07/01/22

**CTIS 186 Business Computer Applications**

**Final Exam**

1. Open ExcelExam and save it as **ExcelExamLastFirst** (i.e. with your surname and name) (**1** Point)
2. Name Sheet 1 as **ExamData**. (**1** Point)
3. Apply the following to the whole current sheet: Calibri, 12, column width 25, row height 18. Remove all fills. (**2** Points)
4. Create a copy of ExamData worksheet at the end. Name it **Table**. (**2** Points)

Go back to ExamData Sheet:

1. Insert 3 rows on the top. Label B1 as **Year**, C1 as **World Renewable Energy Consumption (in Exajoules)**, and D1 as **World Population (in Billions)**. (**3** Points)
2. Insert a column following C column. Label D1 as **Percentage Change 1** (Center, Bold, Yellow Fill). (**1** Point)
3. Label F1 as **Percentage Change 2** (Center, Bold, Light Green Fill). (**1** Point)
4. Label G1 as **Consumption / Population (in Exajoules / Billion)**. (**1** Point)
5. Label H1 as **Percentage Change 3** (Center, Bold, Light Blue Fill). (**1** Point)
6. Mark B1, C1, D1, E1, F1, G1 and H1 as Bold with a font size of 14. (**2** Points)
7. Merge B1, B2 and B3 cells and wrap text with center alignment horizontally and vertically. Do the same thing for C1, C2 and C3, D1, D2 and D3, E1, E2 and E3, F1, F2 and F3, G1, G2 and G3 as well as for H1, H2 and H3. (**4** points)
8. Format B5:H25 as centered, C5:C25, E5:E25 and G5:G25 as numbers with 2 decimals. Finally, format D5:D25, F5:F25 and H5:H25 as percentages with 1 decimal. (**3** Points)
9. Fill G5:G25 as to reflect the consumption of renewable energy per population for each year. Make this range right-aligned (bold). (**3** Points)
10. Percentage change is calculated as (New Number – Old Number) / Old Number. Fill appropriately D6:D25 (Yellow Fill); F6:F25 (Light Green Fill); and H6:H25 (Light Blue Fill). (**3** Points)
11. Label B27 as **Average**, B28 as **Standard Deviation** and B29 as **Range** (i.e. difference between Maximum and Minimum values). Format B27:B29 as bold and right aligned. (**2** Points)
12. Calculate the average, standard deviation and range of each column appropriately. Format the answers as bold centered with 3 decimals. (**4** Points)
13. Enter the following table in K5:L14 range: (**2** Points)



1. Label I1 as **Description** (Bold, 14, centered). Merge I1, I2 and I3 as in step k. Use VLOOKUP function to fill cells I5:I25 (consider Consumption / Population column) bearing in mind the table entered in step q. Center the filled cells. (**5** Points)
2. Format B5:I25 range with thin lines from the inside and a thicker line as a border. Do the same thing for B1:I3 as well as for B27:H29 range. (**2** Points)
3. Hide column A. (**1** point)
4. Create a copy of Table after ExamData. Name it **Chart**. (**2** Points)

Now consider Chart sheet:

1. Format range C2:D22 as numbers with 2 decimals. Center the range B2:D22. Decrease A, B, C, D and E column widths to 10. (**3** Points)
2. Prepare a line (with markers) chart showing the World’s population change as well as world renewable energy consumption across years. Resize the line chart as to fit entirely F2:J22 range. Make sure to label appropriately x-axis, y-axis as well as to have a title. Rescale chart so that y-axis crosses the x-axis at 2. (**5** Points)
3. In C24, create a column sparkline for C2:C22 range. (**2** Points)
4. In D24, create a line sparkline for D2:D22 range. (**2** points)

Now consider Table sheet.

1. Delete A column. Center all entries. Create a table for the range A2:C22. Change the table name to **Sustainability**. Format B2:C23 range as number with 3 decimals. (**4** Points)
2. Change Sustainability style to Table Style Medium 23. (**2** Points)
3. Consider Column3. By adding a Row Total, calculate the standard deviation as a percentage with 2 decimals. (**3** Points)
4. Apply conditional formatting on Sustainability so that cells whose values between 7.50 and 15 are marked with blue color, red outline boarder and italic. (**3** Points)
5. Consider ExamData sheet. Select B1:L29 as your print area. Go to print preview, change the orientation to landscape. Decrease all margins to the extent possible and fit to 1 wide by 1 tall page. Center the range horizontally. Insert the header: **CTIS 186 Final Exam** and the footer: **Page 1** (Centered, Bold, Arial Narrow, 12, Red). (**3** Points)
6. Consider Chart sheet. Select B2:J24 as your print area. Go to print preview, change the orientation to landscape. Decrease all margins to the extent possible and fit to 1 wide by 1 tall page. Center the range horizontally and vertically. Insert the header (in the middle): **CTIS 186 Final Exam** and the footer: **Page 2** (Right Aligned, Bold, Algerian, 12, Green). (**3** Points)
7. Consider Table sheet. Select A2:J24 as your print area. Go to print preview. Decrease all margins to the extent possible and scale the printout area to 125 %. Center the range horizontally. Insert the header: **CTIS 186 Final Exam** and the footer: **Page 3** (Left aligned, Bold, Book Antiqua, 12, Purple). (**3** Points)
8. Save your Excel file and submit it as indicated by your Senior Lecturer. (**1** Point)

**GOOD LUCK!**