Question 1

Suppose you are working with a data set that is normally distributed with a mean of 400

and a standard deviation of 20. Determine the value of x such that 5% of the values are less than x.

Select one:

a. 396

b. 432.9

c. 404

d. 367.1

Question 2

The uniform distribution is also known as the \_\_\_\_\_\_\_\_\_\_.

Select one:

a. rectangular distribution

b. gamma distribution

c. beta distribution

d. Erlang distribution

Question 3

Completion time (from start to finish) of a building remodelling project is normally

distributed with a mean of 200 work-days and a standard deviation of 10 work-days. The

probability that the project will be completed within 215 work-days is \_\_\_\_\_.

Select one:

a. 0.9332

b. 0.4332

c. 0.5000

d. 0.0668

Question 4

The EPA has reported that the average fuel cost for a particular type of car is $800 with a standard deviation of $80. Fuel cost is assumed to be normally distributed. If one of these cars is randomly selected, what is the probability that the fuel cost for this car exceeds $760?

Select one:

a. 0.1915

b. 0.8085

c. 0.3085

d. 0.6915

Question 5

Within a range of z scores from -2 to +2, you can expect to find \_\_\_\_\_\_\_ per cent of the

values in a normal distribution.

Select one:

a. 34

b. 68

c. 99

d. 95

Question 6

For any normal distribution, any value less than the mean would have a \_\_\_\_\_\_\_.

Select one:

a. negative probability of occurring

b. positive z-score

c. negative z-score

d. negative variance

Question 7

The Environment Protection Authority has reported that the average fuel cost for a particular type of car is $800 with a standard deviation of $80. Fuel cost is assumed to be normally distributed. If one of these cars is randomly selected, what is the probability that the fuel cost for this car exceeds $760?

Select one:

a. 0.8085

b. 0.1915

c. 0.6915

d. 0.3085

Question 8

A z-score is the number of \_\_\_\_\_\_\_\_\_\_ that a value is from the mean.

Select one:

a. standard deviations

b. units

c. miles

d. variances

Question 9

Let Z be a normal random variable with mean 0 and standard deviation 1. Use the normal

tables to find P(Z > -1.1).

Select one:

a. 0.3643

b. 0.1357

c. 0.8643

d. -0.1357

Question 10

Which of the following is NOT a continuous distribution?

Select one:

a. normal distribution

b. exponential distribution

c. binomial distribution

d. uniform distribution

Question 11

The normal distribution is also referred to as \_\_\_\_\_\_\_.

Select one:

a. the Poisson distribution

b. the Gaussian distribution

c. the de Moivre distribution

d. the exponential distribution

Question 12

The weights of aluminium castings produced by a process are normally distributed with µ = 2 kg and σ = 0.10 kg. Design specifications require the castings to weigh between 1.836 and 2.164 kg, inclusively. The probability that a casting produced by this process will conform to design specifications is \_\_\_\_\_\_\_\_\_.

Select one:

a. 0.9974

b. 0.8990

c. 0.9500

d. 0.4495

Question 13

Let X be a normal random variable with mean 20 and standard deviation 4. Find P(X < 17).

Select one:

a. 0.2266

b. 0.7734

c. 0.2734

d. –0.2734

Question 14

Suppose you are working with a data set that is normally distributed with a mean of 400

and a standard deviation of 20. Determine the value of x such that 60% of the values are

greater than x.

Select one:

a. 404.5

b. 405.0

c. 395.5

d. 395.0

Question 15

The Environmental Protection Authority has reported that the average fuel cost for a particular type of car is $800 with a standard deviation of $80. Fuel cost is assumed to be normally distributed. If a car is randomly selected, what is the probability that fuel cost would be between $700 and $900?

Select one:

a. 0.3944

b. 0.7888

c. 0.1056

d. 0.8944

Question 16

The distribution in the following graph is a \_\_\_\_\_\_\_\_ distribution.

 

Select one:

a. normal

b. gamma

c. uniform

d. exponential

Question 17

The EPA has reported that the average fuel cost for a particular type of car is $800 with a standard deviation of $80. Fuel cost is assumed to be normally distributed. If a car is randomly selected, what is the probability that fuel cost would be between $700 and $900?

Select one:

a. 0.1056

b. 0.3944

c. 0.7888

d. 0.8944

Question 18

Suppose X is a normal random variable with mean 60 and standard deviation 2. A z-score

was calculated for a number, and the z-score is 3.4. What is x?

Select one:

a. 56.6

b. 63.4

c. 66.8

d. 53.2

Question 19

Let Z be a normal random variable with mean 0 and standard deviation 1. Use the normal tables to find P(Z > 2.4).

Select one:

a. 0.4918

b. 0.9918

c. 0.0082

d. 0.4793

Question 20

Let Z be a normal random variable with mean 0 and standard deviation 1. Use the normal

tables to find P(Z < 1.3).

Select one:

a. 0.0968

b. 0.3485

c. 0.4032

d. 0.9032