1.   a) If A and B are two disjoint events then $P(A \cap B) =$ -------

     b) There are two urns ,the first urn contains 8green and 12 blue balls and the second urn contains 4 green and 10blue balls.Choosing an urn at random and a ball is drawn from it .If the drawn ball is green find the probability that the ball come from

       1) The first urn   [1+5]
       2) The second urn

2.   A card is drawn from a pack of cards. Find the probability of getting
     a) a king
     b) a card of heart   [2]

3   a) I f $E(X) = 10$ then $E(3X+ 2) =$ -----------
     b) Three unbiasded coins are tossed . The random variable X is defined as the number of tails in the three tosses of a coin .Find :
     1) Probability distribution of X .   [1 + 4]
     2) $E(X)$

<div align="center">OR</div>

4   .a) Write any two properties of frequency distribution.
     b) The probability distribution is

X	-2	-1	0	1	2
P(x)	1/12	1/3	2/12	1/4	2/12

     Find
     1) $F(x)$
     2) $P(X < 1)$ [2 + 3]
     3) $P(-1 < X < 2)$

5 .   A four digit number is formed of the integers 0,2,3 and 6 . In how many different possible ways can the number be formed so that [Repetition is not allowed]
     1) it is divisible by 5.   [4]
     2) it is divisible by 2.

6.   Find n such that $3 \cdot {}^n c_3 = {}^{(n-1)} c_2$ [3]

7 . Represent the following by o histogram :

Marks	Number of students
0 ---- 20	25
20 ---- 40	22
40 -----60	21
60 ---- 80	20
80 ----100	12

[4]

8 . a) For a negatively skewed distribution :
   [1) Mode < Median , 2) Mean > Median , 3)Mean < Mode , 4) None of these]

   b) If the first four central moments of a distribution are 0 , 5 , -10 , and 30.
Find the measure of skewness and measure of kurtosis ?   [1 + 3]

9 .   Calculate median for the following frequency distribution :

Class	Frequency
0 ----9	5
10 ----19	12
20 ----29	14
30 -----39	13
40 ----49	10

[3]

10 .a) Histogram can be used to estimate -----------

   [1) mean , 2) median , 3) mode , 4) variance]

   b) The average mark of 100 students was found to be 76.27. It was later
discovered that marks 87 and 54were mistakenly entered as 78 and 68.What is the
correct mean ?

[1+ 3]

11. a) Mean deviation is minimum when deviations are taken from --------
        [1) mean , 2) median , 3) mode , 4) zero]

   b) The scores of two batsmen A and B in six innings during a certain
match are as follows :

Batsmen A	10	12	80	70	60	100	0	4
Batsmen B	8	9	7	10	5	9	10	8

Examine which of the two batsmen is more consistent in scoring .   [1 + 5]

OR

12 .Choose the correct answer :

a) **To measure the inequalities in the distribution of income , we use -----------**
[1) Frequency curve 2) Ogive 3) Lorenze curve ,4) Scatter diagram]

b)**The following frequency table presents the income in hundred earned by 257 families in a town .**

Annual Income	5	30	125	350	750
No.of families	22	78	124	24	9

[1 + 5]

13. Marks of 30 students in statistics are as follows :
31, 10, 48, 46, 45, 32, 28, 36, 31, 25, 22, 23, 24, 5, 6, 17, 30, 25, 26, 2, 8, 23 22, 40.
29, 21, 19, 16, 38,41. **Classify the data by taking the width of the class as 10.**   [5]

14. Write down the domain and range in the set A ={ 1, 2, 4, 5, 7, 8, 11 }
If the relation is ' a is 3 more than b '.   [3]

15. If log 2 =0.3010 , and log3= 0.4771 , find
1) log 16 ; 2) log 12   [2]

16. If A ={ 1,2,3} ,B = { 3.4.5 }, C = { 1,3,5 }
Prove that A-(B U C) = (A-B) ∩ (A- C)   [3]

17 . Find two numbers of which sum is 30 and difference is 4.   [2]

18 a) We want to test the life time of electric bulbs and blood groups of patients .Which type of data collection method we apply ?

b) **You are asked to collect information regarding annual result of SSLC Exam March 2010 in your school .What type of data do you prefer ? Compare different types of data ?**   [1+ 3]