

**Given the following measures on the Statistics scores for a group of 25 second year's students:**

<b>The smallest 3 values</b>	<b>The first quartile</b>	<b>The median</b>	<b>The third quartile</b>	<b>The largest 3 values</b>
<b>30, 33, 37</b>	<b>40</b>	<b>45</b>	<b>60</b>	<b>72, 80, 98</b>

- 1) Draw the Box-Plot.**
- 2) Find a measure of central tendency**
- 3) Is the value "15" an outlier? Why?**
- 4) Determine the direction of the skewness (without calculation).**
- 5) Calculate the coefficient of skewness, and comment.**
- 6) Is it a difficult exam? Why?**

### **Some Exercises**

- (1) What name is given to a table that lists all the values that a discrete random variable  $X$  can assume and their corresponding probabilities?
- (2) For the probability distribution of a discrete random variable, the probability of any single value of  $X$  is always
- a. In the range 0 to 1      b. 1.0      c. less than zero
- (3) For the probability distribution of a discrete random variable, the sum of the probabilities is always .....
- (4) The parameters of the binomial probability distribution are ..... and .....
- (5) The binomial distribution is skewed to the right if  $\pi \dots 0.5$
- (6) The parameter/ parameters of the Poisson probability distribution is/ are .....

- (7) Find the mean and the standard deviation from the following table

$x$	-4	0	1	2
$P(X = x)$	0.2	0.3	0.3	0.2

- (8) A factory has eight machines. The probability is 0.04 that any machine will break down at any time. Find the probability that at any given time:
- a. All eight machines will be broken down
- b. Exactly two machines will be broken down
- c. None of the machines will be broken down
- (10) A high school boys' basketball team averages 1.2 technical fouls per game. Find the probability that in a given game this team will commit:
- a. Exactly three technical fouls
- b. At least two technical fouls
- c. Find the mean and the standard deviation