Assignment 02
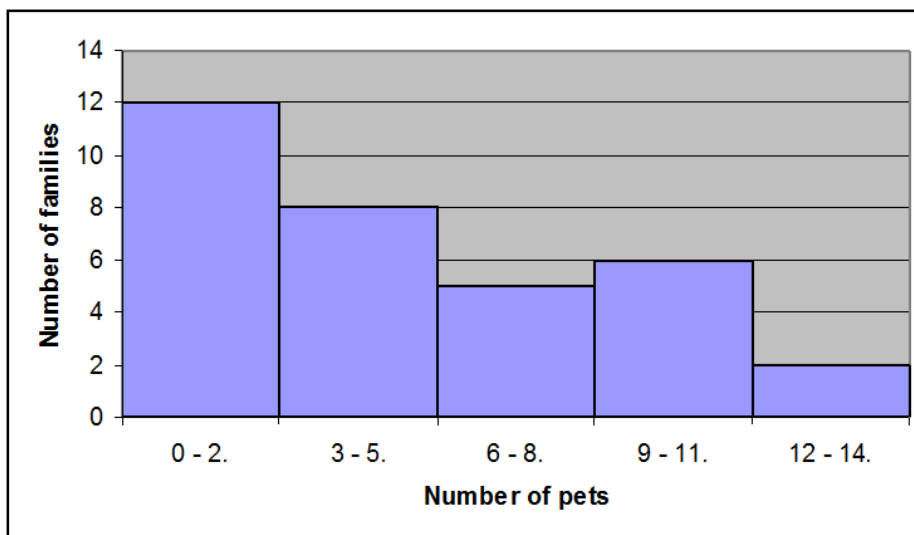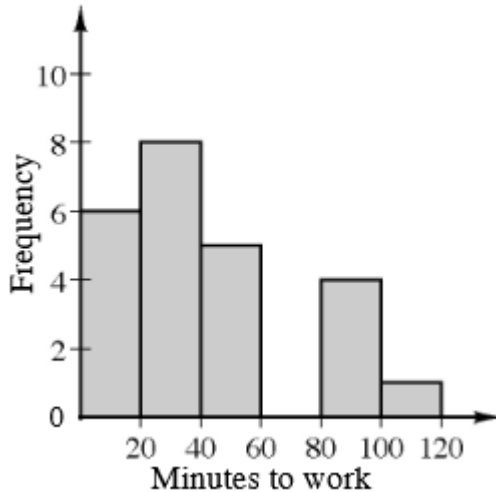
1. Closed Loop MRP means:
   a) Actual sales are netted off the forecasts in the MPS.
   b) Capacity and resource planning is included in the MRP logic.
   c) Unused materials are returned to stores and recorded back into the system.
   d) Actual inventory is counted regularly and adjustment made to the inventory records.

2. The manner in which a system, subsystem, or component could potentially fail to meet the design requirements is:
   a) Failure mode
   b) Cause
   c) Effect
   d) All of the above

3. Insufficient Material thickness, vibration, contamination, temperature, tolerance build-up, interference, insufficient bond, environment, insufficient material strength, overload, insufficient coating/plating, electric power interrupt are:
   a) Examples of Failure mode
   b) Examples of potential causes of failure
   c) Examples of effect of failure
   d) All of the above

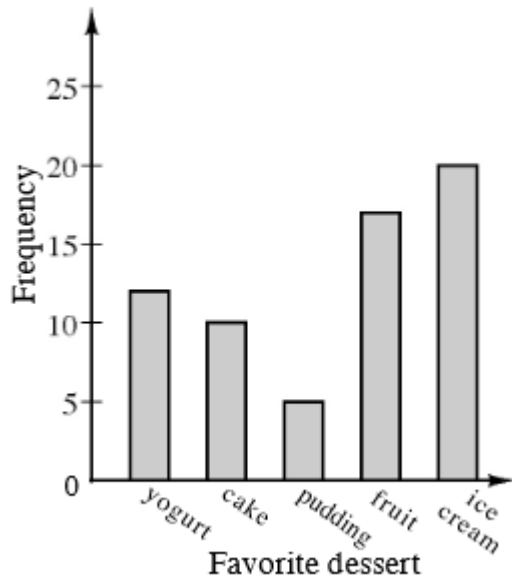4. Choose the correct statement about the following histograms

[a] Most families have less than 9 pets
[b] Most families have between 0 and 2 pets
[c] All families love pets
[d] Most families have more than 9 pets

5. Mr. Aniruddh surveyed his employees on the time it takes them to get to work. The result are shown in the histogram given below. Find how many employees completed the survey and how many employees get to work in less than 40 minutes?

   (a) 8 & 8 respectively

   (b) 14 & 24 respectively

   (c) 24 & 14 respectively

   (d) 8 & 6 respectively

6. The two fifth grade classes at Delhi public school voted for their favorite dessert. The results are shown in the bar graph (given below) for the five favorite choices. Determine how many students made the most favorite dessert choice and how many more students selected ice cream than pudding?

(a) 20 & 20

(b) 20 & 15

(c) 55 & 15

(d) 55 & 20

7. A graphical representation of a frequency distribution is called a_____

(a) Histogram

(b) stem-and-leaf plot

(c) time-series plot

(d) scatter diagram

8. The highest bar in a histogram represents?

(a) The class with the lowest frequency.

(b) The class with the lowest relative frequency.

(c) The class with the highest cumulative frequency.

(d) The class with the highest frequency.

9. If data had been collected and you wanted to get an idea of how the data were distributed, you would use a:

(a) Run chart

(b) Pareto chart

(c) Cause and effect diagram

(d) Histogram

10. A company makes bicycles. It produces 450 bicycles a month. It buys the tires for bicycles from a supplier at a cost of $20 per tire. The company's inventory carrying cost is estimated to be 15% of cost and the ordering is $50 per order.
a. Calculate the EOQ
b. What is the number of orders per year?
c. Compute the average annual ordering cost.
d. Compute the average inventory.
e. What is the average annual carrying cost?
f. Compute the total cost.