MATHS

BOOKS - UNITED BOOK HOUSE

Model Test Set - 7

Exercise

1. Division obtained in an examination is

    A. attribute

    B. discrete variable

    C. continuous variable

    D. none of these

Answer:

2. Frequency densities are necessary for drawing

    A. ogive

    B. step diagram

    C. histogram

    D. column diagram

Answer:

3. The G.M. of the observations 5, 1, 0, 2 and 4 is

A. 3

B. 5

C. 0

D. none of these

Answer:

4. Coefficient of variation is equal to

A. a) $\dfrac{s}{\bar{x}} \times 100$

B. b) $\dfrac{\bar{x}}{\times} x 100$

C. c) $\dfrac{s}{\bar{x}} \times 100 \%$

D. d) $\dfrac{\bar{x}}{s} \times 100 \%$

Answer:

5. The degree of the polynomial $6x^5 + 4x^3 + 2x - 1$ is

A. 1

B. 3

C. 5

D. none of these

Answer:

6. Which of the following is correct?

A. 15 = 25 (mod 5)

B. 15 = 25 (mod 3)

C. 15 = 25 (mod 7)

D. 15 = 25 (mod 11)

Answer:

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7. $\Delta 5 = $_____

A. 5

B. 0

C. 1

D. none of these

Answer:

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8. For the first $n(\geq 2)$ natural number $\left(\dfrac{n+1}{2}\right)^n < n$ (write true or false)

9. For two events A and B, P(A) or le P(A). (write true or false)

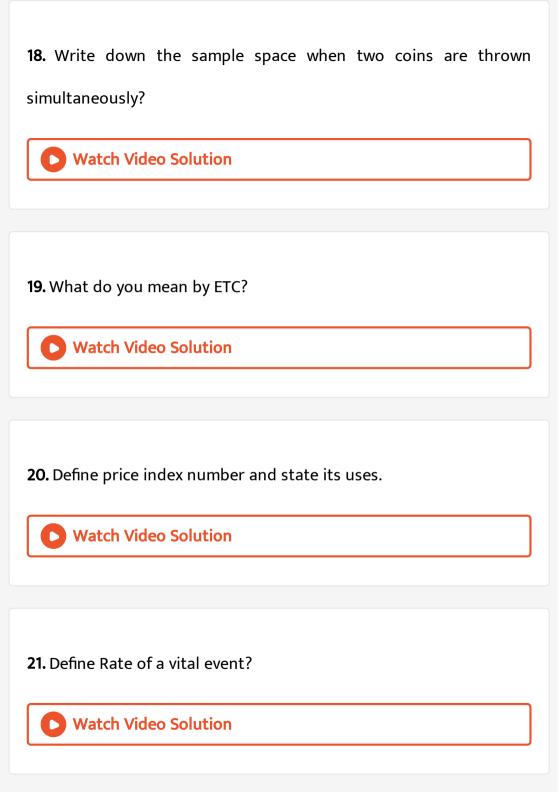**10.** Probability of having no head from three throws of an unbiased coin is

A. $\dfrac{1}{3}$

B. 1/8`

C. $\dfrac{3}{8}$

D. $\dfrac{7}{8}$

Answer:

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11. Write a short note on measures of central tendency.

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12. Define primary data with examples.

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13. What is food?

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14. What do you mean by ETC?

15. What is Biocide?

16. Define frequency density of a class interval.

17. Let A and B be two events with P(A) = 0.4 and $P(A \cup B) = 0.7$ then for what value of P(B), can A and B independent?

18. Write down the sample space when two coins are thrown simultaneously?

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19. What do you mean by ETC?

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20. Define price index number and state its uses.

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21. Define Rate of a vital event?

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22. Distinguish between frequency data and non-frequency data?

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23. Define ordianl and nominal data.

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24. The mean and standard deviation for two values x_1 and $x_2(x_1 < x_2)$ of a variable x are respectively 25 and 4. find x_1 and x_2.

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25. Three points x, y and z are taken at random on a line segment. What is the probability that z lies between x and y.

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26. If events A and B are independent, then so are A^c and B?

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27. What do you mean by statistical independence of events?

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28. Find the arithmetic mean of 7, 77, 777.___upto p^{th} term.

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29. If y = a + bx and M_o is the mode of x, then show that the mode of

y must be $a + bM_o$.

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30. Show that the arithmetic mean of the square root of x cannot be greater than the square root of its arithmetic mean.

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

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

32. If a,b,c be three distinct positive numbers, each different from 1 such that

$$(\log_b a \log_c a - \log_a a) + (\log_a b \log_c b - \log_b b) + (\log_a c \log_b c - \log_c c) = 0$$

, then prove that abc=1

33. Give f(x) = a + b(x - 10) + c(x - 1)(x - 2), f(1) = 7, f(2) = 17 and f(3) = 35, determine the coefficients a, b and c

34. Derive Lagrange's interpolation formula.

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

36. Eight students are arranged in a row. Find the probability that two given students will be next to each other?

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37. If the prices of all items in a place have increased by 145 times in comparison to the base period prices, then what should be the index number of prices for the place?

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38. Study the effect of change of origin and scale on mean deviation and quartile diviation.

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39. The mean deviation of the series 3, 4, 5, 6, 7 about the median is

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40. The standard deviation of the first n odd positive integers is $\sqrt{85}$ find n.

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41. State and prove Cauchy-Schwartz inequality.

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42. Why meiosis is considered as reductional division?

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

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