BHARATH COACHING CENTRE

9th CBSE	Probability	Total: 40
Maths		Time: 1.30 hrs

SECTION – A $6 \times 1 = 6$

1. In a survey of 400 students, 160 liked maths and rest disliked it. What is the probability that a student chosen at random likes maths?
2. What is the probability of the event "the sun rises in the east"?
3. In an experiment, a coin is tossed 500 times. If head turns up 280 times, then find the probability of getting a tail.
4. In an experiment, E and F are the only two possible outcomes. if P(E) = 0.72 , then find P($\bar{E}$)
5. Reena dialed a phone number 100 times in a week out of which she gets the response 55 times. What is the probability that in a phone call, she will not get the response?
6. In a survey, it was found that out of 364 person, 91 person like potato chips. If one person is selected at random, then find the probability that he likes potato chips?

SECTION – B $5 \times 2 = 10$

7. The table given below shows the marks obtained by 80 students of a class in a test maximum mark 100 :

Marks	0 - 20	20 - 40	40 - 60	60 - 80	Above 80
No of student	8	16	40	10	6

A student is chosen at random. Find the probability that he gets:

(a) Less than 40 marks (b) 60% or more marks

8. A survey of 100 students is done regarding the likes and dislikes about the subject maths. the data are given below:

views	No of students
Likes	80
Dislikes	20

Find the probability that student chosen randomly

(a) Likes maths (b) goes not like maths

9. In rolling a die 500 times the following result were obtained:

Number on die	1	2	3	4	5	6
No of times	28	135	142	79	81	35

What is the probability of getting a multiple of 3?

10. In a survey of 200 men, it was found that 65 men take only coffee, 35 take only tea, 25 don't take either and the rest take both coffee and tea. find the probability that a man selected at random:

(a) Takes coffee (b) takes only tea

11. The percentage of marks obtained by a student in the monthly unit tests are given below:

Unit test	I	II	III	IV	V
% of marks obtained	76	52	60	95	43

Based on this data, find the probability that the

(a) Student gets less than 60% marks in a unit test.

(b) Student gets at least 60% marks in a unit test.

SECTION – C $8 \times 3 = 24$

12. Two coins are tossed together 625 times and the outcomes are:

    (a) No tail: 225 times (b) one tail : 180 times (c) two tails : 220 times

    Two coins are tossed once again. Find the probability of:

    (a) Getting at least one tail.

    (b) Getting both heads

    (c) Getting one tail and one head

13. Fifty seeds were selected at random from each of 5 bags of seeds and were kept under standardized condition favorable to germination. after 20 days , the number of seeds which had germinated in each collection were counted and recorded as follows:

Bags	1	2	3	4	5
Number of seeds germinated	40	48	42	39	41

    What is the probability of germination of:

    (a) More than 40 seeds in a bag? (b) More than 39 seeds in a bag?

    (c) 49 seeds in a bag?

14. The following table shows the performance of two section of students in a maths test of 100 marks

Marks	0 - 20	20 - 30	30 - 40	40- 50	50 - 60	60- 70	70 & above	total
No of student	7	10	10	20	20	15	8	90

Find the probability that a student obtained:

    (a) Marks less than 20% in the maths test.

    (b) Marks 60% or above

    (c) Marks more than or equal to 40 but less than 60

15. On a busy road, following data was observed about cars passing through it and number of occupants:

No of occupants	1	2	3	4	5
No of cars	29	26	23	17	5

    Suppose another car passed by. Find the chance that it has

    (a) Exactly 5 occupants (c) more than 2 occupants

    (b) Less than 5 occupants

16. 30 plants were planted in each school. After a month the number of plants that survived are given below.

School	1	2	3	4	5	6	7	8	9	10	11	12
No of plant survived	22	15	12	24	27	10	13	22	17	9	20	25

    What is the probability of survival of?

    (a) Mora than 20 plants in a school (c)less than 10 plants in a school

    (b) Exactly 22 plants in a school

17. At a hospital, a doctor compiled the following data about 400 patient whom he could cure of hepatitis :

Time for cure	< 1 Month	1 - 2 Months	2 – 3 Months	> 3 Months

No of patient	210	105	60	25

Another case of hepatitis is reported. What is the probability that this patient will be cured in (a) less than 2 months (b) 1 month or more but not more than 3 months?

18. The given table shows the month of birth of 40 students

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
No of student	3	4	2	2	5	1	2	6	3	4	4	4

(a) Find the probability that a student was born in the month of 31 days

(b) Find the probability that a student was born in the month of February.

19. A survey found that ages of 250 workers in a factory are distributed as follows :

Age (in years)	20 - 29	30 - 39	40 - 49	50 - 59	60 & above
Number of workers	50	35	95	55	15

If a person is selected at random, find probability that the person is :

(a) 40 years or more (b) having age from 30 to 39 years

(c) Under 60 but over 39 years