible by 5
66. A loan of Rs 12,00,000 was repaid in 60 EMIs of Rs 24,000 find the rate of interest if on simple interest.
67. 4 digit numbers are formed with 2 3 5 6 8 and 9 find probability number lies between 6400 and 8500
68. In a normally distributed factory with 15000 workers the range of salary is 80,000 and maximum people draw 62,000 find highest salary of lowest paid 3750 workers
69. In a manufacturing unit if 1.75% items produced are find defective find probability out of 200 items not more than 2 items are defective
70. In a symmetrical Binomial Distribution with 400 trials find C/V and 4th moment.
71. In a Poisson's Distribution if $3P(x = 2) = 4P(x = 4)$ find the value of second and fourth moments.
72. If α and β are the roots of equation $3x^2 - 9x + 15 = 0$ find equation whose roots are α^4 and β^4

73. A loan of Rs 43,00,000 was initially repayable in 10 years on quarterly basis but after making 6 installments it was closed finally. find the amount repaid on closure
74. If cost of capital is 19% and growth rate is 12% find market price of share if proposed dividend is Rs 234
75. While computing co efficient of correlation of 49 items P.E was computed as .032 find co efficient of alienation, determination and co efficient of co relation
76. While computing co efficient of co relation by rank differential method of 12 items the difference in one rank is wrongly taken as 7 instead of 9 if computed co efficient of co relation is .65 find correct co efficient of correlation
77. from the following data compute co efficient of correlation by rank differential method

X:	12	15	18	32	21	23	32	18	21
Y:	23	34	45	45	45	34	34	42	50

78. From the following data compute price index by Dr Fisher and Dr Bowley method

Base year		current year	
P ₀	q ₀	p ₁	q ₁
10	50	18	60
15	60	32	50
30	40	70	50
40	60	90	30
80	20	60	40

79. CPI is increased from 320 to 980 while wages are increased from 24,000 to 70,000 Compute the Dearness allowance
80. if b_{yx} is computed as $-.90$ and x and u are related to $3x+4u-10=0$ while y and v are related as $6y + 9v - 20 = 0$ compute b_{vu}
81. If the word APURVA is written in different ways find Probability vowels and consonants are written alternatively.
82. If the 4 letter word is formed from the word GOOGLE, how many such words can be formed
83. A pair of dice is thrown Find probability the number 6 on second die if number of first die is also 6
84. There are two bags numbered 1 and 2 containing 6 Red and 7 blue and 7 Red and 6 blue respectively a ball is drawn from either of the two bags find Probability it is drawn from bag 2 provided drawn ball is Red
85. Evaluate $\int_1^2 \left[\frac{x^2-1}{x^2} \right] e^{x+\frac{1}{x}} dx$. The value is

86. Out of 3,000 people in a society 60% are females. 40% of the people drink coffee and remaining take tea. If 60% of the gents are coffee drinker find probability a person selected randomly is female provided selected person is coffee drinker.
87. In a town with 10,000 population 3,000 read English news paper 2000 read Hindi newspaper 4,000 read regional language paper while 1000 read any of the two news papers and 200 people read all the papers find probability out of 5 persons selected at random 3 does not read any news paper
88. In a normally distributed factory with 10,000 employees the average salary is 30,000 with Standard Deviation 9,000 find probability out of 5 persons selected 4 draw salaries beyond point of inflection.
89. In connection with random experiment, it is found that $P(A) = \frac{2}{3}$, $P(B) = \frac{3}{5}$ and $P(A \cup B) = \frac{5}{6}$ Evaluate the following probabilities
 (i) $P(A/B)$ (ii) $P(B/A)$ (iii) $P(A'/B)$ (iv) $P(A/B')$ (v) $P(A'/B')$
90. If the weekly wages of 5000 workers in a factory. Follows normal distribution with mean and Standard Deviation and ₹ 7000 and ₹ 500 find probability a worker selected is drawing salary between 6600 and 7200.
91. The probability that there is at least one error in an account statement prepare by 3 persons A, B and C are 0.2, 0.3 and 0.1 respectively. If A, B and C prepare 60, 70 and 90 such statements find the expected number of correct statements
92. If the SD of the 1st n natural numbers is 2, find the value of n
93. The mean and SD for a group of 100 observations are 65 and 7.03 respectively. If 60 of these observations have mean and SD as 70 and 3 respectively, what is the SD for the group comprising 40 observations?
94. A pair of dice is thrown together and the sum of points of the two dice is noted to be 10. What is the probability that one of the two dice has shown the point 6?
95. A box contains 5 white and 8 black balls. Two successive drawn are made without replacement find probability first draw would produce white balls and the second draw would produce black balls.
96. A biased coin of getting probability of head 4 times than that of getting tail is thrown 7 times find probability of getting atleast 2 heads.
97. Out of 2000 employees in an office 48% preferred Coffee, 54% like Tea 64% are used to Smoking. Out of the total employees 28% prefer Coffee and Tea, 32% preferred Tea and Smoking and 30% preferred Coffee and Smoking only 6% people don't take anything find the number having all the 3 things.
98. If $f(x) = \frac{1}{1-x}$ and $g(x) = \frac{(x-1)}{x}$ find the value of fog, fof, gof and gog
99. Define the function $f(x) = 3^x$
100. Evaluate $\int \frac{e^x - e^{-x}}{e^x + e^{-x}} dx$