Pankaj Pandey <pankaj.25257@lpu.co.in>

MTH-302 (CA-3)

Google Forms <forms-receipts-noreply@google.com>
To: pankaj.25257@lpu.co.in

Wed, Apr 21, 2021 at 4:57 PM

Thanks for filling out MTH-302 (CA-3)

Here's what we got from you:

MTH-302 (CA-3)

Email address *

pankaj.25257@lpu.co.in

NAME

Pankaj Pandey

REGISTRATION NUMBER

00

ROLL NUMBER

00

SECTION

00

MOBILE NUMBER

00

QUESTION PAPER

THERE IS 25% NEGATIVE MARKING

1 MARKS

The limit of Karl Pearson coefficient is

$(a) -1 < r < 1$ $(b) -1 \leq r \leq 1$ $(c)\ 1 \leq r \leq -1$ (d) All above

- A
- (•) B
- C
- D

1 MARKS

If the Karl Pearson coefficient is $r = 1$ then graph is given by

$(a)\ X = Y$ $(b)\ \ Y = -X$ $(c)\ X = -Y$ (d) Option (b) and (c) both

- (•) A
- B

- C
- D

1 MARKS

If the Karl Pearson coefficient is $r = -1$ then the possible line obtained from graph

$(a)\ X = Y$ $(b)\ \ Y = -X$ $(c)\ X = C$ (d) All above are possible

- A
- B
- C
- D

1 MARKS

If the Karl Pearson coefficient is $r(X, Y) = -1$ then $X\ and\ Y$ are

(a) Related (b) Not related (c) May or may not be related (d) All above are possible

- A
- B
- C
- D

1 MARKS

The Karl Pearson coefficient $r(X, Y)$ is called perfect if

(a) $r(X, Y) = 1$ (b) $r(X, Y) = -1$ (c) $r(X, Y) = \pm 1$ (d) All above are possible

- A

- ○ B
- ○ C
- ◉ D

1 MARKS

The correlation coefficient is the mean of regression coefficient of type

(a) Arithmetic mean (b) Geometric mean (c) Harmonic mean (d) Gauss mean

- ○ A
- ◉ B
- ○ C
- ○ D

1 MARKS

If $Y = 2.8\,X + 5$ and $X = 2.8\,Y + 5$ be two regression lines then correlation coefficient is

(a) $r = 2.8$ (b) $r = -2.8$ (c) $r = \pm 2.8$ (d) not exist

- ◉ A
- ○ B
- ○ C
- ○ D

1 MARKS

If $b(X,Y)$ denotes the regression coefficient of X on Y then

(a) $b(X+c,Y+d) = cd\ b(X,Y)$
(b) $b(X+c,Y+d) = \frac{c}{d}\ b(X,Y)$
(c) $b(X+c,Y+d) = \frac{d}{c}\ b(X,Y)$
(d) $b(X+c,Y+d) = b(X,Y)$

- ○ A
- ○ B
- ○ C
- ◉ D

1 MARKS

If X and Y are independent then the Karl Pearson coefficient $r(X,Y)$ is

(a) $r(X,Y) = 0$ (b) non-zero positive (c) non-zero negative (d) ± 1

- ◉ A
- ○ B
- ○ C
- ○ D

1 MARKS

If X and Y are independent then then X and Y are

(a) correlated (b) not correlated (c) $r(X,Y) \pm 1$ (d) None of the above

- ○ A
- ◉ B
- ○ C
- ○

D

2 MARKS

If X and Y are not correlated then then X and Y are

(a) Independent Always
(b) Dependent Always
(c) May be dependent or independent
(d) None of the above

A

B

C

D

2 MARKS

If $U = X\cos\alpha + Y\sin\alpha$, $V = Y\cos\alpha - X\sin\alpha$ such that $\tan 2\alpha = \frac{2r\sigma_X\sigma_Y}{\sigma^2 X - \sigma^2 Y}$ then U and V are

(a) Correlated
(b) Not correlated
(c) may be correlated or uncorrelated
(d) No such relation exist

A

B

C

D

2 MARKS

If $Y = cX + d$ be the regression line then regression coefficients are

(a) $b_{XY} = c$ and $b_{YX} = c$
(b) $b_{XY} = \frac{1}{c}$ and $b_{YX} = c$
(c) $b_{XY} = c$ and $b_{YX} = \frac{1}{c}$
(d) $b_{XY} = \frac{1}{c}$ and $b_{YX} = \frac{1}{c}$

- ○ A
- ◉ B
- ○ C
- ○ D

2 MARKS

If $r(X, Y)$ denotes the Karl Pearson coefficient then

(a) $r(aX, Y) = a\, r(X, Y)$
(b) $r(aX, Y) = -a\, r(aX, Y)$
(c) $r(aX, Y) = \pm\, r(X, Y)$
(d) All above are correct

- ○ A
- ○ B
- ◉ C
- ○ D

2 MARKS

Select the correct statement for regression coefficients b_{XY} and b_{YX}:

(a) $b_{XY} < 1$ and $b_{YX} < 1$
(b) $b_{XY} > 1$ and $b_{YX} > 1$
(c) $b_{XY} < 1$ and $b_{YX} > 1$
(d) $b_{XY} < 1$ and $b_{YX} < -1$

A

B

C

D

2 MARKS

If $b(X,Y)$ denotes the regression coefficient of X on Y then

(a) $b(cX,dY) = cd\ b(X,Y)$
(b) $b(cX,dY) = \frac{c}{d}\ b(X,Y)$
(c) $b(cX,dY) = \frac{d}{c}\ b(X,Y)$
(d) $b(cX,dY) = b(X,Y)$

A

B

C

D

2 MARKS

If $r(X,Y)$ denotes the Karl Pearson coefficient then

(a) $r(X+\pi,Y-\pi) = \pi\, r(X,Y)$
(b) $r(X+\pi,Y-\pi) = \pi^2\, r(X,Y)$
(c) $r(X+\pi,Y-\pi) = \pm\, r(X,Y)$
(d) $r(X+\pi,Y-\pi) = r(X,Y)$

A

B

C

D

2 MARKS

If $r(X,Y)$ denotes the Karl Pearson coefficient then

(a) $r(\pi X, Y+\pi) = \pi\, r(X,Y)$
(b) $r(\pi X, Y+\pi) = -\pi\, r(X,Y)$
(c) $r(\pi X, Y+\pi) = \pm\, r(X,Y)$
(d) $r(\pi X, Y+\pi) = r(X,Y)$

- ○ A
- ○ B
- ○ C
- ◉ D

2 MARKS

A dice is thrown 9000 times and 1 or 6 appears 3240 times. If the null hypothesis is that "The dice is unbiased" then null hypothesis is

(a) Accepted at 5% level of significance
(b) Rejected at 5% but accepted at 1% level of significance
(c) Always accepted
(d) Always rejected

- ○ A
- ○ B
- ○ C
- ◉ D

2 MARKS

If $n = 900$, Sample mean $= 3.4$, Population mean $= 3.25$, Standard Deviation of Sample and Population both $= 2.61$ then at 5% level of significance

(a) Sample is from the given population
(b) Sample is not from the given population
(c) Sample may or may not be from the given population
(d) Above all are possible

- (●) A
- ( ) B
- ( ) C
- ( ) D