



Answer Five Questions Only

Q1: A tire manufacturer wants to determine the inner diameter of a certain grad of tire. The data are as follows:

123	116	122	110	175	126	125	111	118	117
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

- (a) Find the sample mean and median?
(b) Find the sample variance, standard deviation, and rang?

(20 marks)

Q2: The following data represent the length of life in years, measured to the nearest tenth, of 30 similar Fuel pumps:

2.0	3.0	0.3	3.3	1.3	0.4	0.2	6.0	5.5	6.5
0.2	2.3	1.5	4.0	5.9	1.8	4.7	0.7	4.5	0.3
1.5	0.5	2.5	5.0	1.0	6.0	5.6	6.0	1.2	0.2

-Set up a relative frequency distribution with only seven classes?

(20 marks)

Q3:A:

Suppose that we have a fuse box containing 20 fuses, of which 5 are defective. If 2 fuses are selected at random and removed from the box in succession without replacing the first, what is the probability that both fuses are defective?

(10 marks)

B: A coin is tossed twice. What is the probability that at least one head occurs?

(10 marks)

Q4: Define three of the following items:

- 1- Optimum design.
- 2- Types of designs.
- 3- Capital investments.
- 4- Types of interest.

(20 marks)

Q5: A: What are the steps of plant layout.

(10 marks)

B: Define the following items:

- 1- Total capital investment .
- 2- Fixed capital investment.
- 3- Working capital.

(10 marks)

Q6: A: Define the following items: 1- Salvage value. 2- Book value. 3- market value. 4- Types of depreciation.

(10 marks)

B: What are the methods for determining depreciation

(10 marks)