eco153 List of eExam Questions in the Bank

Latex formatted questions may not properly render

Q1 Since the calculated F is less than _____ F, it is not significant . Hence Ho may be accepted at 5% level of significance or risk level.

Q2 The outcomes _____ of a hypothesis test is the set of all _____ which cause the null hypothesis to be rejected in favour of the _____ hypothesis

Q3 In statistics, a result is interpreted as being statiscally _____ if it has been predicted as unlikely to have occurred by _____ alone, according to a pre-determined threshold probability, the significance level

Q4 The normal curve approaches the horizontal axis asymptotically as we proceed in either _____ away from the _____ __.

Q5 If we toss a fair coin n times (which is fixed and finite) then the _____ of any trial is one of the _____ exclusive events, viz., head (success) and tail (failure)

Q6 In the Binomial distribution, the outcome of the random experiment (trial) results in the _____ classification of _____

Q7 These sets of finite sequences are referred to as cylinder sets in the product _____

Q8 The Bernoulli process can be formalized in the language of probability _____ as a _____ sequence of _____ realisations of a random variable that can take values of heads or tails

Q9 For selling an item for N850 a trader made a profit of 15%. His selling _____ to make a profit of 20% should be _____

Q10 An imaginary is a number that has _____ square root

Q11 Find the sum of eight terms of the GP 2,6,18, _____

Q12 The second term of a geometric progression is 6 and the fifth term is 162. find the third term _____ _-

Q13 The 3rd and the 6th term of GP are 18 and 486, find the 10th term _____

Q14 Given that first term of a GP is 900 and the common ratio is 2.07. find the 4th term of the GP _____

Q15 Given that $5/x^2+x-6 = A/x+3 + B/x-2$. find A and B _____

Q16 Divide $2x^3+ 4x^2-6x+1$ by x+3 and find the remainder _____

Q17 Find the value of x, given that $f(x)= 5x^3-3x^2+x+7$, $g(x) = 6x^2+5x-4$ and $h(x)= 8x^3+5x-2$, where f(x) + 2g(x) -3h(x) at x = 2 _____

Q18 Factor the polynomial $a^2+bc+ab+ac$ _____

Q19 Find the HCF of $144a^3b^2$ and $54a^2bc^2$ _____

Q20 Find the LCM of $12ax^2$, $18b^3xy$ and $24xy^3$ _____

Q21 Find the present value of N923 receivable in 7 years if the money is worth 15% per year compounded quarterly _____

Q22 A man deposit 20,000 at 9% per year. Find the compound amount at the end of 12years. _____

Q23 The first and last term of an AP are 5 and 100 respectively. Find the sum of AP, if the AP has 20 terms. _____

Q24 The 4th and 7th term of an arithmetic sequence are 6 and 15 respectively. Find the nth term of the sequence _____

Q25 Tunde save N 40,000 in the first year of a new job. In each subseqent year, he saved 15% more than in the previous year. How much in total has he saved in 5years _____

Q26 Solve the simultaneous inequalities $6x - 2y \geq 14$ and $14x + 3y \leq 24$ and determine the values of x and y. _____

Q27 The sum of eight times a number and 15 is less than thrice the same number minus 10, find the number. _____

Q28 Simplify $\sqrt{27} * \sqrt{50} ⁄ \sqrt{54}$ _____

Q29 Make x the subject of the formula $L= xh⁄a(x+p)$ _____

Q30 Simplify without using table $\log_5 12.5 + \log_5 2$ ⬚

Q31 Simplify and solve for x, given (0.125)x+1 = 1⁄64 ⬚

Q32 Factor the polynomial $4x^2 + 20x + 3xy + 15y$ ⬚

Q33 The LCM of $14a^2b^2, 7ab$ and $28ab^2$ is ⬚

Q34 It took 7men 35hours to build a house. How much time will it take 12 men working at the same rate to finish the house. ⬚

Q35 Find the present value of 10,000 receivable 5 years from now if money is worth 10% per annum. ⬚

Q36 The logarithm of a ⬚ is simply the ⬚ of the logarithms of the ⬚ __.

Q37 The condition f(x1, …, xn) = f(|x1|, …, |xn|) ensures that X1, …, Xn are of ⬚ mean and ⬚ ; still, they need not be independent, nor even ⬚ independent.

Q38 An important ⬚ of a log-concave density is a function ⬚ inside a given convex body and ⬚ outside

Q39 The law of large numbers says that the sample ⬚ of a random sample ⬚ in probability to the mean μ of the individual random variables, if the ⬚ exists.

Q40 The convergence to the normal distribution is ⬚ _, in the sense that the entropy of Zn ⬚ monotonically to that of the normal ⬚ _.

Q41 Regression analysis is a mathematical ⬚ of the average relationship between c ⬚ or more variables in terms of the original units of the ⬚ _.

Q42 The correlation ⬚ only the degree of ⬚ association between two variables while regression analysis is a statistical process for estimating the ⬚ among variables.

Q43 A ⬚ coefficient means that x and y values ⬚ and decrease in the same ⬚

Q44 The H-Test or the Kruskal-Wallis Test is usually based on ⬚ sample theory that the sampling ⬚ of H can be closely approximated with a chi-square distribution with ⬚ degree of freedom

Q45 Non-parametric ⬚ are widely used for studying ⬚ that take on a ranked ⬚ (such as movie reviews receiving one to four stars).

Q46 Under the hypothesis of ⬚ of attributes the expected outcome for any of the cell frequencies can be obtained by multiplying the row totals and the column totals in which the ⬚ occurs and dividing the product by the ⬚ frequency N".

Q47 ANOVA is very ⬚ in the multiple comparison of ⬚ among other important uses in both social and applied ⬚ __.

Q48 To obtain the variation between ⬚ _, we compute the sum of the ⬚ of the deviations of the various sample means from the overall (grand) ⬚

Q49 The main objective of the analysis of variance technique is to ⬚ if there is significant ⬚ between the class ⬚ in view of the inherent variability within the separate classes.

Q50 The variation due to assignable causes can be detected and ⬚ whereas the variation due to chances is beyond the ⬚ of human and cannot be traced ⬚

Q51 On the other hand, if ⬚ value of $\chi 2$ is greater than the ⬚ value, it is said to be ⬚ __.

Q52 Since the calculated F is less than ⬚ F, it is not ⬚ . Hence Ho may be ⬚ at 5% level of significance or risk level.

Q53 F-statistic is the ratio of two ⬚ chi-square variates ⬚ by their respective ⬚ of freedom.

Q54 The ⬚ region of a hypothesis test is the set of all ⬚ which cause the null hypothesis to be rejected in favour of the ⬚ hypothesis

Q55 In statistics, a result is interpreted as being ⬚ significant if it has been predicted as unlikely to have occurred by ⬚ alone, according to a pre-determined threshold probability, the ⬚ level

Q56 The normal curve approaches the [_____] axis asymptotically as we proceed in either [_____] away from the [_____] __.

Q57 If we toss a [_____] coin n times (which is fixed and finite) then the [_____] of any trial is one of the [_____] exclusive events, viz., head (success) and tail (failure)

Q58 In the Binomial distribution, the [_____] of the random experiment (trial) results in the [_____] classification of [_____]

Q59 These sets of finite [_____] are referred to as [_____] sets in the [_____] topology

Q60 The Bernoulli process can be formalized in the language of [_____] spaces as a random sequence of [_____] realisations of a random variable that can take [_____] of heads or tails

Q61 Given that first term of a GP is 900 and the common ratio is 2.07. find the 4th term of the GP
- ○ 8400.9
- ○ 645.5
- ○ 7982.8
- ○ 21400

Q62 Given that $5/x^2+x-6 = A/x+3 + B/x-2$. find A and B
- ○ A = -3, B = 6
- ○ A = 3, B = -1
- ○ A = -1 , B = 1
- ○ A=1, B=1

Q63 Divide $2x^3+ 4x^2-6x+1$ by x+3 and find the remainder
- ○ −3
- ○ 1
- ○ -1
- ○ 2

Q64 Find the value of x, given that $f(x)= 5x^3-3x^2+x+7$, $g(x) = 6x^2+5x-4$ and $h(x)= 8x^3+5x-2$, where $f(x) + 2g(x) -3h(x)$ at x = 2
- ○ −119
- ○ −201
- ○ 117
- ○ 28.4

Q65 Divide $x^3+ x^2-10x+8 \div x-4$ and find the value of x
- ○ −3 or 4
- ○ −2 or 1
- ○ 7 or 8
- ○ 1 or −4

Q66 Simplify and solve for x, given $(0.125)x+1 = 1/64$
- ○ 1
- ○ 2
- ○ 3
- ○ 4

Q67 Simplify without using table $\log_5 12.5 + \log_5 2$
- ○ 3
- ○ 1
- ○ 4
- ○ 2

Q68 The LCM of $14a^2b^2$, 7ab and $28ab^2$ is
- ○ 28ab
- ○ 28ab²
- ○ 56b²a²
- ○ 28a²b²

Q69 The ratio by weight (kg) of zinc, tin and copper are 4:3:3, if the work requires 640kg alloy, what is the required kg for zinc
- ○ 255kg
- ○ 257kg
- ○ 256kg
- ○ 75kg

Q70 Which of the these is an imaginary
- ○ √9

○ 25
○ √-4
○ 3⅖

Q71 Another name for standard error is _____
○ error margin
○ population error
○ median error
○ error of omission

Q72 A particular value of the population, such as the mean income or the level of formal education, is called a_____
○ parameter
○ limit
○ constraint
○ factor

Q73 _____ is not of the ways to evaluate the reliability of a linear regression model
○ the t and F, which test the explanatory power of the independent variables
○ the econometric confidence interval
○ the forecast confidence interval
○ the R2 which measures the goodness of fit

Q74 The best fit line can be given as _____
○ x = a + by
○ a = y + bx
○ y = a + bx
○ y = ay + bx

Q75 Typical regression model is specified in form of_____
○ Y = a + bX + e
○ Y = a + bX + c
○ Y = a + bX + ex
○ Y = a + bX + ev

Q76 F-statistic is the ratio of _____ chi-square variates divided by their respective degrees of freedom
○ two independent
○ two dependent
○ three independent
○ three dependent

Q77 Prices of shares of a company on the different days in a month were found to be: 66, 65, 69,70, 69, 71, 70, 63, 64 and 68. What is the mean price of the price of the shares in the month?
○ 67.4
○ 67.5
○ 67.6
○ 67.7

Q78 The assumptions for Student's test do not include _____
○ The parent population from which the sample is drawn is normal
○ The sample observations are independent i.e the given sample is random.
○ The population standard deviation ζ is known
○ The population standard deviation ζ is unknown

Q79 If the absolute value of the calculated t is greater than tabulated t, we say it is significant and the null hypothesis is _____
○ accepted
○ reset
○ rejected
○ amended

Q80 Given two variables X and Y: If r = -1, there is a perfect _____ relationship between Y and X.
○ direct relationship
○ zero
○ inverse or negative
○ indirect relationship

Q81 From a class of 12 students , six are to be selected as a member of a committee. In how many ways can this be done.
○ 62555
○ 665280
○ 234560
○ 320450

Q82 How many ways can a committee of two men and three women be selected from groups of eight men and seven women.

○ 780
○ 880
○ 980
○ 1080

Q83 In how many ways can the letter of the word FRACTIONS be written

○ 362,880 ways
○ 4842 ways
○ 720 ways
○ 7999 ways

Q84 In how many ways can the letter OSOGBO be arranged

○ 138 ways
○ 180 ways
○ 120 ways
○ 30 ways

Q85 In how many ways can the word EXAMINATION be arranged

○ 100213
○ 242464
○ 4989600
○ 587678

Q86 Multiply 4ı x 12

○ 300
○ 288
○ 450
○ 270

Q87 Solve $^7P_4 - {}^4P_3$

○ 900
○ 375
○ 280
○ 828

Q88 Simplify 10ı /(10 -5)ı

○ 22575
○ 88490
○ 4123
○ 30240

Q89 How many ways can a committee of two men and three women be selected from groups of eight men and seven women.

○ 780
○ 880
○ 980
○ 1080

Q90 A schoolcommttee is to be formed. There are mine girl and six eligible boys. In how many ways can the committee be formed if there are four girls and three boys

○ 2520
○ 3500
○ 2825
○ 3020

Q91 From a class of 12 students , six are to be selected as a member of a committee. In how many ways can this be done.

○ 62555
○ 665280
○ 234560
○ 320450

Q92 Solve $^7P_4 - {}^4P_3$

○ 900
○ 375
○ 280
○ 828

Q93 A committee has ten members, how many ways can the MD, Chairman, Secertary and ICT manager be selected

○ 5000 ways
○ 7200 ways
○ 5040 ways
○ 23,00 ways

Q94 Multiply 4! x 12
- ○ 300
- ○ 288
- ○ 450
- ○ 270

Q95 Five men sit around a circular table, how many ways can this be done.
- ○ 120 ways
- ○ 130 ways
- ○ 140 ways
- ○ 138 ways

Q96 In how many ways can the letter OSOGBO be arranged
- ○ 138 ways
- ○ 180 ways
- ○ 120 ways
- ○ 30 ways

Q97 Find the value of (1.06)^7
- ○ 1.85
- ○ 1.33
- ○ 1.23
- ○ 1.5

Q98 In how many ways can the word EXAMINATION be arranged
- ○ 100213
- ○ 242464
- ○ 4989600
- ○ 587678

Q99 In how many ways can the letter of the word FRACTIONS be written
- ○ 362,880 ways
- ○ 4842 ways
- ○ 720 ways
- ○ 7999 ways

Q100 Simplify 10! /(10 -5)!
- ○ 22575
- ○ 88490
- ○ 4123
- ○ 30240

Q101 (7⅗ of 17⁄19)⁄15⁄25
- ○ 11⅓
- ○ ⅓
- ○ 9 7⁄9
- ○ 2⁄33

Q102 1 6⁄9 of ⅔ - 3⅛ + 2½⁄½
- ○ 4⅕
- ○ 17½
- ○ 2 41⁄45
- ○ 3⅜

Q103 An imaginary number is a number that has
- ○ Positive square root
- ○ positive square
- ○ negative square
- ○ negative square root

Q104 An improper fraction is classified as
- ○ 3⁄2
- ○ 3⅓
- ○ ⅗
- ○ ⅓

Q105 convert ratio 4:5 to percentage
- ○ 0.45
- ○ 0.8
- ○ 0.355

○ 0.42

Q106 Express 5hrs as a ratio of 1week and 2days
○ 5⁄200
○ 5⁄216
○ 6⁄17
○ 8⁄9

Q107 Express the fraction in the lowest possible equivalent $16x^5y^4 * 48xy ⁄ 32xy * 24x3y2$
○ 2xy
○ x^2y^3
○ $\frac{1}{2}x^2y^3$
○ x^2y

Q108 Factor the polynomial $4x^2+20x+3xy+15y$
○ (4x-3y)(x+5)
○ (4x+3y)(x+5)
○ (4x+3y)²(x-5)
○ (x-5)(4x+3y)

Q109 For selling an item for N850 a trader made a profit of 15%. What should be selling price be to make a profit of 20%.
○ 739
○ 887
○ 850
○ 705

Q110 Given that factor over head is ⅖, prime cost is ⅕. Calculate the fraction of the total spent on other items.
○ ⅖
○ ⅗
○ ⅚
○ 4⁄7

Q111 It took 7men 35hours to build a house. How much time will it take 12 men working at the same rate to finish the house.
○ 20hrs 42mins
○ 28hrs 3mins
○ 27hrs 48mins
○ 38hrs 44mins

Q112 Make x the subject of the formula $L= xh ⁄ a(x+p)$
○ x=h -ap⁄a+p
○ x= ap⁄h - La
○ xh = ap⁄La
○ h = apx⁄Lax

Q113 Simplify $\sqrt{27} * \sqrt{50} ⁄ \sqrt{54}$
○ 5
○ 17
○ 7
○ 6

Q114 Simplify $1⅓ + (2⁄4 \text{ of } 12 ⁄ 16) - ⅚$
○ 21⁄38
○ 5⁄9
○ 7⁄12
○ 7⁄8

Q115 simplify 3½ - 2 7/12
○ 10⁄12
○ 1 1⁄12
○ 11⁄12
○ 9⁄10

Q116 Simplify and solve for x, given $(0.125)x+1 = 1⁄64$
○ 1
○ 2
○ 3
○ 4

Q117 Simplify without using table $\log_5 12.5 + \log_5 2$
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