## Atomic Energy Education Society

Session : 2023-24
Class: VIII
Subject: Mathematics

## WORKSHEET NO.- 1 <br> Name of the Chapter : 4 Data Handling

1. This work sheet is divided into five sections-A, B, C.D and E.
2. Section A-Question No, $\mathbf{1}$ to $\mathbf{1 0}$ are multiple choice questions. Each question carries $\mathbf{1}$ mark.
3. Section B-Question No. $\mathbf{1 1}$ to $\mathbf{2 0}$ are Very Short answer type questions. Each question carries 1 marks.
4. Section C- Question No. $\mathbf{2 1}$ to 30. Each question carries $\mathbf{2}$ marks.
5. Section D-Question No. $\mathbf{3 1}$ to 35. Each question carries $\mathbf{3}$ marks.
6. Section E- Question No. $\mathbf{3 6}$ to $\mathbf{4 0}$ carry $\mathbf{5}$ marks.

## SECTION - A

( $\mathbf{1 \times 1 0 = 1 0}$ Marks)

## Choose the correct option

1. Which of the following is not a random experiment?
(a) Tossing a coin
(b) Rolling a dice
(c) Choosing a card from a deck of 52 cards
(d) Throwing a stone from a roof of a building
2. In a school only, 3 out of 5 students can participate in a competition. What is the probability of the students who does not make it to the competition?
(a) 0.65
(b) 0.4
(c) 0.45
(d) 0.6
3. Listed below are the temperature in ${ }^{\circ} \mathrm{C}$ for 10 days $-6,-8,0,3,2,0,1,5,4,4$. What is the range of the data?
(a) 8
(b) $13^{\circ} \mathrm{C}$
(c) $10^{\circ} \mathrm{C}$
(d) $12^{\circ} \mathrm{C}$
4. Data represented using circles is known as
(a) Bar graph
(b) Histogram
(c) Pictograph
(d) Pie chart
5. A glass jar contains 6 red, 5 green, 4 blue and 5 yellow marbles of same size. Hari takes out a marble from the jar at random. What is the probability that the chosen marble is of red colour?
(a) $7 / 10$
(b) $3 / 10$
(c) $4 / 5$
(d) $2 / 5$
6. In a pie chart, the total angle at the centre of the circle is
(a) $180^{\circ}$
(b) $360^{\circ}$
(c) $270^{\circ}$
(d) $90^{\circ}$
7. A card is drawn at random from a pack of 52 cards. Find the probability that the card is drawn is a red king.
(a) $1 / 13$
(b) $1 / 26$
(c) 13
(d) 26
8. Total number of outcomes, when a ball is drawn from a bag which contains 3 red, 5 black and 4 blue balls, is $\qquad$ .
(a) 8
(b) 12
(c) 7
(d) 9
9. 18 out of 36 people love reading, so reading in the pie chart will be represented by
(a) 36 degree sector
(b) quarter sector
(c) semi circular sector
(d) None of these
10. When a die is thrown, list the outcomes of an event of getting a composite number.
a) $1,3,5$
b) 2, 4, 6
c) 4,6
d) None of these

## SECTION - B

( $1 \times 10=10$ Marks $)$
11. A coin is tossed three times. The number of possible outcomes is $\qquad$ .
12. A die is thrown once. Find the probability of getting a number greater than 4.
13. What is the probability of an impossible event?
14. The monthly salary of an average person is Rs. 15,000 . The central angle of the given sector representing his expenses on food and house rent on a pie chart is $60^{\circ}$. The amount he spends on his food and house rent is $\qquad$ _.

Adjoining pie-chart gives the expenditure (in percentage) on various items and savings of a family during a month.
Study the given pie-chart and answer the questions from Q15 - Q19.


Page 2 of 6
15. On which item the expenditure was maximum?
16. On which item the expenditure was minimum?
17. Expenditure on which item is equal to total savings of the family?
18. Expenditure on which item is equal to total savings and the House Rent?
19. If the monthly savings of the family is Rs 3000 . What is the monthly income of the family?
20. If you have a spinning wheel with 3 green sectors, 1 blue sector and 1 red sector, what is the probability of getting a green sector? What is the probability of getting a nonblue sector?

## SECTION - C

$(10 \times 2=20 M)$
21. When a die is thrown, list out the outcomes of an event that shows
(i) (a) a prime number
(b) not a prime number
(ii) (a) a number greater than 5
(b) a number not greater than 5
22. A class consists of 21 boys and 9 girls. A student is to be selected for social work. Find the probability that
(i) a girl is selected
(ii) a boy is selected.

Numbers 1 to 50 are written on 50 separate cards (one number on one card), kept in a box and mixed well. One card is drawn at random from the box. Answer the following questions (Q23-Q30)
23. What is the probability of getting a multiple of 5 ?
24. What is the probability of getting a number greater than 25 ?

25 . What is the probability of getting a multiple of 10 ?
26. What is the probability of getting a Prime number?

27 . What is the probability of getting a number divisible by 3 ?
28. What is the probability of getting a number divisible by 7 ?
29. What is the probability of getting an even number?
30. What is the probability of getting a one digit number?
31. The pie chart shows the number of fruits sold in a store. Given that the number of apples is 180 and number of oranges is 400 .

(a) Find the value of $x$, in degress.
(b) Find the number of pears sold.
32. A school has strength of 2000 students. The following pie graph shows the interests of students in different subjects.

(a)The number of students interested in Maths is $\qquad$ .
(b) The number of students interested in Scince is $\qquad$ .
(c) The number of students interested in Social Studies is $\qquad$ .
33. The pie chart shows a percentage breakdown of 1000 votes in student elections.
(a) How many votes did Sushanth receive?
(b) What is the central angle of the sector showing the votes to Priyanka?

34. The pie chart given below shows the distribution of constituents in the human body.

(a) What is the central angle of the sector showing the distribution of protein and other constituents?
(b) What is the central angle of the sector showing the distribution of water?
35. A survey of 400 families of a town was conducted to find out how many children are there in a family. The result of the survey is given below:

| No. of children | 0 | 1 | 2 | 3 | 4 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| No. of families | 56 | 62 | 183 | 73 | 26 |

Find the probability that a family chosen at random will have
(i) 4 children
(ii) 1 or 2 children
(iii) No children

## SECTION - E

( $5 \times 5=\mathbf{2 5 M}$ )
36. From a well shuffled deck of 52 playing cards, a card is selected at random. Find the probability of getting
(i) a black card
(ii) a black king
(iii) an ace
(iv) a card of diamond
(v) a queen
37. The number of students in a hostel, speaking different languages is given below. Display the data in a pie chart.

| Language | Hindi | English | Marathi | Tamil | Bengali | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No. of students | 40 | 12 | 9 | 7 | 4 | 72 |

38. Construct a pie chart for the given data:

| Method of travel | Walk | Bike | Car | Bus |
| :--- | :--- | :--- | :--- | :--- |
| Frequency | 9 | 3 | 6 | 12 |

39. The adjoining pie chart gives the marks scored in an examination by a student in Hindi, English, Mathematics, Social Science and Science. If the total marks obtained by the students were 540 ,answer the following questions.
(i) In which subject did the student score 105 marks?
(ii) How many more marks were obtained by the student in Mathematics than in Hindi?
(iii) Examine whether the sum of the marks obtained in Social Science and

Mathematics is more than that in Science and Hindi.

40. The following data shows the expenditure of a person on different items during a month.

Draw a pie chart to represent the data

| ITEM OF EXPENDITURE | AMOUNT (IN RS.) |
| :---: | :---: |
| Rent | 2,700 |
| Education | 1,800 |
| Food | 2,400 |
| Clothing | 1,500 |
| Others | 2,400 |

