Educonclave

Note : All questions carry 1 mark each.

Case Study: Direction (1–4) : The number of washing machines sold during seven days sale in a shop are given below :

Days	Number of washing machines
Day I	200
Day II	260
Day III	150
Day IV	250
Day V	160
Day VI	170
Day VII	120

Now, answer the following questions:

1. On which day, the number of washing machines sold is least?

    (a) Day–IV   (b) Day–V   (c) Day–VI   (d) Day–VII

2. Find the total number of washing machines sold on Day–III and Day–IV.

    (a) 300   (b) 400   (c) 500   (d) 600

3. How many less washing machines are sold on Day–VII as compared to Day–I?

    (a) 20   (b) 80   (c) 70   (d) 60

4. The ratio of the number of washing machines sold on Day–III to that on Day–IV is

    (a) $4:5$ (b) $5:3$ (c) $3:5$ (d) $5:4$

5. What is the arithmetic mean of first ten natural numbers?

    (a) 5.5   (b) 7.2   (c) 6.5   (d) 6

6. The daily maximum temperature recorded (in degree Celsius) at Delhi for some days in the month of June 2018 is as under:

    38,42,41,32,35,36,30,31,32,33 Find the mean of the temperature recorded.

    (a) $35^{\circ}C$ (b) $36^{\circ}C$ (c) $37^{\circ}C$ (d) $38^{\circ}C$

7. Find the mean of $a, a+3, a+6, a+9, a+12$.

    (a) $a+3$ (b) $a+6$ (c) $a+9$ (d) $a+12$

8. The mean of five given numbers is 75 . Find their sum.

    (a) 375   (b) 300   (c) 400   (d) 350

9. The marks of 10 students out of 100 in English of a class are given below:

78,21,99,63,94,22,78,36,30,54

The range of marks of students is

(a) 85   (b) 90   (c) 78   (d) 93

10. The mode of the following data is 3,5,7,4,2,1,5,3,5,6,5

(a) 5   (b) 6   (c) 7   (d) 3

11. The mode of the following data is 8 . 3,6,8,5,4,8,5,6, x–3

Find the value of x.

(a) 10   (b) 11   (c) 12   (d) 8

12. Find the median salary, if the salaries of 8 workers are: ₹ 5000 , ₹ 8900 , ₹ 12100 , ₹ 3800 , ₹ 9800 , ₹ 7000 , ₹ 7000 , ₹ 7200 .

(a) ₹ 6300   (b) ₹ 6350   (c) ₹ 7100   (d) ₹ 7500

13. Which set of data has a median 16 ?

(a) 16,21,26,32,29   (b) 0,16,7,10,16,4   (c) 0,16,31,17,18,22   (d) 25,14,7,16,21

Case Study (14 - 17): Read the bar graph given below and answer the following questions:

(Production of rice and wheat in some states during 2017-18)
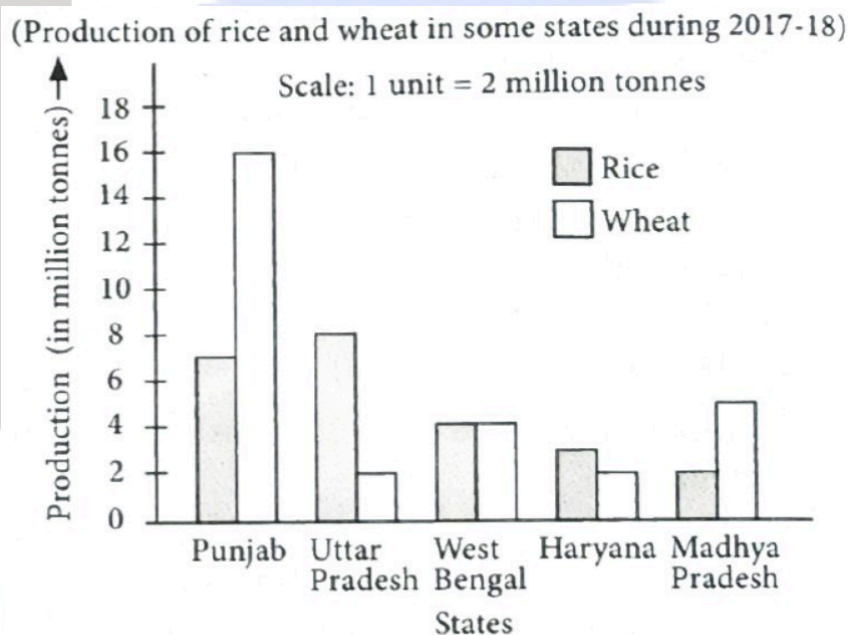
14. Which of these is certain event?

(a) You look younger today than yesterday.   (b) You are older today than yesterday.

(c) A coin tossed will land heads up.   (d) Tomorrow will be cloudy day.

15. A coin is tossed. What is the probability of getting tail?

(a) 0   (b) 1   (c) $\dfrac{1}{2}$ (d) $\dfrac{1}{3}$

16. A box contains socks of two colours red and green. Raju has one of a pair of black socks. He picks out one with his eye closed from the box. What is the probability that he will make a pair?

   (a) 0   (b) $\dfrac{1}{2}$ (c) 1   (d) $\dfrac{1}{3}$

17. Monika has a box with 8 marbles numbered from 1 to 8 on each. She picks a marble from the box without seeing. What is the probability that the picked marble has the number 3 on it?

   (a) $\dfrac{1}{8}$ (b) $\dfrac{2}{3}$ (c) $\dfrac{1}{4}$ (d) $\dfrac{3}{8}$
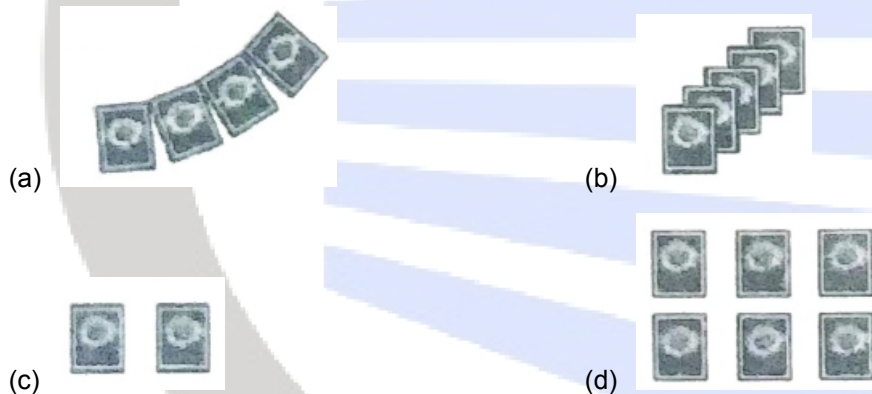
18. Let x, y, z be three observations. The mean of these observations is

   (a) $\dfrac{x \times y \times z}{3}$ (b) $\dfrac{x + y + z}{3}$ (c) $\dfrac{x - y - z}{3}$ (d) $\dfrac{x \times y + z}{3}$

19. The range of the data: 21,6,17,18,12,8,4,13 is
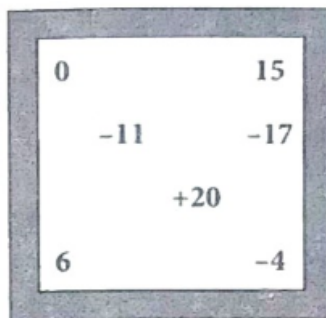
   (a) 17   (b) 12   (c) 8   (d) 15

20. There are 2 aces in each of the given set of cards placed face down. From which set are you certain to pick the two aces in the first go?
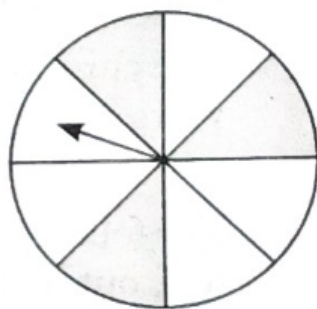
   (a)   (b)

   (c)   (d)

21. In a school, only 2 out of 5 students can participate in a quiz. What is the chance that a student picked at random makes it to the competition?

   (a) 20%   (b) 40%   (c) 50%   (d) 30%

22. Some integers are marked on a board. What is the range of these integers?

C-9, Greater Kailash Enclave 2, New Delhi; Phone: 9810815644, 9910393669
Email: info.educonclave@gmail.com; sangeettuli@gmail.com

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(a) 31   (b) 37   (c) 20   (d) 3

23. Which measure of central tendency best represents the data of the most popular politician after a debate?

(a) Mean   (b) Median   (c) Mode   (d) Any of the above

24. Which of the following has the same mean, median and mode?

(a) 6,2,5,4,3,4,1   (b) 4,2,2,1,3,2,3   (c) 2,3,7,3,8,3,2   (d) 4,3,4,3,4,6,4

25. Assertion : The range of the following set of scores: 25,36,38,24,35,27,28 is 18.

Reason : Range is the difference between the highest and the lowest value of the data.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

26. Assertion : The mode of the data: 97,115,82, 71,136,105,115,125,83,115 is 115.

Reason : The most frequently occurring values in the data is called the mode of the data.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

27. Assertion : The probability of obtaining a number 6 in a throw of a die is 1.

Reason : Probability of sure event is always 1.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

28. Assertion : The probability of the arrow stopping in shaded region of the spinner is $\dfrac{3}{4}$.

Reason : Probability of an impossible event is zero.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

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