òŸëæaš brŒKiw¤ nj®Î – 2021

tF¥ò – 12

SET – I

neu« : 1.30 kâ kÂ¥bg© : 15

1. xU ehza« 10,000 Kiw R©l¥gL« nghJ 5195 Kiw jiy éG»wJ. m›thbwåš, 5% äiffh© ãiyæš mªehza« F‰wk‰wjh v‹gij¡ fhz fUJnfhŸ nrhjid brŒf.
2. X® MŒÎ¡ f£Liuæš khzt®fŸ V‰gL¤Âa vG¤J¥ ÃiHæid \_‹W mik¥ò gæ‰We®fŸ gÂÎ brŒj étu« Ã‹tUkhW. \_‹W tF¥òfëY« V‰g£l vG¤JÃiHfë‹ ruhrçfS¡»ilna é¤Âahr« cŸsjh vd α = 5% äiffh© ãiyæš MuhŒf,

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| gæ‰We® | 1 | 2 | 3 | 5 | 0 | 8 |  |  |
| gæ‰We® | 2 | 4 | 6 | 8 | 4 | 9 | 0 | 2 |
| gæ‰We® | 3 | 5 | 2 | 3 | 2 | 3 | 3 |  |

1. 6 khzt®fë‹ òŸëæaš k‰W« fâjéaš ghl§fë‹ kÂ¥bg©fS¡»ilna cŸs (bkh¤j kÂ¥bg© 10) fh®š Ãa®r‹ x£LwÎ¡ bfGit fz¡»Lf.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| khzt® | 1 | 2 | 3 | 4 | 5 | 6 |
| òŸëæaš | 7 | 4 | 6 | 9 | 3 | 8 |
| fâjéaš | 8 | 5 | 4 | 8 | 3 | 6 |

1. Ñœ¡f©l juÎfS¡F, Ñœ¡f©l Kiwfëš ãiuæ£l bkh¤j F¿p£L v©fis¡ fh©f
2. yh°Ãa® Kiw
3. ghÁæ‹ Kiw
4. lh®Õ° bgsèæ‹ Kiw
5. Ãõç‹ éGäa Kiw
6. kh®õš – v£{ bth®¤ Kiw

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| bghU£fŸ | 2016-Ïš éiy | msÎ | 2017-Ïš éiy | msÎ |
| A | 2 | 8 | 4 | 6 |
| B | 5 | 10 | 6 | 5 |
| C | 4 | 14 | 5 | 10 |
| D | 2 | 19 | 2 | 13 |

1. Ñœ¡fhQ« juÎfS¡F Û¢ÁW t®¡f Kiwia¥ ga‹gL¤Â 1995M« tUl¤Â‰fhd c‰g¤Âia¡ fz¡»Lf,

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| tUl« | 1990 | 1991 | 1992 | 1993 | 1994 |
| c‰g¤Â (Mæu« l‹) | 70 | 72 | 88 | 90 | 92 |

òŸëæaš brŒKiw¤ nj®Î – 2021

tF¥ò – 12

SET – II

neu« : 1.30 kâ kÂ¥bg© : 15

1. xU gŸëæš ÏUªJ 10 khzt®fŸ bfh©l xU khÂç nj®ªbjL¡f¥g£lJ. xU F¿¥Ã£l ghl¤Âš mt®fŸ bg‰w kÂ¥bg© 72, 82, 96, 85, 84, 75, 76, 93, 94 k‰W« 93. Ïij¡ bfh©L tF¥Ã‹ ruhrç kÂ¥bg© 90 v‹w T‰iw eh« V‰W bfhŸs KoÍkh?
2. 500 khzéfŸ bfh©l xU FGéš el¤j¥g£l X® MŒéš 60% ò¤Ârhèahdt®fŸ mt®fë‹ 40% khzéfë‹ jªija®fŸ go¥g¿Î Ïšyhjt®fŸ. ò¤Ârhèæšyhj khzéfëš 30% jªija®fŸ go¤jt®fŸ. Ï¤jutçéèUªJ go¤j jªija®fë‹ FHªijfŸ ò¤Ârhèahdt®fsh v‹w fUJnfhë‹ K¡»a¤Jt¤ij¢ nrhÂ¡f.
3. xU efu¤Âš rªij MŒéš ju¤Â‹ mo¥gilæš njÚ® k‰W« fh¥Ãæ‹ éiy ãytu« Ñœ¡f©lthW bfhL¡f¥g£LŸsJ. Ït‰¿‹ éiyfS¡F Ïilæyhd ju x£Lwit¡ fh©f.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| njÚ® éiy | 88 | 90 | 95 | 70 | 60 | 75 | 50 |
| fh¥Ãæ‹ éiy | 120 | 134 | 150 | 115 | 110 | 140 | 100 |

1. rk thŒ¥ò Kiwæš nj®ªbjL¡f¥g£l 5 khzt®fë‹ òŸëæaš k‰W« fz¡F gÂéaš kÂ¥bg©fŸ Ã‹tUkhW,

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| òŸëæaš | 85 | 60 | 73 | 40 | 90 |
| fz¡F gÂéaš | 93 | 75 | 65 | 50 | 80 |

1. ÑnH bfhL¡f¥g£LŸs jäœeh£oš gÂthd kiH (ä.Û) étu¤Â‰F gUtfhy F¿pLfis vâa ruhrç Kiwæš fhz.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| tUl« | gUt§fŸ | | | |
| I | II | III | IV |
| 2001 | 118.4 | 260.0 | 379.4 | 70 |
| 2002 | 85.8 | 185.4 | 407.1 | 8.7 |
| 2003 | 129.8 | 336.5 | 403.1 | 12.0 |
| 2004 | 283.4 | 360.7 | 472.1 | 14.8 |
| 2005 | 231.7 | 308.5 | 828.8 | 15.9 |

òŸëæaš brŒKiw¤ nj®Î – 2021

tF¥ò – 12

SET – III

neu« : 1.30 kâ kÂ¥bg© : 15

1. xU ehza« 10,000 Kiw R©l¥gL« nghJ 5195 Kiw jiy éG»wJ. m›thbwåš 5% äiffh© ãiyæš mªehza« F‰wk‰wjh v‹gij¡ fhz fUJnfhŒ nrhjid brŒf.
2. 6 khzt®¡F xU gæ‰Á¡F K‹D«, Ã‹D« el¤j¥g£l nj®éš mt®fŸ bg‰w kÂ¥bg©fŸ gÂél¥g£L Ñœ¡f©lthW m£ltiz¥gL¤j¥g£LŸsJ. Ï¥gæ‰Á MdJ mt®fë‹ kÂ¥bg©fis ca®¤Jtj‰F cjéfukhd ÏUªjjh vd nrhÂ¡f.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| gæ‰Á¡F K‹ | 100 | 160 | 113 | 122 | 120 | 105 |
| gæ‰Á¡F Ã‹ | 120 | 155 | 120 | 128 | 115 | 100 |

1. 1800 khzt®fŸ fyªJ¡ bfh©l xU ngh£o¤ nj®éš 625 ng® bt‰¿ bg‰wd® jå¥ gæ‰Á bg‰w 300 ngçš 180 ng® bt‰¿ bg‰wd®. jå¥gæ‰Áæ‹ ga‹gh£il kÂ¥ÃLf.
2. bfhL¡f¥g£l bjhl® tçir 4 tUl RH‰Áæš cŸsJ vd¡ bfh©L efU« ruhrç fz¡»Lf.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| tUl« | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| M©L kÂ¥ò | 154.0 | 140.5 | 147.0 | 148.5 | 142.9 | 142.1 | 136.6 | 142.7 | 145.7 | 145.1 | 137.8 |

1. ÏU gFÂfëYŸs k¡fŸ bjhif v©â¡if. m¥gFÂfëYŸs taJ¥ng‰w FG¡fŸ, mt‰¿ V‰g£l Ïw¥òfŸ M»ait Ñœ¡f©l m£ltizæš ju¥g£LŸsd. mj‰F br¥gål¥gh Ïw¥ò é»j¤ijÍ« taij¡ F¿¤j Ïw¥ò é»j¤ijÍ« fh©f.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| taJ (M©Lfëš) | gFÂ – 1 | | gFÂ – II | |
| k¡fŸ bjhif | Ïw¥òfë‹ v©â¡if | k¡fŸ bjhif | Ïw¥òfë‹ v©â¡if |
| 0-10 | 3000 | 55 | 7500 | 300 |
| 10-25 | 4500 | 30 | 6000 | 50 |
| 25-45 | 6000 | 40 | 8000 | 40 |
| 45 ¡F nkš | 1000 | 15 | 2000 | 64 |

STATISTICS PRACTICAL EXAM – 2021

STANDARD – 12

SET – I

TIME : 1.30 hrs. Marks : 15

1. A coin is tossed 10,000 times and head turned up 5,195 times. Test the hypothesis, at 5% level of significance. That the coin in unbiased.
2. Three composition instructors recorded the number of spelling error which their students made on a research paper. At 5% level of significant difference in the average number of error in the three classes of students

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Instructor 1 | 2 | 3 | 5 | 0 | 8 |  |  |
| Instructor 2 | 4 | 6 | 8 | 4 | 9 | 0 | 2 |
| Instructor 3 | 5 | 2 | 3 | 2 | 3 | 3 |  |

1. Calculate the Karl Pearson’s correlation coefficient between the marks (our of 10) in Statistics and mathematics of 6 students.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Student | 1 | 2 | 3 | 4 | 5 | 6 |
| Statistics | 7 | 4 | 6 | 9 | 3 | 8 |
| Mathematics | 8 | 5 | 4 | 8 | 3 | 6 |

1. Construct weighted aggregate index number of price from the following data by applying.
2. Laspeyre’s method
3. Paasche’s method.
4. Dorbish and Bowley’s method
5. Fisher’s ideal method
6. Marshall – Edgeworth method

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Commodity | 2016 | | 2017 | |
| Price | Quantity | Price | Quantity |
| A | 2 | 8 | 4 | 6 |
| B | 5 | 10 | 6 | 5 |
| C | 4 | 14 | 5 | 10 |
| D | 2 | 19 | 2 | 13 |

1. Estimate the value of production for the year 1995 by using the method of least squares from the following data:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | 1990 | 1991 | 1992 | 1993 | 1994 |
| Production (1000 tons) | 70 | 72 | 88 | 90 | 92 |

STATISTICS PRACTICAL EXAM – 2021

STANDARD – 12

SET – II

TIME : 1.30 hrs. Marks : 15

1. A sample of 10 students from a school was selected. Their scores in a particular subject as 72, 82, 96, 85, 84, 75, 76, 93, 94 and 93. Can we support the claim that the class average scores in 90?
2. A survey was conducted with 500 female students of which 60% were intelligent, 40% had uneducated fathers, while 30% of the not intelligent female students had educated fathers. Test the hypothesis that the education of fathers and intelligence of female students are independent.
3. In a marketing survey the prices of tea and prices of coffee in a town based on quality was found as shown below. Find the rank correlation between prices of tea and prices of coffee.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Price of tea | 88 | 90 | 95 | 70 | 60 | 75 | 50 |
| Price of coffee | 120 | 134 | 150 | 115 | 110 | 140 | 100 |

1. The random sample of 5 school students is selected and their marks in statistics and accountancy are found to be

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Statistics | 85 | 60 | 73 | 40 | 90 |
| Accountancy | 93 | 75 | 65 | 50 | 80 |

1. Calculate the seasonal indices for the rain fall (in mm) data in Tamilnadu given below by Simple Average Method.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Season | | | |
| I | II | III | IV |
| 2001 | 118.4 | 260.0 | 379.4 | 70 |
| 2002 | 85.8 | 185.4 | 407.1 | 8.7 |
| 2003 | 129.8 | 336.5 | 403.1 | 12.0 |
| 2004 | 283.4 | 360.7 | 472.1 | 14.3 |
| 2005 | 231.7 | 308.5 | 828.8 | 15.9 |

STATISTICS PRACTICAL EXAM – 2021

STANDARD – 12

SET – III

TIME : 1.30 hrs. Marks : 15

1. A coin is tossed 10,000 times and head turned up 5,195 times. Test the hypothesis at 5% level of significance. That the coin is unbiased.
2. A test was conducted with 6 students before and after the training programme. Their marks were recorded and tabulated as shown below. Test whether the training was helpful in improving their scores.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Before training | 100 | 160 | 113 | 122 | 120 | 105 |
| After training | 120 | 155 | 120 | 128 | 115 | 100 |

1. Out of 1800 candidates appeared for a competitive examination, 625 were successful; 300 had attended a coaching class and of these 180 come out successful. Test for the association of attributes attending the coaching class and success in the examination.
2. Compute the trends by the method of moving averages, assuming that 4-year cycle is present in the following series.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Annual value | 154.0 | 140.5 | 147.0 | 148.5 | 142.9 | 142.1 | 136.6 | 142.7 | 145.7 | 145.1 | 137.8 |

1. Number of deaths recorded in various age groups in two areas, viz… Area I and Area II and the population size in each age group are given in the following table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Age group (in years) | Area – I | | Area – II | |
| Population | No. of deaths | Population | No. of deaths |
| 0-10 | 3000 | 55 | 7500 | 300 |
| 10-25 | 4500 | 30 | 6000 | 50 |
| 25-45 | 6000 | 40 | 8000 | 40 |
| 45 and over | 1000 | 15 | 2000 | 64 |

Find the crude death rates and age specific death rates of Area I and Area II.