STA-3112: Quiz for review on STA-3111

1) Using the standard normal probability table, \( P(z \leq 1.39) = \)
   
   a) .9177  
   b) .9656  
   c) .4656  
   d) .4177

2) Using the standard normal probability table, \( P(z > -0.57) = \)
   
   a) .9406  
   b) .7157  
   c) .2157  
   d) .4406

3) If the area under the standard normal curve from \( z_o \) to [right] is 0.15, then the z-score “\( z_o \)” is (approximately) equal to
   
   a) 0.84  
   b) 0.39  
   c) 0.52  
   d) 1.04

4) If the area under the standard normal curve between \( z_o \) and \(-z_o\) is 0.8230, then the z-score “\( z_o \)” equals to
   
   a) 0.93  
   b) 1.35  
   c) -0.93  
   d) 1.25

5) The total area under any normal curve is equal to
   
   a) One  
   b) Zero  
   c) Negative value  
   d) None of the above

6) The mean of the standard normal variable is equal to
   
   a) One  
   b) Zero  
   c) Negative value  
   d) None of the above

7) For the T probability distribution if df = 12 and \( P(T > To) = 0.01 \) then To equals
   
   a) - 2.681  
   b) 2.681  
   c) 3.930  
   d) 2.718

8) For the T probability distribution if df = 21 and \( P(T < To) = 0.05 \) then To equals
   
   a) - 1.721  
   b) 1.721  
   c) 2.831  
   d) 1.725
9) For the Student’s T probability distribution if df = 8 and P(-To < T < To) = 0.95 then To equals
   a) -1.86     b) 1.86    c) -2.306    d) 2.306

10) Parameter is a descriptive numerical measure of a
    a) Sample       b) Subset of the population   c) Population    d) None of the above

11) Statistic is a descriptive numerical measure of a
    a) Sample       b) Random variable     c) Population    d) None of the above

12) A sampling distribution is the probability model in repeated sampling of any:
    a) Statistic     b) Parameter       c) Fixed number     d) None of the above

13) The central limit theorem is a property stating that the sampling distribution of the sample mean is approximately Normal when the sample size of the problem is:
    a) Less than 30   b) Exactly 30    c) Greater than or equal to 30   d) Any

14) While conducting estimations for a population mean, two different types of numerical estimates can be obtained:
    a) Point and linear   b) Interval and linear   c) Point and Margin of Error    d) Point and Interval

15) The confidence level measures the reliability of our interval estimates as a:
    a) Qualitative description   b) Percent probability    c) Sample size     d) None of the above

16) An interval estimate for a population mean was obtained as (13.75 ; 14.35), hence the point estimate for μ is equal to:
    a) 14.05       b) 13.20       c) 13.75       d) 12.75
17) An interval estimate for a population mean was obtained as (13.75 ; 14.35), hence the margin of error for the estimation of \( \mu \) is equal to:

a) 0.90  b) 0.45  c) 0.60  d) 0.30

18) While estimating a population mean with a given confidence level, if the sample size is increased then the interval’s width will be

a) wider  b) narrower  c) the same  d) undetermined

19) An interval estimate for a population proportion “p” using a sample size of \( n = 400 \) individuals was obtained as (0.66, 0.74). Hence the point estimate for “p” is equal to

a) 0.04  b) 0.70  c) 0.80  d) 0.06

20) An interval estimate for a population proportion “p” using a sample size of \( n = 400 \) individuals was obtained as (0.66, 0.74). Hence the margin of error for the estimation of “p” is equal to

a) 0.04  b) 0.70  c) 0.80  d) 0.06

21) Using the standard normal probability table, \( P(z \leq -0.58) = \)

a) 0.2190  b) -0.2190  c) 0.2810  d) -0.2810

22) Using the standard normal probability table, \( P(-0.58 \leq z \leq 1.70) = \)

a) .2364  b) .2646  c) .3256  d) .6744

23) For the T probability distribution if \( df = 15 \) and \( P(T < T_0) = 0.95 \) then \( T_0 \) equals

a) -2.131  b) 2.131  c) -1.753  d) 1.753

24) For the T probability distribution if \( df = 25 \) then \( P(T > 3.12) \) is between

a) .05 & .10  b) .01 & .05  c) .001 & .005  d) .025 & .05

25) For the T probability distribution if \( df = 12 \) then \( P(T < -1.26) \) is between

a) .10 & .50  b) .01 & .05  c) .001 & .005  d) .025 & .05
### STA-3112: Quiz for review on STA-311

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