

## Summer Holidays Homework (2019-20)

### Subject - Computer

**CLASS VI:** 1. Write five points which human beings can learn from a Computer, 2. List the names of objects which you are not supposed to be taken in the Computer room, 3. Write ten uses of the Computer, 4. Draw / Stick pictures of Hardware and Software.

**CLASS-VII:** 1. Differentiate between Hardware and Software, 2. you must be reading the newspaper daily. Collect the prices of CDs, Keyboards, Printers, CPU, and Mouse from the IT supplement which comes weekly with every newspaper. Make your own price list. 2. Make a scrapbook. Collect pictures of objects which signify speed, storage, accuracy, versatility, diligence and paste them in your scrap book. For example: Speed (Car, Aeroplane), Accuracy (Calculator, Computer)

**CLASS-VIII:** 1. Write a short note and stick pictures for the same: Charles Babbage, Lady Ada Lovelace, Herman Hollerith, Blaise Pascal, 2. Differentiate between RAM and ROM, 3. Write the full form of following acronyms: CD-ROM, ROM, RAM, PROM, EPROM, EEPROM

### CLASS- IX

#### DESIGN A SCRAPBOOK /PRESENTATION ON

#### ROLE OF FAMOUS I.T PERSONALITIES

- (1. Steve Jobs 2. Tim Berners-Lee 3. Bill Gates 4. James Gosling 5. Linus Torvalds 6. Richard Stallman 7. Denis Retsjje 8. Shabber Bhatia 9. N.R Narayan Murthy 10 . Azeem prem jee 11. Vinod Dham 12. Ajay Bhatt 13. Nandan Nilekani 14. Vinod Khosla 15. Charles Babbage )

#### Role of above personalities in the development of IT

### Class-X

#### DESIGN A SCRAPBOOK /PRESENTATION ON

##### 1. Impact of Social Networking on Society

- Founder of famous Social Networking Site – facebook, Twitter, Snapchat , Instagram
- Purpose of each Social Networking Site
- Advantages of social networking
- Disadvantages of Social networking

##### 2. Impact of ICT on Society

- Categorization of ICT- E Business, E- Learning, e- Governance
- E- Business – Amazon, Flipkart , Snapdeal, Jabong , Myntra (Founder, Annual turnover, Product in which deals)
- E-Learning – CBSE, E-pathshala, NCERT, UGC , NIOS , W3C , Moodle (Impact, Advantages, Limitations)
- E-Governance – Income Tax, SSC, Govt. of India, Indian rail, RBI India, NIC (Impact, Advantages, Limitations)

# Summer Holidays Homework (2019-20)

## Subject – INFORMATICS PRACTICES

### Class-XII (Assignment -1)

Q1. Create DataFrame

```

Name Age Department Salary
0 Arpit 62 Surgery 30000
1 Zarina 22 ENT 25000
2 Kareen 32 Surgery 30000
3 Ankita 22 Cardiology 50000
4 Kush 32 Cardiology 60000
    
```

Q2. Create Pivot table for above DataFrame:-

i.

Department	Cardiology	ENT	Surgery
Ankita	50000.0	NaN	NaN
Arpit	NaN	NaN	30000.0
Kush	60000.0	NaN	NaN
Zarina	NaN	25000.0	NaN
kareen	NaN	NaN	30000.0

ii.

Department	Cardiology	ENT	Surgery
Age			
22	2.0	1.0	NaN
32	NaN	NaN	1.0
62	NaN	NaN	1.0

Q4. Total Salary per department.

Q5. Total Salary by both department and name.

Q3. Find the output for the following statements:-

DataFrame-Table

```

NAME gender Quarters Sales
0 karan M Q1 40
1 shipra F Q1 30
2 karan M Q1 42
3 riya F Q2 40
4 jhon M Q2 35
5 shipra F Q2 42
6 nitu F Q2 60
    
```

i. `p=table.pivot_table(index='NAME',columns='Quarters',values='Sales',\naggfunc='count')`  
`print(p)`

ii. `print(p[p.index=='nitu'].Q2.values*10/100)`

Q2.

iii.

	max	min	sum
Department			
Cardiology	60000	50000	110000
ENT	25000	25000	25000
Surgery	30000	30000	60000

iv.

Age	Department	Salary
22	Cardiology	55000
	ENT	25000
32	Surgery	30000
62	Surgery	30000

Q6. Create the pivot table Name as index ,dept as column and salary sum as values:-

i. show kareen information.

ii. find 5% bonus on Kush.

iii. display salary of Ankita and Kush.

Q7: (Sorting)

i. Sort the records by name.

ii. Sort the rows by name in ascending and age in descending.

iii. Sort by index.

### Assignment -2

```

Product Company Qty Price
CPU compaq 40 7000
Mouse compaq 20 500
Keyboard HP 10 500
Printer Epson 2 4800
HD Toshiba 10 2000
Plotter Sony 5 8000
    
```

Q2.

i. Add new column TotalPrice and calculate Qty\*Price for each product.

ii. Add new product Scanner with information(Epson,2,8000).

iii. Find the Grand total of all Qty, price and total price.

iv. remove Plotter information.

v. Remove Company column.

Q4.

```

Product Company | Qty Price
CPU NaN NaN NaN
Mouse compaq 20.0 NaN
    
```

Combine this dataframe with first dataframe

Q5. Create a new dataframe with numeric values and broadcast first row with rows and broadcast second column with all columns

i. Display all information for product CPU and mouse

ii. Display product and company information for all product.

iii. Find number of rows.

iv. Count values with Non-NA values.

v. Without Non-NA values

vi. Transpose the DataFrame(p).

vii. Display company, qty, price for printer, HD and Monitor.

Q4.

i. `print(p1.iloc[:,2:3])`

ii. `print(p1.iat[3,2]+10)`

Q3. Write Commands for the output:

i.

```

Company Qty Price
Toshiba 10 2000
Sony 5 8000
    
```

ii.

```

Qty Price
40 7000
20 500
10 500
12 4800
10 2000
5 8000
    
```

Try it:-

`a=pd.concat([p1,p2])`

`p3=pd.concat([p1,p2],ignore_index=True)`

`p3=pd.concat([p1,p2],axis=1)`

Try it: (Boolean reduction) p1 first dataframe

`(p1>2000).any()`

`(p1>2000).any(axis=1)`

`(p1>2000).all()`

`p1+p2`