



SSC CGL (Tier - 2)

SSC Combined Graduate Level Exam

SSC CGL (Tier - 2) Online Exam Paper - 2016 "held on 02 December 2016" Morning Shift (Statistical

SSC CGL (Tier - 2) Online Exam Paper - 2016 "held on 02 December 2016" Morning Shift (Statistical Investigator)

EXAM DATE : 02-December-2016

EXAM START TIME : 10:00:00

QID : 401 For determination of mode and median graphically, one considers:

Options:

- 1) Bar diagram and Ogive
- 2) Bar diagram and Line diagram
- 3) Histogram and Line diagram
- 4) Histogram and Ogive

Correct Answer: Histogram and Ogive

QID : 402 -

The value of k for which the function $f(x) = \begin{cases} ke^{-3x}, & x > 0 \\ 0, & \text{elsewhere} \end{cases}$ is probability density function, is

Options:

- 1) 1
- 2) 2
- 3) 3
- 4) 1/3

Correct Answer: 3

QID : 403 In the construction of cost of living index, commodities are selected by :

Options:

- 1) simple random sampling
- 2) stratified random sampling
- 3) systematic sampling
- 4) judgement/ purposive sampling.

Correct Answer: judgement/ purposive sampling.

QID : 404 If x and y are uncorrelated variables then this implies :

Options:

- 1) the absence of any linear relationship between them
- 2) the absence of any quadratic relationship between them
- 3) the absence of any logarithmic relationship between them
- 4) the absence of any trigonometric relationship between them

Correct Answer: the absence of any linear relationship between them

QID : 405 In simple random sampling of n units from a population of N units the quantity $[1 - (n/N)]$ is called the

Options:

- 1) sampling fraction
- 2) expansion factor
- 3) finite population correction factor
- 4) degrees of freedom

Correct Answer: finite population correction factor

QID : 406 The coefficient of range of the weights of 10 students from the following data:

41,20,15,65,73,84,53,35,71,55 is

Options:

- 1) 1.433
- 2) 0.696
- 3) 0.675
- 4)

Correct Answer: 0.696

QID : 407 Consider simple random sampling with replacement from a population of size N . The number of samples of size n is

Options:

- 1) N_{Pn}
- 2) N_{Cn}
- 3) N^n
- 4) None of the options

Correct Answer: N^n

QID : 408 -

Under usual notations used for Index Number calculation

$$\sum p_1 q_0 = 231, \quad \sum p_0 q_0 = 228$$

$$\sum p_1 q_1 = 295, \quad \sum p_0 q_1 = 283$$

the value of Paasche's index is :

Options:

- 1) 141.32
- 2) 132.78
- 3) 153.9
- 4) 104.24

Correct Answer: 104.24

QID : 409 If a population consists of 10 units and SRSWOR is adopted, the probability of selecting a specified sample of 2 units is :

Options:

- 1) $1/10$
- 2) $1/45$
- 3) $1/90$
- 4) $1/100$

Correct Answer: $1/45$

QID : 410 In drawing a sample of size n under SRSWR from a population of size N , the probability that a specified member is included in the chosen sample is

Options:

1)

$$\frac{1}{N}$$

2)

$$\frac{n}{N}$$

3)

$$1 - \left(1 - \frac{1}{N}\right)^n$$

4)

$$\frac{(N-1)^n}{N^n}$$

Correct Answer: 3

QID : 411 Suppose a person would earn Rs. 10,000 in base period. Suppose the cost of living index increases by 20 over base period. Then the employers of that person increase his salary by Rs. 1500. Which of the following option is TRUE?

Options:

- 1) He is just able to maintain the same standard of living as in base period.
- 2) He should claim Rs 500/ as Dearness Allowance.
- 3) He can improve his standard of living as compared to base period.
- 4) He should claim Rs 2,000 as Dearness Allowance.

Correct Answer: He should claim Rs 500/ as Dearness Allowance.

QID : 412 The correlation coefficient between two variables X and Y is 0.4. The correlation coefficient between 2X and (Y) will be :

Options:

collegedunia

- 1) 0.4
- 2) 0.8
- 3) 0.4
- 4) 0.8

Correct Answer: 0.4

QID : 413 Trace out the **WRONG** option from the following: (CLI= Cost of living index numbers)

Options:

- 1) If group indices increase k times, so also CLI does.
- 2) CLI remains unchanged if all the group indices increase by a constant amount.
- 3) CLI helps determining Purchasing Power of Money.
- 4) Dearness Allowance is fixed by considering CLI.

Correct Answer: CLI remains unchanged if all the group indices increase by a constant amount.

QID : 414 -

A sample of 60 students is to be selected from a population of 480 students belonging to 3 different schools.

तीन अलग अलग स्कूलों के 480 छात्रों की समष्टि से चुने गए 60 छात्रों का प्रतिचयन किया जाता है।

School स्कूल	N_i (Total No. of student) छात्रों की कुल संख्या	n_i (sample size) प्रतिदर्श आमाप
A	120	n_1
B	200	n_2
C	160	n_3

Drawing a sample using proportional allocation technique would give n_1, n_2, n_3 as

Options:

- 1) 15, 25, 20 respectively
- 2) 12, 27, 21 respectively

3) 10,30,20 respectively

4) 5,45,10 respectively

Correct Answer: 15,25,20 respectively

QID : 415 Relationship between real wage and money wage is given by

Options:

1) Money wage = Real wage

मौद्रिक मजदूरी = वास्तविक मजदूरी

2)

$$\text{Real wage} = \frac{\text{Cost of living index}}{\text{Money wage}} \times 100$$

$$\text{वास्तविक मजदूरी} = \frac{\text{निर्वाह सूचकांक}}{\text{मौद्रिक मजदूरी}} \times 100$$

3)

$$\text{Real wage} = \frac{\text{Money wage}}{\text{Cost of living index}} \times 100$$

$$\text{वास्तविक मजदूरी} = \frac{\text{मौद्रिक मजदूरी}}{\text{निर्वाह सूचकांक}} \times 100$$

4)

$$\text{Real wage} = \frac{\text{Money wage}}{\text{Price relation}} \times 100$$

$$\text{वास्तविक मजदूरी} = \frac{\text{मौद्रिक मजदूरी}}{\text{कीमत सम्बन्ध}} \times 100$$

Correct Answer: 3

QID : 416 When the collected data is grouped with reference to time, we have

Options:

- 1) Quantitative classification
- 2) Qualitative classification
- 3) Geographical classification
- 4) Chronological classifications

Correct Answer: Chronological classifications

QID : 417 In SRSWOR of size n from a population with N units if p is the proportion of sampled units having a given attribute, then unbiased estimate of $V(p)$ is

Options:

1)
$$\frac{pq}{(n-1)N}$$

2)
$$pq/n$$

3)
$$N(N-n)pq/(n-1)$$

4)
$$\frac{(N-n)pq}{N(n-1)}$$

Correct Answer:

$$\frac{(N-n)pq}{N(n-1)}$$

collegedunia

QID : 418 -

The data about the sales and advertisement expenditure of a firm is given below

	Sales (in crores of Rs.)	Advertisement exp (in crores of Rs.)
Means	40	6
Standard Deviation	10	1.5

The correlation coefficient between sales and advertisement expenditure is 0.9. The likely sales for a proposed advertisement expenditure of Rs 10 crore

Options:

- 1) Rs 64 crores
- 2) Rs. 67 crores
- 3) Rs. 70 crores
- 4) Rs. 58 crores

Correct Answer: Rs 64 crores

QID : 419 Which type of sampling is one where only the first sample unit is selected at random and the remaining units are automatically selected in a definite sequence at equal spacing from one another. It is :

Options:

- 1) Multi stage sampling
- 2) Quota sampling
- 3) Systematic sampling
- 4) Area sampling

Correct Answer: Systematic sampling

QID : 420 -

If the mean and the standard deviation of n observations x_1, x_2, \dots, x_n be \bar{x} and σ respectively, then the mean and standard deviation of $-x_1, -x_2, -x_3, \dots, -x_n$ are, respectively, :

Options:

1) $\bar{x}, -\sigma$

2) $-\bar{x}, \sigma$

3) \bar{x}, σ

4) $-\bar{x}, -\sigma$

Correct Answer:

$-\bar{x}, \sigma$

A large, light blue watermark of the word "collegedunia" is positioned diagonally across the right side of the page. To the left of the watermark, there is a cartoon illustration of a person with dark hair, wearing glasses and a grey graduation cap with a red tassel.

QID : 421 A random sample of size n is drawn from a population of size N by SRSWOR method. Then the standard error of sample mean will be zero if n is

Options:

1) $N - 1$

2) N

- 3) tending to infinity
- 4) none of the options

Correct Answer: N

QID : 422 The coefficient of correlation between two variables X and Y is 0.48. The covariance is 36. The variance of X is 16. The standard deviation of Y is :

Options:

- 1) 10.15
- 2) 13.32
- 3) 16.5
- 4) 18.75

Correct Answer: 18.75

QID : 423 If 4,5,6,6,6,6,6,6,7 be a random sample from a Poisson population with parameter λ , then an unbiased estimate of λ is :

Options:

- 1) 4.2
- 2) 5
- 3) 5.8
- 4) 6

Correct Answer: 5.8

QID : 424 There are 35 students in a hostel. If the number of students increases by 7, the expenses of the hostel increases by Rs. 42 per day while the average expenditure per head diminishes by Re. 1. The original expenditure of the hostel is:

Options:

- 1) Rs. 380
- 2) Rs. 420
- 3) Rs. 490
- 4) Rs. 510

Correct Answer: Rs. 420

collegedunia