MATHS

BOOKS - UNITED BOOK HOUSE

Model Test Set-2

Exercise

1. The sum of the 20 observations is 100, then the sum of squares of these observations is at least

A. 25

B. 100

C. 500

D. 2500

Answer:

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2. If 3u + 4v =10 nd $S_u = 1.2$. then Var (v) = 0.81

A. 1

B.

C.

D.

Answer:

3. The H.M of a set of values is 2. If each value is tripled, the new H.M is equal to

A. 2

B. 3

C. 6

D. none of these.

Answer:

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4. Division obtained in an examination is

A. attribute

B. discrete variable

C. continous variable

D. none of these.

Answer:

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5. For a constant c, the value of $\triangle (c)$ is

A. 1

B. c

C. 0

D. none of these.

Answer:

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6. In Lagrange's interpolation formula the values of the argument are _____

A. Equispaced

B. Not equispaced

C.

D.

Answer:

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7. The degree of the polynomial $7x^5 + 5x^9 + 3x^2 + 4x + 1$ is

A. 5

B. 9

C. 7

D. none of these.

Answer:

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8. The greatest common divisor of 29 and 2

A. 0

B. 1

C. 3

D. none of these.

Answer:

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9. A and B are mutually independent implies P(AIB) = P(A).

A. 1

B.

C.

D.

Answer:

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10. If event A implies B. then $P(A) \leq P(B)$

A. 1

B.

C.

D.

Answer:

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11. If the algebric sum of the deviations of 20 observations measured from 30 is 2, then what would be the mean of these observations.

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12. State the empirial relation between mean, median and mode.

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13. Which measure of dispersion do you use for a frequency distribution with open-end class?

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14. For a symmetrical distribution $Q_1 = 28$ and $Q_3 = 46$. Find the median?

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15. Write down the importance of class bounderies in case of continuous variable.

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16. Let A and B be two events such that P(A) = 0.3 and $P(A \cup B) = 0.8$. If A and B are independent events then P(B) = ?

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17. If events A and B are complementary to each other, then P(B) =?

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18. Draw venn diagram to represent the following set : $(A \cup B) - C$.

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19. Draw venn diagram to represent the following set : $A \cap B^c$.

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20. A-set contains 4 elements. It's power set will contain _____ element.

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21. Write down the Fisher's Price index formula.

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22. Define ordianl and nominal data.

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23. Describe cross sectional data with their utility.

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24. In a certain distribution the first four moments about the value 4 of a varible are 1, 4, 10 and 45 respectively. Find the moments about mean b_1 and b_2.

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25. If the A.M. and S.D. at n observation $x_1, x_2, \ldots\ldots\ldots\ldots x_n$ be $\bar{x}$ and s respectively, then

find the A.M. and S.D. of

$(-x_1, -x_2, \ldots\ldots\ldots\ldots -x_n, x_1, x_2, \ldots\ldots\ldots x_n)$.

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26. n persons are seated on n chairs at a round table. Find the probability that two specified persons are sitting next to each other.

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27. State the statistical definition of probability.

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28. Describe Ratio chart.

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29. Find the standard deviation of the values $a, a+b, a+2b, a+3b, \ldots, a+2nb(b>0)$.

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30. If the values of a variable be increased by 10, show the effect on arithmetic mean.

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31. If Y = a + bx, a, b be two real constants, then prove that Range (y) = |b|, Range (x).

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32. Prove that $\triangle \log f(x) = \log[1+\frac{\triangle f(x)}{f(x)}]$.

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33. Find $\triangle^2 \left(e^{ax+b}\right)$, taking the interval of differencing as 1.

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34. Find the relation between a and b so that $\left(2x^4 - 7x^3 + ax + b\right)$ may be divisible by $(x - 3)$.

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35. If $x > 0, y > 0, z > 0$ and $x + y + z = 1$, prove that

$$(1 + x)(1 + y)(1 + z) \geq 8(1 - x)(1 - y)(1 - z)$$

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36. If $P(A) = \frac{1}{2}, P(B) = \frac{1}{3}$, and $P(A^c \cap B^c) = \frac{5}{12}$, find $P(AIB)$ and $P(B - A)$.

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37. What is the probability that a number selected at random from, 1, 2, 3,...., 100 has a digit 4?

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38. In a throw of two unbiased dice, a boy gets a total of 5. Find the probability that he will not get a total of 5 in the next throw.

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39. Write down the merits and demerits of mass questionnaire method.

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40. State how different measures of Central tendency are affected when all the variable values are increased by the same amount.

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41. State how different measures of Central tendency are affected when all the variable values are

increased by the same amount.

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42. Prove that Mean deviation is minimum about its median.

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43. Two groups of students are arranging an picnic near a lake.The probability of the 1st group of getting the picnic spot is 0.6 and that of the second group is 0.4. If the 1st group get the spot, the probability of doing boating is 0.8 and that of 2nd group is 0.3

what is the probability of boating? Given that boating is done, find the probability that the 2nd group does the picnic.

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44. Give the forniula of Fisher's index number ?

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