**ASSIGNMENT NO.-15(STATISTICS AND PROBABILITY)**

**(MATHEMATICS)**

1. The scores of a batsman in 10 innings are : 38,70,48,34,42,55,63,46,54,44.Find the mean deviation about the median.

2. Calculate the mean deviation about the mean from the following data:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| xi | 3 | 9 | 17 | 23 | 27 |
| fi | 8 | 10 | 12 | 9 | 5 |

3. Find the mean deviation about the median of the following frequency distribution:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Class | 0-6 | 6-12 | 12-18 | 18-24 | 24-30 |
| Frequency | 8 | 10 | 12 | 9 | 5 |

4. Calculate the mean and standard deviation of first n natural numbers.

5. Find the variance and standard deviation for the following distribution:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| x | 4.5 | 14.5 | 24.5 | 34.5 | 44.5 | 54.5 | 64.5 |
| f | 1 | 5 | 12 | 22 | 17 | 9 | 4 |

6. Three coins are tossed once.Find the probability of getting:

 (i) at least two heads (ii) at most two heads

7. A die is thrown.Find the probability of getting:

 (i) A number is greater than or equal to 3 (II) a number less than or equal to 4

8. Two dice are thrown simultaneously.Find the probability of getting :

 (i) A doublet of even numbers (ii) a multiple of 3 as a sum

 (iii) a multiple of 2 on one dice and a multiple of 3 on the other dice

9. Find the probability that a leap year,selected at random,will contain 53 Sundays.

10. A and B are two non-mutually exclusive events.If $P\left(A\right)=\frac{1}{4} ,P\left(B\right)=\frac{2}{5} and P\left(A∪B\right)=\frac{1}{2},$find the values of $P(A∩B)$ and $P\left(A∩\overbar{B}\right)$.