Question **1**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[2-06] Suppose that P(A|B) = 0.6, P(A) = 0.5 and P(B) = 0.1. Find the value of P(B|A).

Select one:

0.12

0.30

0.20

0.06

Feedback

The correct answer is: 0.12

Question **2**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[3-03] The number of customers that arrive at a fast-food business during a one-hour period is known to be Poisson distributed with a mean equal to 8.60. What is the probability that 2 or 3 customers will arrive in one hour?

Select one:

0.1023

none of the other choices is true

0.0679

0.0263

Feedback

The correct answer is: 0.0263

Question **3**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[3-25] Let X be a discrete uniform random variable on the interval [2; 20]. Find P(X < 13)

Select one:

0.555556

2 / 20

None of the others

0.666665

Feedback

The correct answer is: 0.555556

Question **4**

Correct

Mark 1.0 out of 1.0

Remove flag

Question text

[3-23] The following probability distribution has been assessed for the number of accidents that occur in a mid western city each day:Based on the data given below, find the

probability that there are at least two accidents per day.

Select one:

0.3

0.75

None of the others

0.55

Feedback

The correct answer is: 0.55

Question **5**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[2-11] If two balanced die are rolled, the possible outcomes can be represented as

follows.Determine the probability that the sum of the dice is 7.

Select one:

5/36

2/9

1/6

3/12

Feedback

The correct answer is: 1/6

Question **6**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-18] Let is a standard normal variable, find the the probability that Z lies between 0 and 3.01.

Select one:

0.3882

0.4986

0.5986

None of the others

Feedback

The correct answer is: 0.4986

Question **7**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-17] The diameters of pencils produced by a certain machine are normally distributed with a mean of 0.32 inches and a standard deviation of 0.01 inches. What is the probability that the diameter of a randomly selected pencil will be less than 0.297 inches?

Select one:

0.307

None of the others

0.33

0.0107

Feedback

The correct answer is: 0.0107

Question **8**

Correct

Mark 1.0 out of 1.0

Remove flag

Question text

[1-17]

Select one:

B)

A)

D)

C)

Feedback

The correct answer is: D)

Question **9**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[1-07] Jared was working on a project to look at global warming and accessed an Internet site where he captured average global surface temperatures from 1866. Which of the four methods of data collection was he using?

Select one:

Surveying

Retrospective study

Observation

Experimentation

Feedback

The correct answer is: Retrospective study

Question **10**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-16] Assume that z scores are normally distributed with a mean of 0 and a standard deviation of 1. If P(0.2 < Z < a) = 0.23131, find a.

Select one:

0.8797

0.66262

0.46262

0.6797

Feedback

The correct answer is: 0.8797

Question **11**

Correct

Mark 1.0 out of 1.0

Remove flag

Question text

[2-14] If two events A and B are _____, then P(A and B) = P(A)P(B).

Select one:

Complements

Mutually exclusive

Independent

Simple events

Feedback

The correct answer is: Independent

Question **12**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[1-10] Classify each set of data as discrete or continuous: 1) The time it takes for a car battery to die.2) The production of tomatoes by weight.

Select one:

1) Discrete, 2) Discrete

1) Discrete, 2) Continuous

1) Continuous, 2) Discrete

1) Continuous, 2) Continuous

Feedback

The correct answer is: 1) Continuous, 2) Continuous

Question **13**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[3-10] Messages arrive at a computer at an average rate of 15 messages/second. The number of messages that arrive in 1 second is known to be a Poisson random variable. Find the probability that no messages arrive in 1 second.

Select one:

3.06*10^-9

3.06*10^-8

3.06*10^-7

None of the others

Feedback

The correct answer is: 3.06*10^-7

Question **14**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[2-02]

Select one:

0.489

0.589

0.689

0.389

Feedback

The correct answer is: 0.489

Question **15**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-03] Let X be a normal distribution with the mean of 4 and the variance of 9. Find the value of x such that P (x < X < 7) = 0.5. Let P(Z<1) =0.84; P(Z<-0.41) =0.34.

Select one:

0.84 / 3

7.27

2.77

2.27

Feedback

The correct answer is: 2.77

Question **16**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[2-20] In a class of 30 students, there are 17 girls and 13 boys. 12 are good students, and nine of these students are girls. If a student is chosen at random, what is the probability of choosing a boy or a good student?

Select one:

19/30

11/15

22/30

17/180

Feedback

The correct answer is: 22/30

Question **17**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[3-12] The number of messages that arrive at a Web site is a Poisson random variable with a mean of five messages per hour. What is the probability that 10 messages are received in 1.5 hours?

Select one:

0.0758

0.0958

0.0658

0.0858

Feedback

The correct answer is: 0.0858

Question **18**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[2-23] In a pet store, there are 6 puppies, 9 kittens, 4 gerbils and 7 parakeets. If a pet is chosen at random, what is the probability of choosing a puppy or a parakeet?

Select one:

0.25

0.5

None of the others

11 / 26

Feedback

The correct answer is: 0.5

Question **19**

Correct

Mark 1.0 out of 1.0

Remove flag

Question text

[3-24] A greenhouse is offering a sale on tulip bulbs because they have inadvertently mixed pink bulbs with red bulbs. If 35% of the bulbs are pink and 65% are red, what is the probability that at least one of the bulbs will be pink if 5 bulbs are purchased?

Select one:

0.8704

0.8840

0.9744

0.2082

Feedback

The correct answer is: 0.8840

Question **20**

Incorrect

Mark 0.0 out of 1.0

Flag question

Question text

[4-23] Letbe a cumulative distribution function of a continuous random variable X. Find

f(2).

Select one:

0

None of the others

8

16

Feedback

The correct answer is: 0

Question **21**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-05] If the time it takes for a customer to be served at a fast-food chain business is thought to be uniformly distributed between 3 and 8 minutes, what is the probability that the time it takes for a randomly selected customer will be less than 5 minutes?

Select one:

0.80

0.30

0.40

0.20

Feedback

The correct answer is: 0.40

Question **22**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-22] Let X be a continuous random variable with the probability density functionFind

F(0.5).

Select one:

None of the others

3/8

7/8

1/2

Feedback

The correct answer is: 3/8

Question **23**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[3-27] A nationwide survey showed that 65% of all children in the United States dislike eating vegetables. If 4 children are chosen at random, what is the probability that all 4 dislike eating vegetables? (Round your answer to the nearest percent.)

Select one:

2%

26%

None of the others

18%

Feedback

The correct answer is: 18%

Question **24**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[1-02] You want to know the mean income of the subscribers to a particular magazine. You draw a random sample of 100 subscribers and determine that their mean income is $27,500. Then, we have: a) the population is subscribers to the magazine, b) the sample is 100 subscribers of the sample.

Select one:

a) and b)

None of the other

b) only

a) only

Feedback

The correct answer is: a) and b)

Question **25**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-15] If the time it takes for a customer to be served at a fast-food chain business is thought to be uniformly distributed between 3 and 8 minutes. Find the mean of the time it takes for a customer to be served.

Select one:

11

5.5

None of the others

2.08333

Feedback

The correct answer is: 5.5

Question **26**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[4-13] Let X be a uniformly distributed random variable. Given two probabilites as follow.

Find P(20<X<40). <x </x

Select one:

1.3 x 10^-11

0.5

1.3 x 10^11

0.5 x 10^-11

Feedback

The correct answer is: 1.3 x 10^-11

Question **27**

Correct

Mark 1.0 out of 1.0

Remove flag

Question text

[3-04] Let X be a discrete uniform random variable on the interval [2; 20]. Find the mean and standard deviation of X.

Select one:

11 & 5.477

None of the others

0 & 30

11 & 30

Feedback

The correct answer is: 11 & 5.477

Question **28**

Incorrect

Mark 0.0 out of 1.0

Remove flag

Question text

[2-01]

Select one:

0.95

0.85

0.9

1.0

Feedback

The correct answer is: 0.95

Question **29**

Correct

Mark 1.0 out of 1.0

Remove flag

Question text

[2-09] A test for a certain rare disease is assumed to be correct 95% of the time. If a person has the disease, the test results are positive with probability 0.95 and if the person does not have the disease, the test results are negative with probability 0.95. A random person drawn from a certain population has probability 0.001 of having the disease. Given that the person just tested positive, what is the probability of having the disease?

Select one:

0.01866

0.0014

0.00095

0.98134

Feedback

The correct answer is: 0.01866

Question **30**

Correct

Mark 1.0 out of 1.0

Flag question

Question text

[3-17] The probability that a radish seed will germinate is 0.7. A gardener plants seeds in batches of 11. find the standard deviation for the random variable X, the number of seeds germinating in each batch.

Select one:

1.7

7.7

1.52

7.52

Feedback

The correct answer is: 1.52