Department of Commerce
Osmania University
Computer Lab – Practical Question Bank
B.Com (Finance)
Semester III
Business Statistics - I

Time: 60 Minutes

Record	**: 10**
Skill Test	**: 15**
Viva - Voce	**: 10**
Total Marks	**: 35**

Use Microsoft Excel to solve the following:

1. Define the following:
   a. Workbook, Worksheet
   b. Cells
   c. Number of rows and columns in a worksheet
   d. Excel File Extensions
   f. Relative reference, absolute reference

2. Present the Tabs, Groups and their functions in a tabular form in excel.
   a. File
   b. Home
   c. Insert
   d. Page Layout
   e. Formulas
   f. Data
   g. Review
   h. View

3. Copy the table created in **Question 2** into a new worksheet, then perform the following steps:
   a. Change the font style to a new font of your choice.
   b. Increase the font size to **14**.
   c. Insert a new row above the table, merge the cells across the table width, and type an appropriate heading for the table. Make the font bold and Italic.
   d. Fill the merged heading cell with **Blue** color and change the font color to **White**.
   e. Apply borders to the entire table. Use **thick borders** for each tab's name.

4. Using the table created in **Question 3**, adjust the alignment of the text as follows:
   a. Align all text in the first column (**Tab Name**) to **Center** horizontally and **Middle** vertically.
   `b. Align all text in the second column (**Group**) to **Left** horizontally and **Top** vertically.

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c. Align all text in the third column (**Main Functions**) to **Justify**.
d. Merge and centre the heading row (if not already done).
e. Adjust the row height so that all text is clearly visible without cutting off.

5. Create a data set in a new worksheet with the following columns:
S.No., Name of the Student, Data of Birth, Age as on Today, Stream, College
Instructions:
a. Enter details for 10 students of your choice
b. Ensure DOB is entered in dd-mm-yyyy format
c, Keep the Age column blank for now
d. Set the column headings in bold and fill them with light gray back ground colour
e. Apply borders to the table.

6. Copy the table created in Question 5 in a new sheet. Using the shortcut keys of keyboard, perform the following:
a. Make the student name column bold and italic
b. Increase the font size of DOB to 14.
c. Fill each column with different colour of your choice with short cut keys.
d. Create all borders for the table.
e. Create a thick border with each of the column.

7. Copy the table created in Question 5 in a new sheet.
a. Insert a row above, Merge the cells and give heading as Student Details -2025
b. Adjust the column width to the contents.
c. Adjust the row width to contents.
d. Increase Row height to 25 and column width to 10
e. Hide Age column , save the file.

8. Copy the table created in Question 5 in a new sheet.
a. Mention the different data types and where are they aligned in the cell.
b. Align the text column to the centre.
c. Wrap the College Name and location.
d. Insert a column to the left of the table and merge all 11 rows. Give the title of the table of Student details. Align it vertically in the column created.
e. Align each of the column headings to angle clockwise direction.

9. Copy the table created in Question 5 in three different sheets.
a. Rename the sheet as "Student Details 1", "Student Details 2", "Student Details 3"
b. Give Tab colour as Green., Yellow and pink to all the three tabs
c. Delete the sheet student details-2 from the workbook.
d. Create a copy of student details 3 and name it as "Student Details 4"
e. Save the file as "Student details" in your system.

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10. Create a table with 15 rows having the following details.
A sample is given

S.No.	Name of the student	Sem I					
		ENG	II LANG	BOM	FA-1	DDDM	TOTAL MARKS
1	Ravi Kiran S	67	88	65	66	94	380
2	Sreeja M	89	72	97	68	88	414

a. Align all details to the centre of the cell.
b. Bold the headings using short cut key.
c. Increase the font size to 16 by using short cut key
d. Use italics to the students names.
e. Give colour to the columns.

11. a) Generate a sample of 500 observations ranging from 100 to 500.
b) Check for the duplicates in the data and remove the duplicates.
c) Arrange the data in the ascending order
d) Arrange the data in the descending order
e) How many observations are above 400.
f) How many observations are between 200 and 300
g) How many observations are below 300

12. a) From the data given in Q11,
Create a sample of 50 from 500 observations.
b) Create a bins (upper limits of each of the class intervals)
c) Create a Histogram using data analysis tool pack.
d) Create a Pareto chart
Create cumulative percentage table
e) Create the chart.

13. Create a data set of 100 observations, with gender (Male and Female) and Major elective (Accounting, Information systems, and Marketing).
a. Tally the data into a contingency table where two rows represent the gender categories and three columns represent the academic major electives.
b. Construct contingency table based on percentages of all 100 student responses, based on row percentages and based on column percentages.

14. The below is the summary of ATM Transactions.

ATM Transactions	
Cause	Frequency
ATM Mal functions	82
ATM out of cash	68
Invalid amount requested	43
Lack of funds in account	85
Card unreadable	234

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Wrapped card jammed	365
Wrong Key stroke	123
Wrong Pin	55

a. Construct a bar chart and give your inferences.
b. Format the chart into 3D format.
c. Add chart title and axis titles
d. Change the background colour of the chart.
e. Include data labels
f. Include data table.

15. From the table given below

Cell Phone Activity	Percentage of Usage
Banking	2%
Checking Date and time	8%
Listening to Music	12%
Playing games	4%
Reading	3%
Sending Emails	9%
Social Media	18%
Surfing the internet	7%
Taking photos	3%
Talking	6%
Texting	18%
You tube	2%
Other	8%

a. Construct a bar chart.
b. Construct a pie chart
c. Construct a doughnut chart
d. Construct a pareto chart
e. Which graphical method do you think is the best for portraying these data?
f. What conclusions can you reach concerning how college students spend their time using cell phones?

16. From the data given below

229	119	142	234	233	180	121	229	248	222
229	104	134	203	220	207	186	237	249	229
175	245	211	165	98	109	195	226	200	143
243	210	124	165	150	239	130	205	223	220
186	168	179	173	207	212	126	221	204	187

a. Construct a histogram and a percentage polygon.
b. Construct a cumulative percentage polygon.
c. Around what amount does the monthly electricity cost

17. Draw the bar charts for the following data

(a)		(b)		(c)	
Time Series Data		Geographical Data		Qualitative Data	
Year	Production of A (Million Rs.)	Country	Imports (Million Rs.)	Products	Sale (Million Rs.)
2010	9	A	16	Smart Phones	846.24
2011	8	B	20	Soft Drinks	938.54
2012	7	C	22	Fast food	735
2013	5	D	24	Beauty Products	1025
2014	9.5	E	18	Shoes	989.2
2015	6	F	17	Lap tops	1034.56
2016	10	G	25	Leather goods	848.25
2017	5.5	H	21	Furniture	1046.25

18. The following shows the results of B.Com students of a University for the last five years. Represent the same by a suitable diagram both year wise and Division wise. Give your inferences.

	Exam Results of B.Com Students			
Year	1st Div	2nd Div	3rd Div	Failed
2020	400	800	450	700
2021	600	650	800	300
2022	450	900	1060	150
2023	700	1200	780	400
2024	850	950	560	225

19. Represent the following in a suitable bar diagrams independently and both the data together. Give your inferences.

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Profits	25	-15	-25	30	-45	50	-20	60	84	68

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Balance of Payme	52	-65	-75	10	100	-30	20	-40	60	80

20. The following table shows the number of students admitted in different Faculties of University.

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Year	Number of Sstudents		
	Humanities	Sciences	Commerce
2013	2810	890	1540
2014	3540	1360	1325
2015	4300	1660	1690
2016	5364	2017	2010
2017	6595	2752	2450
2018	8430	3640	2200
2019	7650	4320	2540
2020	8000	4898	2800

a. Represent the data by suitable subdivided bar diagram. Give your inferences.
b. Also present the data in percentage bar diagram.

21. The following table shows the marks obtained by a group of candidates in a written test for a job.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
No. of Students	8	18	23	37	47	26	14	10	6	2

a. Construct a frequency polygon curve.
b. Construct Greater than cumulative frequency curve.
c. Construct Less than Cumulative Frequency Curve.
d. Find the median of the data.

22. From the table given below:

2295	9256	5508	5123	8074	5452	4479	5179	5399	7043
5449	1796	2718	8462	7458	2354	5944	1243	7650	2404
5339	8760	1338	9446	8036	5912	6596	6231	3360	2913
9983	3728	3742	9284	5967	1924	4209	5902	9082	1614
1352	5920	7332	1772	4672	9634	1696	1313	5945	2143

Find the following using Excel formulae:
a. Mean
b. Median
c. Mode
d. Geometric mean
e. Harmonic mean

24. From the following data,

Group A	123	147	70	105	90	50	88	119	84	121	106	87
Group B	131	59	54	59	96	34	108	107	117			
Group C	536	949	751	624	582	952	864					

Find:
a. The Mean of the Group A observations
b. The Mean of the Group B observations

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c. The Mean of the Group C observations
d. The Combined mean of the groups A and B
e. The Combined mean of all the three groups.

25. Comment on the performance of the students of the three universities given below based on simple and weighted arithmetic mean.

Course/University	Osmania University		Andhra University		Nagarjuna University	
	Pass%	No. of Students in '000s)	Pass%	No. of Students in '000s)	Pass%	No. of Students in '000s)
Engineering	65	3	70	3	65	4
B Pharmacy	80	2	75	1	76	2
Technology	75	3	80	3	84	2
Medicine	55	3	65	2	65	2
Ma/M.Com	80	4	75	3	75	5
Ba/B.Com	85	5	75	3	75	5

26. Calculate the Mode of the following data mathematically and graphically.

Income	100-200	200-300	300-400	400-500	500-600	600-700
No. of Families	10	23	50	26	40	36

27. Find the median graphically using (i) Only one Ogive curve (ii) both the Ogive curves and verify numerically.

X	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F	4	13	21	44	33	22	7

28. Find the median graphically using (i) Only one Ogive curve (ii) both the Ogive curves and verify numerically.

X	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	12	20	35	40	55	32	24	18

29. From the following data

Cl	0-20	20-40	40-60	60-80	80-100	100-120	120-140
F	14	27	35	56	48	32	20

30. For the following data

194	196	173	197	63	159	97	181	52	79
177	139	110	167	140	57	107	185	53	67
178	165	111	51	144	153	177	114	185	55
98	72	153	71	153	62	82	175	109	125
168	166	144	61	57	93	186	110	117	156

Find:

a. Find 5th Decile.
b. Find 8th Decile
c. Find 3rd Decile
d. Find 2nd Decile
e. Find 9th Decile

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31. For the data given in Q28,
    a. Find 30th Percentile
    b. Find 50th Percentile
    c. Find 82nd Percentile
    d. Find 45th Percentile
    e. Find 28th Percentile

32. Find the range and coefficient of Range of the following data.

52	439	302	390	478	212
490	190	223	348	454	286
496	372	461	202	431	59
303	56	263	288	281	294

33. Find the Range and Coefficient range of the following data.

86	81	75	61	55
59	55	27	87	76
47	93	87	84	95
92	99	57	27	49
34	70	99	34	46
81	23	47	75	100
37	65	61	37	47
62	63	54	95	86

34. For the following data

194	196	173	197	63	159	97	181	52	79
177	139	110	167	140	57	107	185	53	67
178	165	111	51	144	153	177	114	185	55
98	72	153	71	153	62	82	175	109	125
168	166	144	61	57	93	186	110	117	156

Find:
    f. First Quartile
    g. Second Quartile
    h. Third Quartile
    i. Inter quartile range
    j. Quartile Deviation
    k. Coefficient of Quartile Deviation

35. From the table given in Q34, convert the table into class interval of length 10. Find the frequencies for each of the class intervals. Also find:
    a. First Quartile
    b. Second Quartile

    0Third Quartile
    c. Inter quartile range
    d. Quartile Deviation

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e. Coefficient of Quartile Deviation

36. From the table given above, Find:

a. Standard deviation
b. Variance
c. Coefficient of standard deviation
d. Coefficient of Variation

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0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
12	15	18	20	30	25	22	18	10	8

Calculate the following:

a. Range
b. Standard Deviation
c. Variance
d. Coefficient of Standard Deviation
e. Coefficient of Variation

38. From the following data

86	81	75	61	55
59	55	27	87	76
47	93	87	84	95
92	99	57	27	49
34	70	99	34	46
81	23	47	75	100
37	65	61	37	47
62	63	54	95	86

Find :

a. Standard Deviation
b. Coefficient of Variation
c. Skewness
d. Kurtosis
e. Give your inferences

39. Draw a Lorenz Curve from the following data and give your inferences.

Salaries In Rs. '000	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Factory A	10	15	35	20	15	10	5
Factory B	8	15	20	45	38	25	10

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40. From the following data

Factory A						Factory B				
367	307	122	204	132		164	328	359	317	394
62	333	93	447	285		414	135	123	382	400
93	35	215	187	382		266	300	296	366	290
396	419	163	221	70		258	250	125	257	247
86	247	254	363	380		409	302	110	351	67
323	185	47	86	49						

a. Compute Skewness of Factory A and Factory B.
b. Compute Kurtosis for Factory A and Factory B
c. Give your inferences based on skewness values
d. Give your inferences based on Kurtosis values.

41. Plot the following data on a graph

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
Income (In L)	100	103	105	102	112	119	120	125	130
Exp. In L	90	92	94	96	93	95	100	105	108

42. Find the correlation of

X	22	25	28	36	48	42	57	23
Y	18	20	21	25	24	40	35	20

Give your inferences about the data.

43. For the data given in Q42, Draw scatter diagram. Give Chart title, axis titles, format the graph.

44. Find Karl Pearson's Coefficient of Correlation for the series of marks secured by 10 students in a class test in Mathematics and Statistics.

Marks in Mathematics	45	70	65	30	90	40	50	75	98	85	60
Marks in Statistics	35	90	70	80	95	40	60	80	80	65	60

45. Ten recruits were subjected to a selection test to ascertain their suitability for a training program. After the training they were subjected to proficiency test. Both test scores are as follows:

Recruit's No.	1	2	3	4	5	6	7	8	9	10
Selection Test Score	58	52	44	52	47	76	65	60	63	49
Proficiency test score	55	46	45	48	60	43	80	58	50	77

Calculate Pearson' s Coefficient of Correlation and comment on the value.

46. Find Spearman's Rank Correlation Coefficient and comment on the value.

Contestent	1	2	3	4	5	6	7	8	9	10
Rank X	9	8	5	10	3	7	4	6	1	2
Rank Y	7	9	8	5	6	10	3	2	4	1

47. Given the following marks in competition by two judges, calculate rank correlation coefficient and comment on the score obtained.

Judge A	56	54	51	55	35	37	38	42	44	46
Judge B	55	52	50	46	40	32	39	42	41	31

48. The following are the percentage figures of expenditure on clothing and entertainment by an average working-class family during the last 10 years:

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Exp. On Clothing	24	27	31	32	20	25	33	30	28	22
Exp. On Entertainment	11	8	5	3	13	10	2	7	9	2

Calculate Rank Correlation Coefficient and Karl Pearson Coefficient of Correlation.

49. The following are the ranks given by 3 judges for 10 competitors. Find the correlation between the ranks given by the judges and give which pair of ranks given by judges are similar.

Judge A	1	2	3	4	5	6	7	8	9	10
Judge B	2	1	4	5	8	7	3	6	10	9
Judge C	7	8	6	5	1	3	4	2	10	9

50. Given the following data , you are required to calculate (i) Karl Pearson's Product Movement Correlation (ii) Spearman's Rank correlation (iii) Concurrent deviations Correlation.

X	101	108	105	145	153	186	202	207	204	198	200	208	232	228	222
Y	117	97	102	118	205	196	177	168	177	170	165	170	175	180	190