2018

Roll No. .....

Subject Code—891-X

P. G. Diploma EXAMINATION

INDUSTRY SAFETY MANAGEMENT

PGDISM-05

Safety Statistics and Accident Inspection

Time : 3 *Hours* *Maximum Marks* : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. Calculate Mean, Standard Deviation and Karl Pearson's Coefficient of Skewness from the following data :

Profits (Rs. Lakhs)	**No. of Companies**
70–80	12
80–90	18
90–100	35
100–110	42

110–120	50
120–130	45
130–140	30
140–150	8

2. What do you mean by Statistics ? Explain the applications and limitations of statistics in detail.

3. The following table gives the aptitude test scores and productivity indices of 10 workers :

Aptitude Scores (X)	**Productivity Index (Y)**
60	68
62	60
65	62
70	80
72	85
48	40
53	52
73	62
65	60
82	81

Calculate correlation coefficient between X and Y by using regression coefficients.

4. (a) Explain the properties of Binomial Distribution.

(b) The mean weight of 500 male students in a college is 75 kgs and the standard deviation is 7.5 kg. Assuming that weights are normally distributed, find how many students weigh (a) between 60 and 75 kg. (b) more than 85 kg.

5. What do you understand by Time Series Anaysis ? Explain the different components of Time Series Analysis.

6. (a) A drilling machine bores holes with a mean diameter of 0·5230 cm and a standard deviation of 0·0032 cm. Calculate the 3 sigma control limits for means of samples 4 and prepare a control chart.

(b) Write a detailed note on Inspections Mode and Periodicity.

7. (a) The mean height obtained from a random sample of size 100 is 64 inches and standard deviation is 3 inches. Test the statement that the mean height of population is 67 inches at 5% level of significance.

(b) A random sample of size 16 has 53 as mean. The sum of squares of the deviations taken from mean is 135. Can this sample be regarded as taken from the population having 56 as mean ? Test the statement at 1% and 5% level of significance.

8. Write detailed notes on the following :

(a) Safety Permit System

(b) Reporting techniques of Accident Investigation.