Question 1:

1. Formatting Spread Sheet

Create a spreadsheet like the one below. Enter all the numbers.

- ○ Change the formatting of the numbers to dollars.
- ○ Make the grid around the cells visible.
- ○ Insert the title "Monthly Budget" and center and merge it.
- ○ Total the expenses at the bottom of each month.
- ○ Calculate the average for each row using formula
- ○ Center and bold the headings (months and average)

	A	B	C	D	E	F	G	H
1		January	February	March	April	May	June	Average
2	House Payment	750	750	750	750	750	750	
3	Charity	200	200	200	200	200	200	
4	Groceries	300	425	425	425	425	425	
5	Car Payment	300	300	300	300	300	300	
6	Gasoline	45	45	45	45	45	45	
7	Clothing	100	75	75	75	75	75	
8	Utilities	95	85	85	85	85	85	
9	Total							
10	Income							
11								

Solution :

○ **Change the formatting of the numbers to dollars.**

Steps: Select the Cells to format ->click on home menu-> click on down arrow in the number format box->choose the currency option->select dollar symbol from the symbol list

	January	February	March	April	May	June	Average
House Payment	$750	$750	$750	$750	$750	$750	
Charity	$200	$200	$200	$200	$200	$200	
Groceries	$300	$425	$425	$425	$425	$425	
Car Payment	$300	$300	$300	$300	$300	$300	
Gasoline	$45	$45	$45	$45	$45	$45	
Clothing	$100	$75	$75	$75	$75	$75	
Utilities	$95	$85	$85	$85	$85	$85	
Total							
Income							

○ **Make the grid around the cells visible.**

Steps: select view tab menu->select guidelines ->put check box to true

	January	February	March	April	May	June	Average
House Payment	$750	$750	$750	$750	$750	$750	
Charity	$200	$200	$200	$200	$200	$200	
Groceries	$300	$425	$425	$425	$425	$425	
Car Payment	$300	$300	$300	$300	$300	$300	
Gasoline	$45	$45	$45	$45	$45	$45	
Clothing	$100	$75	$75	$75	$75	$75	
Utilities	$95	$85	$85	$85	$85	$85	
Total							
Income							

o Insert the title "Monthly Budget" and center and merge it.

Steps: a) insert new row first click on home tab menu->insert->insert sheet rows

b) select the cells you want to merge->click on home tab->merge & center->type 'Monthly Budget'

Monthly Budget

	January	February	March	April	May	June	Average
House Payment	$750	$750	$750	$750	$750	$750	
Charity	$200	$200	$200	$200	$200	$200	
Groceries	$300	$425	$425	$425	$425	$425	
Car Payment	$300	$300	$300	$300	$300	$300	
Gasoline	$45	$45	$45	$45	$45	$45	
Clothing	$100	$75	$75	$75	$75	$75	
Utilities	$95	$85	$85	$85	$85	$85	
Total							
Income							

o Total the expenses at the bottom of each month.

Steps:Select cells of total in the corresponding column(eg January)->home tab menu->autosum ->select the cells of the particular column you want to sum

Monthly Budget

	January	February	March	April	May	June	Average
House Payment	$750	$750	$750	$750	$750	$750	
Charity	$200	$200	$200	$200	$200	$200	
Groceries	$300	$425	$425	$425	$425	$425	
Car Payment	$300	$300	$300	$300	$300	$300	
Gasoline	$45	$45	$45	$45	$45	$45	
Clothing	$100	$75	$75	$75	$75	$75	
Utilities	$95	$85	$85	$85	$85	$85	
Total	$1,790	$1,880	$1,880	$1,880	$1,880	$1,880	
Income							

o Calculate the average for each row using formula

Step: a)Select the cell we want to find the average->enter the formula function =AVERAGE(select range of cells) the press enter key

b)Drag this function to below cells also to find the average

Monthly Budget

	January	February	March	April	May	June	Average
House Payment	$750	$750	$750	$750	$750	$750	$750
Charity	$200	$200	$200	$200	$200	$200	$200
Groceries	$300	$425	$425	$425	$425	$425	$404
Car Payment	$300	$300	$300	$300	$300	$300	$300
Gasoline	$45	$45	$45	$45	$45	$45	$45
Clothing	$100	$75	$75	$75	$75	$75	$79
Utilities	$95	$85	$85	$85	$85	$85	$87
Total	$1,790	$1,880	$1,880	$1,880	$1,880	$1,880	$1,865
Income							

o Center and bold the headings (months and average)

Steps : select the cells to format->home tab menu->click on B button->click on center button

Monthly Budget

	January	**February**	**March**	**April**	**May**	**June**	**Average**
House Payment	$750	$750	$750	$750	$750	$750	$750
Charity	$200	$200	$200	$200	$200	$200	$200
Groceries	$300	$425	$425	$425	$425	$425	$404
Car Payment	$300	$300	$300	$300	$300	$300	$300
Gasoline	$45	$45	$45	$45	$45	$45	$45
Clothing	$100	$75	$75	$75	$75	$75	$79
Utilities	$95	$85	$85	$85	$85	$85	$87
Total	$1,790	$1,880	$1,880	$1,880	$1,880	$1,880	$1,865
Income							

Question 2:

2. **Chart Creation**

   The following table shows the number of students in different departments of a university.

Year	Humanities	Science	Commerce
2015	2890	1843	564
2016	3542	2214	798
2017	4548	2871	1256
2018	5238	3167	1762
2019	5884	3654	2145

a) Represent the total number of students for different years by bar diagram
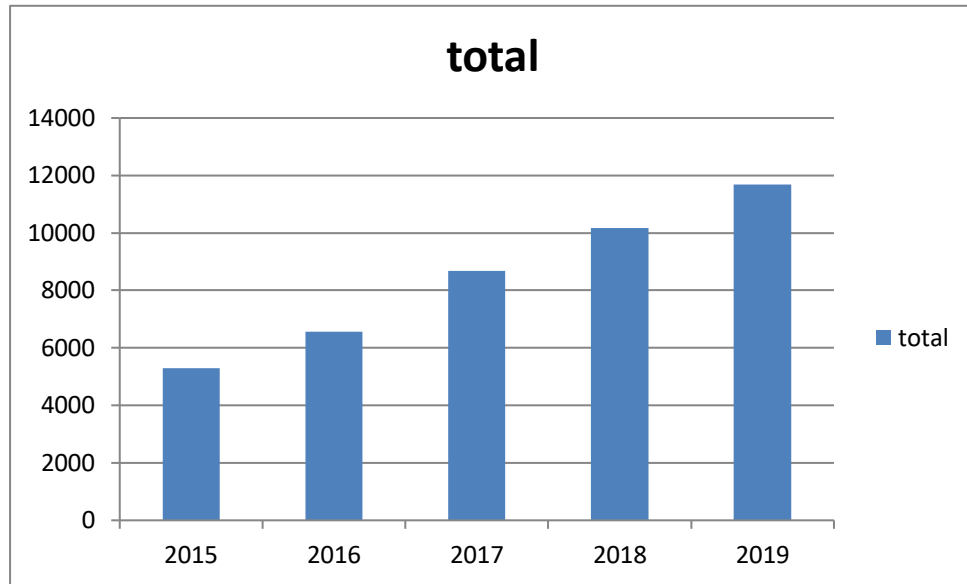
b) Represent the data as multiple bar diagram

Solution:

a) Represent the total number of students for different years by bar diagram

Steps:

a) Find the total number of students in each year
   Create a new column with title as total->add number of students in humanities, science and commerce in to total column->select the cells in the total column->insert tab->column button->click on horizontal axis->write click ->selectdata->Click edit->select cells in the year

Year	Humanities	Science	Commerce
2015	2890	1843	564
2016	3542	2214	798
2017	4548	2871	1256
2018	5238	3167	1762
2019	5884	3654	2145

total

B)Represent the data as multiple bar diagram

select the cells in the humanities,science and commerce columns->insert tab->column button->click on horizontal axis->write click ->selectdata->Click edit->select cells in the year .
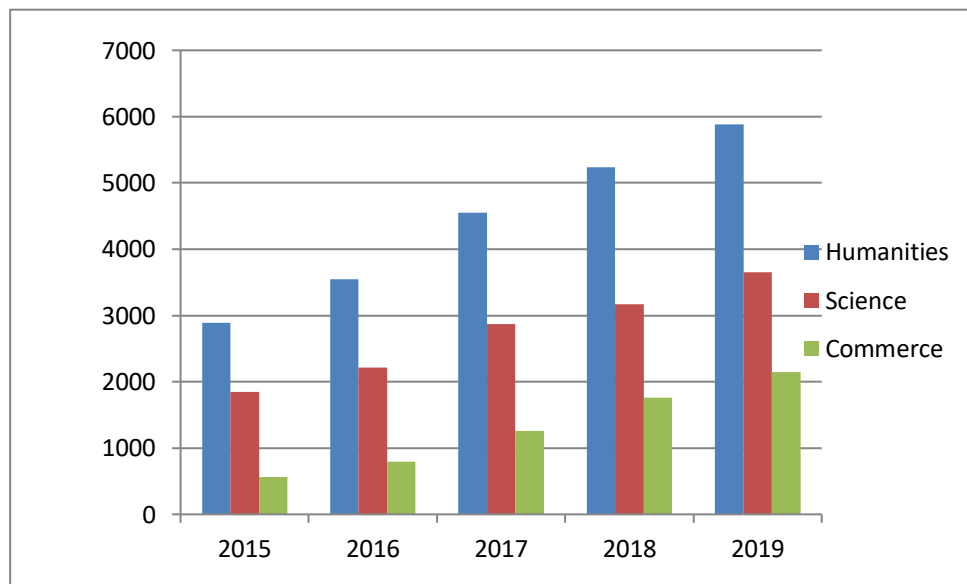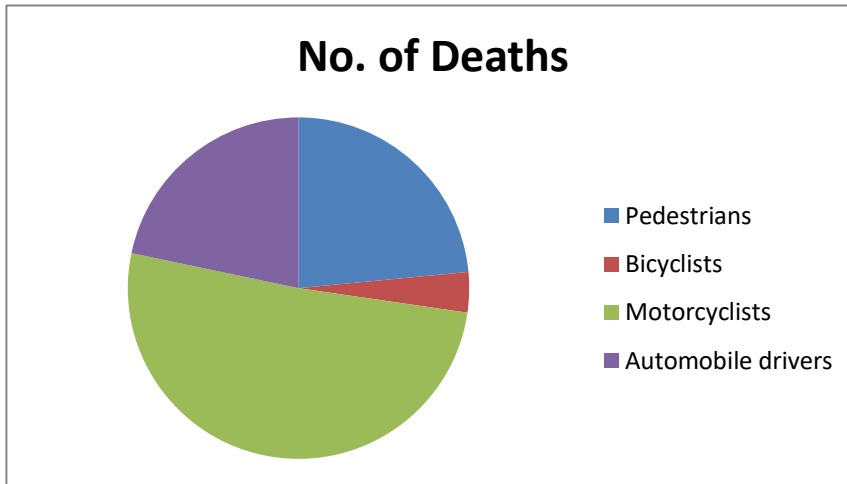
Question 3:

1. The following table gives the number of deaths on Indian roads in 2019 for individuals in various classifications. Express the data set in a pie chart

Classifications	Pedestrians	Bicyclists	Motorcyclists	Automobile drivers
No. of Deaths	25858	4196	56136	23900

Solution:

Select the cells in the table->click on insert tab menu->click on Pie button

Question 4:

1. LOOKUP FUNCTION

Create a look up table with the following details
Student id, name, class, course, % of attendance and Grade

Student ID	Name	Class	Course	% of Att.	Grade
A1	NABEEL	ECO1	BA ECONO	98	A+
A2	MANU	MAT1	BSc MATHS	100	A+
A3	SAMEER	ECO1	BA ECONO	45	B
A4	SHAAN	PHY2	BSCPHYSICS	67	B+
A5	SACHIN	MAT2	BSc MATHS	34	C
A6	NEYMAR	ENG1	BA ENGLISH	56	B
A7	MESSI	CHEM3	BSc CHEMISTRY	65	B+
A8	KISHAAN	COMP2	BSc CS	35	C+
A9	SIRAJ	ECO1	BA ECONO	67	B+
A10	JADEJA	MATH1	BSc MATHS	12	D

Display the details of a selected student using lookup function.

Student ID	A7
Name	MESSI
Class	CHEM3
Course	BSc CHEMISTRY
% of Att.	65
Grade	B+

SOUTION
STEPS: a)Create the given above with the data-> enter H2- H7 with the data as student id,name, class, course, % of att, grade ->in I2 cell create a list by using data tab menu(datavalidation->allow as list-source as selecting the student id range)
 b)in I3 cell enter the formula   =VLOOKUP(I2,A:B,2,0)
c) in I4 cell enter the formula   =VLOOKUP(I2,A:C,3,0)
d) in I5 cell enter the formula   =VLOOKUP(I2,A:D,4,0)
e) in I6 cell enter the formula   =VLOOKUP(I2,A:E,5,0)
f) in I7 cell enter the formula   =VLOOKUP(I2,A:F,6,0)

Student ID	A7
Name	MESSI
Class	CHEM3
Course	BSc CHEMISTRY
% of Att.	65
Grade	B+

QUESTION 5
3. CONDITIONAL FORMATTING
A table of employee data is given. In order to make it easier to understand, we want
1) Each row to highlight the cell if the basic pay exceeds 26000.
2) Visualize the Gross salary using color variation
3) Shade if the department is 'Purchase'

Emp ID	Emp Name	Date of Joining	Department	Basic Pay	DA	Gross Salary
E1	Akshay	29.07.2020	Purchase	32000		
E2	NASEER	20.04.2021	SALES	4500		
E3	NIHAL	10.10.2019	HR	4500		
E4	SUHAIL	20.12.2021	SALES	5500		
E6	MANOJ	12.12.2018	HR	62000		

[DA = Basic salary + 32% of basic salary
Gross Salary = Basic pay + DA]
Solution :
Calculate DA column by using the formula
DA = 32* BasicPay/100
Calculate Gross salary column by using
Gross Salary = Basic pay + DA

Emp ID	Emp Name	Date of Joining	Department	Basic Pay	DA	Gross Salary
E1	Akshay	29.07.2020	Purchase	32000	10240	42240
E2	NASEER	20.04.2021	SALES	4500	1440	5940
E3	NIHAL	10.10.2019	HR	4500	1440	5940
E4	SUHAIL	20.12.2021	SALES	5500	1760	7260
E6	MANOJ	12.12.2018	HR	62000	19840	81840

1) Each row to highlight the cell if the basic pay exceeds 26000.

Select the data cells->Select home tab menu->click on conditional formatting->click on new rule->click on use formula to determine which cell to format->enter the formula(=$E2>26000) ->click on format->select a color to highlight the row

Emp ID	Emp Name	Date of Joining	Department	Basic Pay	DA	Gross Salary
E1	Akshay	29.07.2020	Purchase	32000	10240	42240
E2	NASEER	20.04.2021	SALES	4500	1440	5940
E3	NIHAL	10.10.2019	HR	4500	1440	5940
E4	SUHAIL	20.12.2021	SALES	5500	1760	7260
E6	MANOJ	12.12.2018	HR	62000	19840	81840

2)Visualize the Gross salary using color variation

Select gross alary column->select home tab menu->click on fill color button->select a color and apply

Emp ID	Emp Name	Date of Joining	Department	Basic Pay	DA	Gross Salary
E1	Akshay	29.07.2020	Purchase	32000	10240	42240
E2	NASEER	20.04.2021	SALES	4500	1440	5940
E3	NIHAL	10.10.2019	HR	4500	1440	5940
E4	SUHAIL	20.12.2021	SALES	5500	1760	7260
E6	MANOJ	12.12.2018	HR	62000	19840	81840

3)Shade if the department is 'Purchase'

Select department column>Select home tab menu->click on conditional formatting->highlight cell rules->click on Equal to->enter Purchase

Emp ID	Emp Name	Date of Joining	Department	Basic Pay	DA	Gross Salary
E1	Akshay	29.07.2020	Purchase	32000	10240	42240
E2	NASEER	20.04.2021	SALES	4500	1440	5940
E3	NIHAL	10.10.2019	HR	4500	1440	5940
E4	SUHAIL	20.12.2021	SALES	5500	1760	7260
E6	MANOJ	12.12.2018	HR	62000	19840	81840

Question 6:

PIVOT TABLE

Product ID	Processor	Specification	Operating System	Unit Price	Status
Pr/App/01	**A16 Bionic Apple**	64 GB RAM, HDD	IOS	99000	Available
Pr/Sams/02	Intel Core i3	8GB RAM, SSD	Ubuntu	38000	Pending
Pr/HP/03	Intel Core i7	64 GB RAM, SSD	Windows 10	78000	Available
Pr/Len/04	Intel Core Duo	8GB RAM, HDD	Windows XP	40000	Pending
Pr/HP/05	Intel Core i3	8GB RAM, SSD	Windows 10	52000	Pending
Pr/App/06	**A15 Bionic Apple**	16 GB RAM, SSD	MAC OS	82000	Available
Pr/HP/07	AMD Ryzen 9 7950X	32 GB RAM, HDD	Windows XP	80000	Available

Create a pivot table for the data given above and find the overall average price of all products that satisfy the following criteria:

- The **Specification** includes **'SSD'**
- The **Operating System** is **Windows**
- The **Processor** is **Intel**

Bring out a table which provides the list of status details (**'Available'** and **'Pending'**) with product ID .

Click on insert tab menu->click on pivot table button->select the table->click on new worksheet->right click on the sheet ->click pivot table option->click on display tab->then click on classic layout->right side tick on all field-> the use filter option in specification , operating system and processor

Sum of Unit Price					
Product ID	**Processor**	**Specification**	**Operating System**	**Status**	**Total**
Pr/HP/03	**Intel Core i7**	64 GB RAM, SSD	**Windows 10**	Available	78000
			Windows 10 Total		**78000**
		64 GB RAM, SSD Total			78000
	Intel Core i7 Total				**78000**
Pr/HP/03 Total					**78000**

Product ID	Processor	Specification	Operating System	Status	Total
Pr/HP/05	**Intel Core i3**	8GB RAM, SSD	**Windows 10**	Pending	52000
			Windows 10 Total		**52000**
		8GB RAM, SSD Total			52000
	Intel Core i3 Total				**52000**
Pr/HP/05 Total					**52000**
Grand Total					**130000**

Details=available

Sum of Unit Price					
Product ID	**Processor**	**Specification**	**Operating System**	**Status**	**Total**
Pr/App/01	**A16 Bionic Apple**	64 GB RAM, HDD	**IOS**	Available	99000
			IOS Total		**99000**
		64 GB RAM, HDD Total			99000
	A16 Bionic Apple Total				**99000**
Pr/App/01 Total					**99000**
Pr/App/06	**A15 Bionic Apple**	16 GB RAM, SSD	**MAC OS**	Available	82000
			MAC OS Total		**82000**
		16 GB RAM, SSD Total			82000
	A15 Bionic Apple Total				**82000**
Pr/App/06 Total					**82000**
Pr/HP/03	**Intel Core i7**	64 GB RAM, SSD	**Windows 10**	Available	78000
			Windows 10 Total		**78000**
		64 GB RAM, SSD Total			78000
	Intel Core i7 Total				**78000**
Pr/HP/03 Total					**78000**
Pr/HP/07	**AMD Ryzen 9 7950X**	32 GB RAM, HDD	**Windows XP**	Available	80000
			Windows XP Total		**80000**
		32 GB RAM, HDD Total			80000
	AMD Ryzen 9 7950X Total				**80000**
Pr/HP/07 Total					**80000**
Grand Total					**339000**

Details=pending

Sum of Unit Price					
Product ID	**Processor**	**Specification**	**Operating System**	**Status**	**Total**
Pr/HP/05	**Intel Core i3**	8GB RAM, SSD	**Windows 10**	Pending	52000
			Windows 10 Total		**52000**
		8GB RAM, SSD Total			52000
	Intel Core i3 Total				**52000**
Pr/HP/05 Total					**52000**
Pr/Len/04	**Intel Core Duo**	8GB RAM, HDD	**Windows XP**	Pending	40000

			Windows XP Total			**40000**
		8GB RAM, HDD Total				40000
	Intel Core Duo Total					**40000**
Pr/Len/04 Total						**40000**
Pr/Sams/02	**Intel Core i3**	8GB RAM, SSD	**Ubuntu**	Pending		38000
			Ubuntu Total			**38000**
		8GB RAM, SSD Total				38000
	Intel Core i3 Total					**38000**
Pr/Sams/02 Total						**38000**
Grand Total						**130000**