ASSIGNMENT-5

1-A die is thrown 90 times with the following results:

Face: 1 2 3 4 5 6 Total Frequency: 10 12 16 14 18 20 90

Use χ 2-test to test whether these data are consistent with the hypothesis that die is unbiased.

Given $\chi 2\ 0.05 = 11.07$ for 5 degrees of freedom.

2- Assuming 5-yearly moving averages, calculate trend values from the data below and draw approximately on answer sheet:

| Years | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|--------------|------|------|------|------|------|------|------|
| Production | 105 | 107 | 109 | 112 | 114 | 116 | 118 |
| ('000 tons') | | | | | | | |

| Years | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
|--------------|------|------|------|------|------|------|
| Production | 121 | 123 | 124 | 125 | 127 | 129 |
| ('000 tons') | | | | | | |

- 3- Write short note on-
- (I) T-test
- $\qquad \qquad F\text{-test}$
- 4- Write short note on-
 - (I)Moving Average
 - (II)Frequency Chart
- 5- Define-
 - (i) Chi-square test
 - (ii) t-test, F-Test