ST. PHILOMENA'S COLLEGE (AUTONOMOUS), MYSOREPG DEPARTMENT OF ECONOMICSQUESTION BANK (Revised Curriculum 2018)SECOND YEAR- THIRD SEMESTER (2019-21 Batch)COURSE TITLE (PAPER TITLE):
Sub: Code- C0520 COMPUTER APPLICATION FOR ECONOMICS QP Code: 96552
11 How ctrl+c and ctrl+v shortcuts works? ..... 2
12 What is Excel? Why we use it? ..... 2
13 What are the different operations that can be performed on data using ..... 2excel?
14 Mention the applications of excel ..... 2
15 How menu bar is useful in excel? Mention its different tabs. ..... 2
16 What is Contextual tab in excel? Give an example. ..... 2
17 How functions are useful in excel? ..... 2
18 Can we sort excel data? If yes, how? ..... 2
19 Can we extract particular data in excel? If yes, how? ..... 2
110 Mention any five function names that are available in Autosum tab? ..... 2
111 What are financial functions? Mention any two financial functions. ..... 2
12 Mention any five functions available in excel and its use. ..... 2
13 What charts are in excel? Why we use it? ..... 2
114 Mention different types of charts available in excel. ..... 2
15 Mention different parts of a chart. ..... 2
116 After inserting the chart can you edit it in excel? If yes, how? ..... 2
117 After inserting the chart how do you update it in excel? ..... 2
18 Why we use pivot table and chart? ..... 2
19 What is FPS? ..... 2
120 Mention different types of file organization techniques. ..... 2
121 What is the advantage of indexed file organization? ..... 2
122 What is the disadvantage of Sequential file organization technique? ..... 2
223 Define data. ..... 2
224 What are the soft-wares used for statistical analysis? ..... 2
325 The average GPA of all students is 2.70 A sample of 117 were drown and ..... 2sample mean is $\mathbf{3 . 0 0}$ and S.D is $\mathbf{0 . 7 0}$ Is there a different between mean andsample mean? Test at $5 \%$ level of significance.
326 What are the measure of central tendency? ..... 2
327 What are the different types of arithmetic mean? ..... 2
328 Define dispersion. ..... 2
329 What do you mean by correlation? ..... 2
330 What are the different types of correlation? ..... 2
331 Distinguish between positive and negative correlation. ..... 2
332 Distinguish between simple and multiple regression. ..... 2
333 Distinguish between parametric and non parametric tests. ..... 2
234 What do you mean by variable? ..... 2
235 Distinguish between independent variable. ..... 2
236 When does scatter plot is used? ..... 2
437 What do you mean by time series analysis? ..... 2
438 What do you mean by index numbers? what are the significance of ..... 2 statistical tests?
439 when do we use chi-square test? ..... 2
440 When do we use non parametric tests? ..... 2
$3 \quad 41$ When do we use parametric tests? ..... 2
442 When we use a ANOVA tests? ..... 2
443 Distinguish between the test an $F$ test. What is the formula for range? ..... 2
344 Write the formula for quarter deviation? ..... 2
345 Define percentile. ..... 2
346 Define quartile. ..... 2
347 What is the formula for arithmetic mean? ..... 2
348 Write a formula for median. ..... 2
349 What do you mean by mode. ..... 2
350 Mention the limitations of regression analysis. ..... 2
351 Define coding. ..... 2
352 What is the short cut method is use for data save and data print? ..... 2
353 What are the softwares used for statistical analysis? ..... 2
354 When do we use Pie chart? ..... 2
355 When do we use bar graph? ..... 2
356 When do we use histogram? ..... 2
357 When do we use scatter plot? ..... 2
358 What tool pack do we use for statistical application? ..... 2
359 How do we import data? ..... 2
360 How do we export data? ..... 2
11 Explain the purpose of any ten short cut keys in windows. ..... 5
12 Write a note on MS Excel. ..... 5
13 Write a note on applications of MS Excel ..... 5
14 Write a note on contextual tabs. ..... 5
15 How do you sort data in excel? Explain with an example. ..... 5
16 Explain any one financial function in excel with an example. ..... 5
17 Write a note on charts. ..... 5
18 What are the different parts of a chart? Explain in detail. ..... 5
19 How do you keep a chart updates? Explain. ..... 5
110 Write a note on files. ..... 5
11 Write a note on sequential file organization technique. ..... 5
112 Write a note on random file organization technique. ..... 5
13 Write a note on indexed file organization technique. ..... 5
214 Explain sequential file organization in detail. ..... 5
215 Explain random file organization technique in detail. ..... 5
216 Explain indexed file organization in detail. ..... 5
217 Differentiate between sequential, direct and indexed file organization ..... 5
technique.
318 Calculate Athematic mean for the data given below: ..... 5

| Age more <br> than | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No of <br> Patients | 148 | 124 | 109 | 71 | 30 | 16 | 01 |


| Class | $\mathbf{5 -}$ | $\mathbf{1 0 -}$ | $\mathbf{1 5}-$ | $\mathbf{2 0}$ | $\mathbf{2 5 -}$ | $\mathbf{3 0 -}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| interval | $\mathbf{1 0}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ | $\mathbf{2 5}$ | $\mathbf{3 0}$ | $\mathbf{3 5}$ |
| Frequency | $\mathbf{5}$ | $\mathbf{8}$ | $\mathbf{7}$ | $\mathbf{1 0}$ | $\mathbf{6}$ | $\mathbf{4}$ |

320 Calculate median and mode for the data given below:

| Mid-value | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{1 5}$ | $\mathbf{2 5}$ | $\mathbf{3 8}$ | $\mathbf{3 5}$ |

321 Calculate median and mode for the following data:

| Size | $\mathbf{1 1 -}$ | $\mathbf{1 6 -}$ | $\mathbf{2 1 -}$ | $\mathbf{2 6 -}$ | $\mathbf{3 1 -}$ | $\mathbf{3 6 -}$ | $\mathbf{4 1 -}$ | $\mathbf{4 6 -}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\mathbf{1 5}$ | $\mathbf{2 0}$ | $\mathbf{2 5}$ | $\mathbf{3 0}$ | $\mathbf{3 5}$ | $\mathbf{4 0}$ | $\mathbf{4 5}$ | $\mathbf{5 0}$ |
| Frequency | $\mathbf{7}$ | $\mathbf{1 0}$ | $\mathbf{1 3}$ | $\mathbf{2 6}$ | $\mathbf{3 5}$ | $\mathbf{2 2}$ | $\mathbf{1 1}$ | $\mathbf{5}$ |

322 Calculate geometric mean for the data given below:

| Size | $\mathbf{2}$ | $\mathbf{4}$ | $\mathbf{6}$ | $\mathbf{8}$ | $\mathbf{1 0}$ | $\mathbf{1 2}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 6 | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{4}$ | $\mathbf{3}$ | $\mathbf{5}$ |

323 For the data given calculate harmonic and geometric mean:
5

| Class | $\mathbf{5 -}$ | $\mathbf{1 5 -}$ | $\mathbf{2 5 -}$ | $\mathbf{3 5 -}$ | $\mathbf{4 5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\mathbf{1 5}$ | $\mathbf{2 5}$ | $\mathbf{3 5}$ | $\mathbf{4 5}$ | $\mathbf{5 5}$ |
| Frequency | $\mathbf{1 5}$ | $\mathbf{3 0}$ | $\mathbf{2 5}$ | $\mathbf{1 0}$ | $\mathbf{1 5}$ |

324 Calculate the geometric mean for the data:

| Size of <br> items | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 8 | 12 | 18 | 26 | 16 | 12 | 8 |

325 Calculate harmonic mean of the follow data:

| Marks | $\mathbf{1 0 -}$ <br> $\mathbf{2 0}$ | $\mathbf{2 0}$ <br> $\mathbf{3 0}$ | $\mathbf{3 0 -}$ <br> $\mathbf{4 0}$ | $\mathbf{4 0 -}$ <br> $\mathbf{5 0}$ | $\mathbf{5 0 -}$ <br> $\mathbf{6 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | $\mathbf{3 0}$ | $\mathbf{7 5}$ | $\mathbf{7 0}$ | $\mathbf{1 3 5}$ | $\mathbf{2 2 0}$ |

326 Find the quartile and quartile co-efficient of the following data
5

| C- | $\mathbf{0 -}$ | $\mathbf{1 -}$ | $\mathbf{2 0 -}$ | $\mathbf{3 0 -}$ | $\mathbf{4 0 -}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ |
| F | $\mathbf{1 0}$ | $\mathbf{5}$ | $\mathbf{2 0}$ | $\mathbf{1 5}$ | $\mathbf{1 0}$ |

327 Calculate the Standard deviation and its co-efficient for the weights of 10
5 students is given below: 60,61,60,62,63,63,64,64,70,71
328 A batch of 10 students obtained the following marks out of $\mathbf{1 0 0}$. Calculate the mean deviation and coefficient: Marks-58, 39,22,11,44,28,49,55,41 and 42.
329 From the following data, calculate quartile deviation and its co-efficient;

| Wage less <br> than | $\mathbf{0 -}$ <br> $\mathbf{1 0}$ | $\mathbf{1 0 -}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{4 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{5 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{6 0 -}$ |  |  |  |  |
| $\mathbf{7 0}$ |  |  |  |  |  |  |  |$|$| No.of |
| :--- | :--- |
| Workers |

330 Calculate quartile deviation and its co-efficient for the data given below.

| Mid - <br> Value | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 11 | 14 | 20 | 24 | 20 | 16 | 5 |

331 Find range and its coefficient for the data given.

| SI. No | $\mathbf{1}$ | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Values | 391 | 384 | 591 | 407 | 672 | 522 | 777 | 733 | 2488 | $\mathbf{1 4 9 0}$ |

332 The yearly income of a person for the last ten years is given below. Find the range and its coefficient:

| Year | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Income | $\mathbf{4 0}$ | $\mathbf{3 0}$ | $\mathbf{8 0}$ | $\mathbf{1 0 0}$ | $\mathbf{8 0}$ | $\mathbf{9 0}$ | $\mathbf{1 2 0}$ | $\mathbf{1 1 0}$ | $\mathbf{1 3 0}$ | $\mathbf{1 5 0}$ |

33 Calculate the correlation coefficient from the following data of marks
obtained in commerce ( X ) and Economics ( Y ).

| X | 50 | $\mathbf{6 0}$ | 58 | 47 | 49 | 33 | 65 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Y | 48 | 65 | 50 | 48 | 55 | 58 | 63 |

33
34 From the data given below obtain the correlation coefficient.

| $\mathbf{X}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{Y}$ | $\mathbf{1 0}$ | $\mathbf{7}$ | $\mathbf{2}$ | $\mathbf{6}$ | $\mathbf{4}$ | $\mathbf{8}$ | $\mathbf{3}$ | $\mathbf{1}$ | $\mathbf{5}$ | $\mathbf{9}$ |

235 What are steps to insert table in excel.
336 Seven students have obtain the following ranks in two subjects' history and geography. Find their rank correlation coefficient.

| Rank in <br> History | 7 | 1 | 4 | 6 | 5 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Rank in <br> Geography | 5 | 1 | 2 | 3.5 | 3.5 | 7 | 6 |

337 Find out Karl Pearson's Coefficient of correlation from the following data.

| X | 2 | $\mathbf{3}$ | 5 | 6 | $\mathbf{8}$ | $\mathbf{9}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Y | 6 | 5 | 7 | $\mathbf{8}$ | $\mathbf{1 2}$ | $\mathbf{1 1}$ |

338 From the following data calculate Karl Pearson's coefficient of correlation.

| $\mathbf{A}$ | $\mathbf{1}$ | $\mathbf{5}$ | $\mathbf{3}$ | $\mathbf{2}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{7}$ | $\mathbf{0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{B}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1 1}$ | $\mathbf{2}$ | $\mathbf{1}$ | $\mathbf{5}$ |

339 Find out coefficient of correlation from the following data.

| $\mathrm{X}--17,18,19,20,21, ~ 22$, |
| :--- |
| $23,24,25$ |$|$| $\mathrm{Y}-38,37,38, ~ 33, ~ 32, ~ 33$, |
| :--- |
| $34,29,26$ |

340 The following table gives the aptitude test scores and productivity indices of 10 workers selected at random. Calculate the regression equations.

| Aptitude <br> Scores (X) | 60 | 62 | 65 | 70 | 72 | 48 | 53 | 73 | 65 | 82 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Productivity <br> index Y | 68 | 60 | 62 | 80 | 85 | 40 | 52 | 62 | 60 | 81 |

341 From the data given below find PRF and SRF lines

| Demand | $56,53,45$, <br> $42,54$. |
| :--- | :--- |
| Price | $25,20,18$, |
|  | $16,21$. |

342 Find the SRFfunction and R-square for the data given below:

| X | $18,20,25$, <br>  <br>  <br> $\mathbf{2 9 , 3 3 .}$, <br> Y <br>  <br>  <br>  $\mathbf{1 5 , 1 7 , 2 0 ,} 2$. |
| :--- | :--- |

343 Specify a regression equation for output and labour. Estimate the same by using following information Interpret the results

| Output | $\mathbf{5 0}$ | $\mathbf{6 7}$ | $\mathbf{7 2}$ | $\mathbf{4 0}$ | $\mathbf{8 0}$ | $\mathbf{2 5}$ | $\mathbf{1 0 0}$ | $\mathbf{5 7}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Labour | $\mathbf{0 8}$ | $\mathbf{1 0}$ | $\mathbf{1 5}$ | $\mathbf{0 5}$ | $\mathbf{2 0}$ | $\mathbf{0 4}$ | $\mathbf{1 8}$ | $\mathbf{0 7}$ |

44 For the data given below state whether the new treatment is comparatively superior to the conventional treatment. Test the chi-square at $5 \%$ level of Significance (critical Value-3.84).

| Treatment | No of Patients |  |
| :--- | :--- | :--- |
|  | Favourable <br> Response | No. <br> Response |
| New | $\mathbf{6 0}$ | 20 |
| Conventional | 70 | 50 |

445 For the data given below apply chi-square and test which holiday is preferred and does gender affect preferred holidays at $5 \%$ level of significance:

|  | Beach | Cruise |
| :--- | :--- | :--- |
| Men | $\mathbf{2 0 9}$ | $\mathbf{2 8 0}$ |
| Women | 225 | $\mathbf{2 4 8}$ |

446 A test was given to 5 students chosen at random from the M.Com. Class ofthree universities in Madhya Pradesh. Their scores were found as followbetween the scores of students in the three universities. Test whether there is any significant difference in the scores at $5 \%$ level of significance.(Critical Value-3.44)

| University Scores |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | $\mathbf{9 0}$ | $\mathbf{7 0}$ | $\mathbf{6 0}$ | $\mathbf{5 0}$ | $\mathbf{8 0}$ |
| B | $\mathbf{7 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ |
| C | $\mathbf{6 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{7 0}$ | $\mathbf{6 0}$ |

447 Study the performance of three detergents at three different water temperatures, the following 'whiteness' readings were obtained with specially designed equipment Perform a one-way analysis of variance, using 5\% level of significance (given $\mathrm{F}=$ ).

|  | A | B | C |
| :--- | :---: | :---: | :---: |
| Cold <br> Water | 5 | 5 | 6 |
| Warm <br> Water | 4 | 5 | 6 |
| Hot <br> Water | 5 | 4 | 5 |

448 Intelligence test on two groups of boys and girls gave the following results: is there a significant difference in the mean scores obtained by boys and girls?

|  | Girls | Boys |
| :--- | :--- | :--- |
| No of <br> samples | 150 | 250 |
| Average | 75 | $\mathbf{7 0}$ |
| S.D | 15 | 20 |

449 Sample of sales in similar shops two towns are taken for a new product.

| Town | Mean <br> sales | Variance | Size of <br> samples |
| :--- | :--- | :--- | :--- |
| 1 | 42 | 4.3 | 6 |
| 2 | 55 | 5.1 | 8 |

Is there any differences in sales in the two towns? Use 5\% level of significance (Table value-5.14)
450 A random sample of 17 agriculture labors have a mean income of $\mathbf{3 0 0 0 0}$ and a S.D of $\mathbf{8 0 0 0}$.A random sample of 18 non-agricultural works have mean income of $\mathbf{3 3 0 0 0}$ and a S.D of $\mathbf{8 3 0 0}$.test the claim at $=\mathbf{0 . 0 5}$ that the mean annual income of agriculture and nan-agriculture workers are not same. $($ Critical value $=\mathbf{2} .042$ )
451 Following data show dividend yield between stocks listed BSE and NSE.is
there a difference in average yield between two markets? Test at percent level of significance critical value $=\mathbf{1 . 9 6}$.

|  | BSE | NSE |
| :--- | :--- | :--- |
| $\mathbf{N}$ | $\mathbf{2 2}$ | $\mathbf{2 8}$ |
| Mean | $\mathbf{4 . 2 1}$ | $\mathbf{3 . 6 2}$ |
| SD | $\mathbf{1 . 4 0}$ | $\mathbf{1 . 2 2}$ |

452 Calculate Fisher's ideal index number from the data given below:

| Commodity | 2009 |  |  | 2010 |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  | Price | Quantity | Price | Quantity |  |
| A | $\mathbf{1 0}$ | 49 | $\mathbf{1 2}$ | $\mathbf{5 0}$ |  |
| B | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ |  |
| C | $\mathbf{1 8}$ | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{1 2}$ |  |

453 Calculate the Paasche's price and quantity index for the following index:

| Commodity | 2019 |  |  | $\mathbf{2 0 2 0}$ |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | Expenditure | Price | Expenditure |
| A | $\mathbf{8}$ | $\mathbf{8 0}$ | $\mathbf{1 0}$ | $\mathbf{1 2 0}$ |
| B | $\mathbf{1 0}$ | $\mathbf{1 2 0}$ | $\mathbf{1 2}$ | $\mathbf{9 6}$ |
| C | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{5}$ | $\mathbf{5 0}$ |
| D | $\mathbf{4}$ | $\mathbf{5 6}$ | $\mathbf{3}$ | $\mathbf{6 0}$ |

454 Calculate Marshall-Edgeworth price and quantity index:

| Commodity | 2015 |  |  | 2017 |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  | Price | Quantity | Price | Quantity |  |
| A | $\mathbf{1 6}$ | $\mathbf{5 0}$ | $\mathbf{2 4}$ | $\mathbf{4 5}$ |  |
| B | $\mathbf{1 8}$ | $\mathbf{3 0}$ | $\mathbf{2 4}$ | $\mathbf{2 5}$ |  |
| C | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{1 5}$ | $\mathbf{8}$ |  |

455 From the following data construct an index number (i) with 2005 as base.
(ii) by chain base method:

| Year | 2005 | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Price | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{6 2}$ | $\mathbf{6 5}$ | $\mathbf{7 0}$ | $\mathbf{7 8}$ |

456 Following are the index number of prices (base 1981=100):

| Year | 1990 | $\mathbf{1 9 9 1}$ | $\mathbf{1 9 9 2}$ | $\mathbf{1 9 9 3}$ | $\mathbf{1 9 9 4}$ | $\mathbf{1 9 9 5}$ | $\mathbf{1 9 9 6}$ | $\mathbf{1 9 9 7}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Index <br> number | $\mathbf{1 4 0}$ | $\mathbf{2 0 0}$ | $\mathbf{2 1 0}$ | $\mathbf{2 3 0}$ | $\mathbf{2 5 0}$ | $\mathbf{2 6 0}$ | $\mathbf{2 8 0}$ | $\mathbf{3 0 0}$ |

457 From the given average prices of three commodities, find chain base index
numbers chained to 1998:

| Year | 1991 | 1992 | 1993 | 1994 | 1995 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $X$ | $\mathbf{8}$ | 10 | 12 | 15 | 12 |
| Y | 10 | 12 | 15 | 18 | 20 |
| $Z$ | 5 | 9 | 12 | 15 | 18 |

$4 \quad 58 \quad$ Fit a trend line by the method of semi-averages.

| Year | 2006 | 2007 | 2008 | 2009 | 2010 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Profits | 28.0 | 29.4 | $\mathbf{3 0 . 2}$ | 27.0 | $\mathbf{3 2 . 5}$ |

459 Estimate the trend values using the data given below by taking four-yearly
moving average and forecast the value for the year 2015 :

| Yea | $\mathbf{1 9}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| rs | $\mathbf{9 9}$ | $\mathbf{0 0}$ | $\mathbf{0 1}$ | $\mathbf{0 2}$ | $\mathbf{0 3}$ | $\mathbf{0 4}$ | $\mathbf{0 5}$ | $\mathbf{0 6}$ | $\mathbf{0 7}$ | $\mathbf{0 8}$ | $\mathbf{0 9}$ | $\mathbf{1 0}$ | $\mathbf{1 1}$ | $\mathbf{1 2}$ |
| Valu | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{3 9}$ | $\mathbf{5 4}$ | $\mathbf{7 0}$ | $\mathbf{8 7}$ | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{8 2}$ | $\mathbf{6 5}$ | $\mathbf{4 9}$ | $\mathbf{3 4}$ | $\mathbf{2 0}$ | $\mathbf{7}$ |
| es |  |  |  |  |  |  | $\mathbf{5}$ | $\mathbf{0}$ |  |  |  |  |  |  |

460 Using three yearly moving average compute trend values and find for the

| Year | $\mathbf{1 9 9 8}$ | $\mathbf{1 9 9 9}$ | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 1}$ | $\mathbf{2 0 0 2}$ | $\mathbf{2 0 0 3}$ | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sale | $\mathbf{1 5}$ | $\mathbf{2 1}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{3 6}$ | $\mathbf{4 2}$ | $\mathbf{4 8}$ | $\mathbf{5 4}$ | $\mathbf{5 4}$ |

261 What is the significance of Graphs in data analysis? 5
262 Explain the steps involved in insertion of graphs in excel. 5
263 Discuss the steps of data entry in Excel or SPSS. 5
264 Write a note on recoding the data. 5
265 Write the steps to apply regression test in excel. 5
11 Illustrate five functions in excel with example. 10
12 How do you create a chart in excel? Explain with a suitable example 10
13 Explain different tabs present in menu bar of excel in detail. 10
14 Illustrate the use of pivot table with an example.
15 What are the advantages and disadvantages of file processing system?
16 Explain file organization technique in detail.
37 Calculate mean, median and mode for the data given below:

| Marks | $\mathbf{0 -}$ | $\mathbf{1 0 -}$ | $\mathbf{2 0}$ | $\mathbf{3 0 -}$ | $\mathbf{4 0}$ | $\mathbf{5 0 -}$ | $\mathbf{6 0 -}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{7 0}$ |
| Number of <br> Students (f) | $\mathbf{6}$ | $\mathbf{5}$ | $\mathbf{8}$ | $\mathbf{1 5}$ | $\mathbf{7}$ | $\mathbf{6}$ | $\mathbf{3}$ |

38 Calculate mean, median and mode for the data given below:

| Weekly Wages | Under <br> $\mathbf{1 6}$ | $\mathbf{1 6 -}$ <br> $\mathbf{2 4}$ | $\mathbf{2 4 -}$ <br> $\mathbf{3 0}$ | $\mathbf{3 0}$ <br> $\mathbf{3 6}$ | $\mathbf{3 6}$ <br> $\mathbf{4 8}$ | Above <br> $\mathbf{4 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Number of <br> Employees (f) | $\mathbf{8}$ | $\mathbf{1 6}$ | $\mathbf{4 8}$ | $\mathbf{9 0}$ | $\mathbf{3 0}$ | $\mathbf{8}$ |

39 For the data given below mean, median and mode:

| Sl.No | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | 7 | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Marks | 75 | $\mathbf{7 1}$ | 73 | $\mathbf{7 0}$ | $\mathbf{7 4}$ | $\mathbf{8 0}$ | $\mathbf{8 5}$ | $\mathbf{8 1}$ | $\mathbf{8 6}$ | $\mathbf{7 9}$ |

310 For the data given below mean, median and mode:

| Income more <br> than Rs | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Number of <br> Persons | 72 | 67 | 59 | 50 | 36 | 29 | 4 | 10 |

311 For the data given below mean, median and mode:

| Marks | 5 | 10 | 15 | 20 | 25 | 30 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No of <br> Students | 4 | 6 | 8 | 7 | 3 | 2 |

312 Find the Mean median and mode for the data given below.

| $\mathbf{C I}$ | $\mathbf{1 0 -}$ | $\mathbf{2 0 -}$ | $\mathbf{3 0 -}$ | $\mathbf{4 0 -}$ | $\mathbf{5 0 -}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ |
| $\mathbf{Y}$ | $\mathbf{1 2}$ | $\mathbf{3 5}$ | $\mathbf{4 0}$ | $\mathbf{2 5}$ | $\mathbf{1 0}$ |

313 Find the Standard deviation for the following data:

| Sl.no | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| X | $\mathbf{6 5}$ | $\mathbf{6 2}$ | $\mathbf{5 4}$ | $\mathbf{3 2}$ | $\mathbf{4 2}$ | $\mathbf{6 5}$ | $\mathbf{2 5}$ | $\mathbf{6 5}$ | $\mathbf{3 8}$ | $\mathbf{4 1}$ |

314 Calculate the Standard deviation and its co-efficient for the data given:

| Items | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | $\mathbf{3}$ | $\mathbf{6}$ | $\mathbf{9}$ | 13 | $\mathbf{8}$ | $\mathbf{5}$ | 4 |

315 Calculate the Standard deviation and its co-efficient for the data given:

| Age | $\begin{aligned} & \mathbf{2 0 -} \\ & \mathbf{2 5} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 25- } \\ & \mathbf{3 0} \end{aligned}$ | $\begin{aligned} & \text { 30- } \\ & 35 \end{aligned}$ | $\begin{aligned} & \mathbf{3 5 -} \\ & \mathbf{4 0} \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathbf{4 0 -} \\ & \mathbf{4 5} \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathbf{4 5 -} \\ & \mathbf{5 0} \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathbf{5 0 -} \\ & \mathbf{5 5} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No of Employee | 170 | 110 | 80 | 45 | 40 | 30 | 25 |

316 Calculate the Mean deviation and its co-efficient for the data given: 10

| Class | $\mathbf{0 -}$ | $\mathbf{1 0 -}$ | $\mathbf{2 0 -}$ | $\mathbf{3 0 -}$ | $\mathbf{4 0 -}$ | $\mathbf{5 0 -}$ | $\mathbf{6 0 -}$ | $\mathbf{7 0 -}$ | $\mathbf{8 0 -}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{7 0}$ | $\mathbf{8 0}$ | $\mathbf{9 0}$ |

317 Calculate the Mean deviation and its co-efficient for the data given:
10

| Items | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ | $\mathbf{1 1}$ | $\mathbf{1 2}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | $\mathbf{1 5}$ | $\mathbf{1 6}$ | $\mathbf{2 1}$ | $\mathbf{1 0}$ | $\mathbf{1 7}$ | $\mathbf{8}$ | $\mathbf{4}$ | $\mathbf{2}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{2}$ | $\mathbf{0}$ | $\mathbf{2}$ |

318 From the following data find out Karl Pearson correlation between Age and Illiteracy

| Age-Group | $\mathbf{1 0 -}$ <br> $\mathbf{2 0}$ | $\mathbf{2 0 -}$ <br> $\mathbf{3 0}$ | $\mathbf{3 0 -}$ <br> $\mathbf{4 0}$ | $\mathbf{4 0 -}$ <br> $\mathbf{5 0}$ | $\mathbf{5 0 -}$ <br> $\mathbf{6 0}$ | $\mathbf{6 0 -}$ <br> $\mathbf{7 0}$ | $\mathbf{7 0 -}$ <br> $\mathbf{8 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Total <br> Population | $\mathbf{1 2 0}$ | $\mathbf{1 0 0}$ | $\mathbf{8 0}$ | $\mathbf{5 0}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{5}$ |
| Illiterate <br> Population | $\mathbf{1 0 0}$ | $\mathbf{7 5}$ | $\mathbf{6 0}$ | $\mathbf{3 0}$ | $\mathbf{2 0}$ | $\mathbf{1 0}$ | $\mathbf{5}$ |

19 Find the Spearman's Rank Coefficient of Correlation for the following bivariate data.

| Series- <br> $X$ | $\mathbf{8}$ | 7 | 6 | 9 | 5 | 4 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Series- <br> $\mathbf{Y}$ | $\mathbf{1 0}$ | 10 | 11 | 14 | 9 | 9 | 12 |

320 Find out Rank coefficient of correlation between sales and profits of ten firms.

| Sales | $\mathbf{5 0 , 5 0 , 5 5 , 6 0 , 6 5 , 6 5 , 6 5 ,}$ <br> $\mathbf{6 0 , 6 0 , 5 0}$ |
| :--- | :--- |
| Profits | $11,13,14,16,16,15$, <br> $15,14,13,13$ |

321 Find out the Coefficient of Correlation between $X$ and $Y$ by the method of
Rank-Differences.

| Scores-X-15, 18, 22, 17, |
| :--- |
| 19, 20, 16, 21 |
| Scores-Y-40, 42, 50, 45, |
| 43, 46, 41, 41 |

3
22 Find the Rank Correlation Coefficient between two sets of scores.

| Statistics | $\mathbf{8 8 , 3 6 , 9 8 , ~ 2 5 , ~ 7 5 , ~ 8 2 , ~ 9 2 , ~}$ <br> $\mathbf{6 2 , ~ 6 5 , 3 5 .}$ |
| :--- | :--- |
| Accountancy |  |
|  | $\mathbf{8 4 , 5 1 , 9 1 , ~ 6 0 , ~ 6 8 , ~ 6 2 , ~ 8 6 , ~}$ <br> $\mathbf{5 8 , 9 5}, 49$. |

323 For the data given below obtain $r_{12}, r_{13}$ and $r_{23}$.

| $\mathrm{X}_{1}$ | $\mathbf{6 5}$ | 40 | $\mathbf{3 5}$ | $\mathbf{7 5}$ | $\mathbf{6 3}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{X}_{2}$ | $\mathbf{6 0}$ | $\mathbf{5 5}$ | $\mathbf{5 0}$ | $\mathbf{5 6}$ | $\mathbf{3 0}$ |
| $\mathrm{X}_{3}$ | $\mathbf{6 2}$ | $\mathbf{5 6}$ | $\mathbf{6 2}$ | $\mathbf{5 9}$ | $\mathbf{4 2}$ |

324 For the data given below obtain $r_{12}, r_{13}$ and $r_{23}$.

| $\mathrm{X}_{1}$ | $\mathbf{8 0}$ | $\mathbf{3 5}$ | $\mathbf{2 0}$ | $\mathbf{8 0}$ | $\mathbf{6 0}$ | $\mathbf{5 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{X}_{2}$ | $\mathbf{7 0}$ | $\mathbf{4 0}$ | $\mathbf{3 5}$ | $\mathbf{8 0}$ | $\mathbf{7 5}$ | $\mathbf{8 0}$ |
| $\mathrm{X}_{3}$ | $\mathbf{6 0}$ | $\mathbf{3 5}$ | $\mathbf{6 6}$ | $\mathbf{7 0}$ | $\mathbf{4 5}$ | $\mathbf{5 8}$ |

425 Discuss the steps of ANOVA statistical test done in excel.
326 For the data given below obtain $r_{12}, r_{13}$ and $r_{23}$.

| $\mathrm{X}_{1}$ | 9 | $\mathbf{1 2}$ | 10 | 7 | 17 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{X}_{2}$ | 2 | 5 | 4 | 3 | 6 |
| $\mathrm{X}_{3}$ | 4 | 5 | 6 | 3 | 8 |

327 From the following data, find the PRF and SRF equation.

| $X$ | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $Y$ | 6 | 5 | 4 | 3 | 2 |
| $Z$ | 10 | 6 | 11 | 16 | 7 |


| $\mathbf{Y}$ | $\mathbf{8}$ | $\mathbf{3 6}$ | $\mathbf{2 3}$ | $\mathbf{2 7}$ | $\mathbf{1 4}$ | $\mathbf{1 2}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{X}_{1}$ | $\mathbf{1 0}$ | $\mathbf{3 7}$ | $\mathbf{1 8}$ | $\mathbf{2 5}$ | $\mathbf{1 4}$ | $\mathbf{2 8}$ |
| $\mathbf{X}_{2}$ | $\mathbf{8}$ | $\mathbf{2 0}$ | $\mathbf{1 4}$ | $\mathbf{1 1}$ | $\mathbf{9}$ | $\mathbf{4}$ |

329 For the data given below find SRF, R-square and adjusted R-square:

| State | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | D | $\mathbf{E}$ | F |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Y (in <br> Quintals) | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{7 0}$ | $\mathbf{8 0}$ | $\mathbf{9 0}$ |
| X Rainfall ( in <br> inches | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ | $\mathbf{6 0}$ | $\mathbf{7 0}$ |
| T <br> Temperature | $\mathbf{2 0}$ | $\mathbf{3 0}$ | $\mathbf{4 0}$ | $\mathbf{3 0}$ | $\mathbf{2 0}$ | $\mathbf{4 0}$ |

430 From the following data find out whether there is any relationship
between the sex and preference of colour:Apply the Chi-square test for the data given below. Test the effectiveness of Chloromycetin in checking typhoid at $5 \%$ level (the chi-square at $5 \%$ level of significance critical Value-3.841)

| Colour | Males | Females | Total |
| :--- | :--- | :--- | :--- |
| Red | $\mathbf{1 0}$ | $\mathbf{4 0}$ | $\mathbf{5 0}$ |
| White | $\mathbf{7 0}$ | $\mathbf{3 0}$ | $\mathbf{1 0 0}$ |
| Green | $\mathbf{3 0}$ | $\mathbf{2 0}$ | $\mathbf{5 0}$ |
| Total | $\mathbf{1 1 0}$ | $\mathbf{9 0}$ | $\mathbf{2 0 0}$ |

431 For a given 150 observations classified by two attributes $A$ and $B$ as
follows. Use the Chi-square test whether $A$ and $B$ are associated.

|  | $\mathbf{A}_{1}$ | $\mathbf{A}_{2}$ | $\mathbf{A}_{3}$ | Total |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{B}_{1}$ | $\mathbf{4 0}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{8 0}$ |
| $\mathbf{B}_{2}$ | $\mathbf{1 1}$ | $\mathbf{2 6}$ | $\mathbf{8}$ | $\mathbf{4 5}$ |
| $\mathbf{B}_{3}$ | $\mathbf{9}$ | $\mathbf{9}$ | $\mathbf{7}$ | $\mathbf{2 5}$ |
| Total | $\mathbf{6 0}$ | $\mathbf{6 0}$ | $\mathbf{1 5 0}$ | $\mathbf{1 5 0}$ |

432 For the data given below state whether the new treatment is comparatively superior to the conventional treatment. Test the chi-square at $5 \%$ level of Significance (critical Value-3.84).

| Treatment | No of Patients |  |
| :--- | :--- | :--- |
|  | Favourable <br> Response | No. <br> Response |
| New | $\mathbf{6 0}$ | $\mathbf{2 0}$ |
| Conventional | 70 | 50 |

433 Study the performance of three detergents at three different water temperatures, the following 'whiteness' readings were obtained with specially designed equipment Perform a two-way analysis of variance, using 5\% level of significance (given $F=6.94$ ).

| Water <br> Temperature | Detergent <br> A | Detergent <br> B | Detergent <br> C |
| :--- | :--- | :--- | :--- |
| Cold Water | 7 | 5 | 7 |
| Warm <br> Water | 9 | 2 | 8 |
| Hot Water | 4 | 6 | 8 |

434 Following data show academic background and choice of course of MBA students. Test a hypothesis of whether academic influence choice of course at $5 \%$ level of significance (Table value=24.99)

| Course | Accounting | Finance | Marketing |
| :--- | :--- | :--- | :--- |
| BA | $\mathbf{2 2}$ | $\mathbf{1 0}$ | $\mathbf{0 8}$ |
| BBA | $\mathbf{1 0}$ | $\mathbf{1 8}$ | $\mathbf{2 5}$ |


| BSc | 30 | 12 | 10 |
| :--- | :--- | :--- | :--- |

435 The following table gives the number of units produced per day by two workers $A$ and $B$ for a number of days: Test at $5 \%$ level of significance should these results be accepted as evidence that $B$ is the more stable worker.

| $\mathbf{A}$ | $\mathbf{4 0}$ | $\mathbf{3 0}$ | $\mathbf{3 8}$ | $\mathbf{4 1}$ | $\mathbf{3 8}$ | $\mathbf{3 5}$ | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| B | $\mathbf{3 9}$ | $\mathbf{3 8}$ | $\mathbf{4 1}$ | $\mathbf{3 3}$ | $\mathbf{3 2}$ | $\mathbf{4 9}$ | $\mathbf{4 9}$ | $\mathbf{3 4}$ |

436 Two types of drugs were used on 5 and 7 patients for reducing their weight. Drug A was imported and drug $B$ indigenous. The decrease in the weight after using the drugs for six months was as follows. Is there a significant difference in the efficiency of the two drugs? If not which drug should you buy? ( Critical value $=\mathbf{2 . 2 2 3}$ )

| Drug <br> A | 10 | 12 | 13 | 11 | 14 | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Drug <br> B | 8 | 9 | 12 | 14 | 15 | 10 | 9 |

437 Ten young recruits were put through a strenuous physical training
programme by the army. Their weights (in kg ) were recorded before and after with the following results: using $5 \%$ level of significance conclude that the programme affects the average weight of young recruits.

| Recruit | $\mathbf{1}$ | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Weight <br> before | 127 | 195 | 162 | 170 | 143 | 205 | 168 |
| Weight <br> after | 135 | 200 | 160 | 182 | 147 | 200 | 172 |

438 Calculate Marshall-Edgeworth price and quantity index:

| Commodity | 2015 |  | 2017 |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | Quantity | Price | Quantity |
| A | $\mathbf{1 6}$ | $\mathbf{5 0}$ | $\mathbf{2 4}$ | $\mathbf{4 5}$ |
| B | $\mathbf{1 8}$ | $\mathbf{3 0}$ | $\mathbf{2 4}$ | $\mathbf{2 5}$ |
| C | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{1 5}$ | $\mathbf{8}$ |
| D | $\mathbf{1 0}$ | $\mathbf{6}$ | $\mathbf{1 2}$ | $\mathbf{1 6}$ |
| E | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{1 4}$ | $\mathbf{1 2}$ |

439 Calculate Marshall-Edgeworth number from the data given below:

| Commodity | 2009 |  |  | 2010 |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  | Price | Quantity | Price | Quantity |  |
| A | $\mathbf{1 0}$ | $\mathbf{4 9}$ | $\mathbf{1 2}$ | $\mathbf{5 0}$ |  |
| B | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ |  |
| C | $\mathbf{1 8}$ | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{1 2}$ |  |
| D | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{2}$ |  |

440 Calculate Paasche's price and quantity index numbers:

| Commodity | 2009 |  |  | $\mathbf{2 0 1 0}$ |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  | Price | Quantity | Price | Quantity |  |
| A | $\mathbf{1 0}$ | $\mathbf{4 9}$ | $\mathbf{1 2}$ | $\mathbf{5 0}$ |  |
| B | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ |  |
| C | $\mathbf{1 8}$ | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{1 2}$ |  |
| D | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{2}$ |  |
| E | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{1 4}$ | $\mathbf{1 2}$ |  |

441 Calculate the Laspeyre's price and quantity index for the following index:

| Commodity | 2019 |  | $\mathbf{2 0 2 0}$ |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | Expenditure | Price | Expenditure |
| $\mathbf{A}$ | $\mathbf{8}$ | $\mathbf{8 0}$ | $\mathbf{1 0}$ | $\mathbf{1 2 0}$ |


| B | $\mathbf{1 0}$ | $\mathbf{1 2 0}$ | $\mathbf{1 2}$ | $\mathbf{9 6}$ |
| :--- | :--- | :--- | :--- | :--- |
| C | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{5}$ | $\mathbf{5 0}$ |
| D | $\mathbf{4}$ | $\mathbf{5 6}$ | $\mathbf{3}$ | $\mathbf{6 0}$ |
| E | $\mathbf{2 0}$ | $\mathbf{1 0 0}$ | $\mathbf{2 5}$ | $\mathbf{1 5 0}$ |

442 Calculate Fisher's ideal price and quantity index:

| Commodity | $\mathbf{2 0 1 5}$ | 2017 |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | Quantity | Price | Quantity |
| A | $\mathbf{1 6}$ | $\mathbf{5 0}$ | $\mathbf{2 4}$ | $\mathbf{4 5}$ |
| B | $\mathbf{1 8}$ | $\mathbf{3 0}$ | $\mathbf{2 4}$ | $\mathbf{2 5}$ |
| C | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{1 5}$ | $\mathbf{8}$ |
| D | $\mathbf{1 0}$ | $\mathbf{6}$ | $\mathbf{1 2}$ | $\mathbf{1 6}$ |
| E | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{1 4}$ | $\mathbf{1 2}$ |

443 Calculate the Paasche's price and quantity index for the following index:

| Commodity | 2019 |  | $\mathbf{2 0 2 0}$ |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | Expenditure | Price | Expenditure |
| A | $\mathbf{8}$ | $\mathbf{8 0}$ | $\mathbf{1 0}$ | $\mathbf{1 2 0}$ |
| B | $\mathbf{1 0}$ | $\mathbf{1 2 0}$ | $\mathbf{1 2}$ | $\mathbf{9 6}$ |
| C | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{5}$ | $\mathbf{5 0}$ |
| D | $\mathbf{4}$ | $\mathbf{5 6}$ | $\mathbf{3}$ | $\mathbf{6 0}$ |
| E | $\mathbf{2 0}$ | $\mathbf{1 0 0}$ | $\mathbf{2 5}$ | $\mathbf{1 5 0}$ |

444 Calculate Laspeyre's price and quantity index numbers:

| Commodity | 2009 |  |  | 2010 |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  | Price | Quantity | Price | Quantity |  |
| A | $\mathbf{1 0}$ | $\mathbf{4 9}$ | $\mathbf{1 2}$ | $\mathbf{5 0}$ |  |
| B | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ |  |
| C | $\mathbf{1 8}$ | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{1 2}$ |  |
| D | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{2}$ |  |
| E | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{1 4}$ | $\mathbf{1 2}$ |  |

445 Calculate Fisher's ideal index number from the data given below:

| Commodity | 2009 |  | 2010 |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Price | Quantity | Price | Quantity |
| A | $\mathbf{1 0}$ | $\mathbf{4 9}$ | $\mathbf{1 2}$ | $\mathbf{5 0}$ |
| B | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{1 5}$ | $\mathbf{2 0}$ |
| C | $\mathbf{1 8}$ | $\mathbf{1 0}$ | $\mathbf{2 0}$ | $\mathbf{1 2}$ |
| D | $\mathbf{2 0}$ | $\mathbf{5}$ | $\mathbf{4 0}$ | $\mathbf{2}$ |

446 Fit a trend line by the method of semi-averages.

| Year | 2006 | 2007 | 2008 | 2009 | 2010 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Profits | 28.0 | 29.4 | $\mathbf{3 0 . 2}$ | 27.0 | $\mathbf{3 2 . 5}$ |

447 Estimate the trend values using the data given below by taking four-yearly
moving average and forecast the value for the year 2015 :

| Yea | $\mathbf{1 9}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ | $\mathbf{2 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| rs | $\mathbf{9 9}$ | $\mathbf{0 0}$ | $\mathbf{0 1}$ | $\mathbf{0 2}$ | $\mathbf{0 3}$ | $\mathbf{0 4}$ | $\mathbf{0 5}$ | $\mathbf{0 6}$ | $\mathbf{0 7}$ | $\mathbf{0 8}$ | $\mathbf{0 9}$ | $\mathbf{1 0}$ | $\mathbf{1 1}$ | $\mathbf{1 2}$ |
| Valu | $\mathbf{1 2}$ | $\mathbf{2 5}$ | $\mathbf{3 9}$ | $\mathbf{5 4}$ | $\mathbf{7 0}$ | $\mathbf{8 7}$ | $\mathbf{1 0}$ | $\mathbf{1 0}$ | $\mathbf{8 2}$ | $\mathbf{6 5}$ | $\mathbf{4 9}$ | $\mathbf{3 4}$ | $\mathbf{2 0}$ | $\mathbf{7}$ |
| es |  |  |  |  |  |  | $\mathbf{5}$ | $\mathbf{0}$ |  |  |  |  |  |  |

448 Fit a trend line by using least square with the following data and find sales
for the year 2005:

| Years | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sales | 6.7 | 5.3 | 4.3 | 6.1 | 5.6 | 7.9 | 6.1 |

249 Briefly discuss the data entry method in Excel or SPSS software. 10
250 Briefly discuss the diagram insert steps in Excel.
11. Calculate mean, median and mode of the following distribution.

| C.I | $20-30$ | $30-40$ | $40-50$ | $50-60$ | $60-70$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 8 | 26 | 30 | 20 | 16 |

12. From the following data obtain the SRF equation and fit a line.

| $\mathbf{x}$ | 6 | 2 | 10 | 4 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{y}$ | 9 | 11 | 5 | 8 | 7 |

13. Fit one way ANOVA for the following data (Table value 6.94)

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| :---: | :---: | :---: |
| 5 | 5 | 6 |
| 4 | 5 | 6 |
| 5 | 4 | 5 |

14. Calculate Fisher's ideal index for the following data.

| $\mathrm{P}_{0}$ | $Q_{0}$ | $\mathrm{P}_{1}$ | $Q_{1}$ |
| :---: | :---: | :---: | :---: |
| 8 | 80 | 10 | 120 |
| 10 | 120 | 12 | 96 |
| 5 | 40 | 5 | 50 |
| 4 | 56 | 3 | 60 |
| 20 | 100 | 25 | 150 |

## St. Philomena's College (Autonomous) Mysore III Semester M. A. Final Examination December 2019 <br> Subject: ECONOMICS <br> Title: COMPUTER APPLICATION FOR ECONOMC ANALYSIS (SC)

Time: 03 Hours
Max Marks:70

## Answer any FIVE of the following:

$5 \times 2=10$
$6 \times 5=30$

## Answer any SIX of the following:

2. Explain the process of file creation in M.S. Excel.
3. Explain any 5 short cut keys.
4. Write a note on data management.
5. Calculate range and it's co-efficient of the following series.

| SL. No | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 9.5 | 10.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Value | 7 | 1 | 3 | 5 | 4 | 9 | 8 | 11 | 4 |

6. Use the rank correlation co-efficient for the following series.

| $\mathbf{x}$ | 1 | 6 | 5 | 10 | 3 | 2 | 4 | 9 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{y}$ | 3 | 5 | 8 | 4 | 7 | 10 | 2 | 1 | 6 | 9 |

7. Calculate the 3 yearly moving averages of the sales figure given below and draw trend line and forecast for the year 2019

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sale | 63 | 70 | 74 | 82 | 90 | 95 | 102 |

8. Write a note on Index number.
9. Explain the steps in hypothesis testing.

PART - C

## Answer THREE of the following.

10. Explain different types of files.
11. Calculate mean, median and mode of the following distribution.

| C.I | $20-30$ | $30-40$ | $40-50$ | $50-60$ | $60-70$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 8 | 26 | 30 | 20 | 16 |

12. From the following data obtain the SRF equation and fit a line.

| $\mathbf{x}$ | 6 | 2 | 10 | 4 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{y}$ | 9 | 11 | 5 | 8 | 7 |

13. Fit one way ANOVA for the following data (Table value 6.94)

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| :---: | :---: | :---: |
| 5 | 5 | 6 |
| 4 | 5 | 6 |
| 5 | 4 | 5 |

14. Calculate Fisher's ideal index for the following data.

| $\mathrm{P}_{0}$ | $Q_{0}$ | $\mathrm{P}_{1}$ | $Q_{1}$ |
| :---: | :---: | :---: | :---: |
| 8 | 80 | 10 | 120 |
| 10 | 120 | 12 | 96 |
| 5 | 40 | 5 | 50 |
| 4 | 56 | 3 | 60 |
| 20 | 100 | 25 | 150 |

