 **Indian School Al Wadi Al Kabir**

**Assessment – 1**

**INFORMATICS PRACTICES (Code: 065)**

CLASS : XII Max. Marks:70

Date: 29/09/2024 Time: 3 hours

|  |  |  |
| --- | --- | --- |
|  | **SECTION A** |  |
| 1. | iv) 5 | 1 |
| **2.** | iii) Multiple Row Functions | 1 |
| **3.** | iii) 0 0  1 0  2 0 | 1 |
| **4.** | iii) ORDER BY | 1 |
| **5.** | iv) ALTER | 1 |
| **6.** | ii) 7 5  9 4  11 8 | 1 |
| **7.** | ii) Panel Data | 1 |
| **8.** | iii) bar | 1 |
| **9.** | ii) 0  2 Orange | 1 |
| **10.** | iii) 3 | 1 |
| **11.** | i) delete three columns having labels ‘Name’, ‘Class’ and ‘Rollno’ | 1 |
| **12.** | iii) S=pd.Series(Monument,index=State) | 1 |
| **13.** | iv) 51000 | 1 |
| **14.** | i) Column labels | 1 |
| **15.** | i) SELECT COUNT (Project) FROM Students; | 1 |
| **16.** | i) 2 | 1 |
| **17**. | iii) Similar to WHERE clause but is used for groups rather than rows. | 1 |
| **18.** | iii) describe class; | 1 |
| **19.** | ii) sort\_values() |  |
| **20.** | i) Both A and R are true and R is the correct explanation for A |  |
| **21.** | iii. A is True but R is False |  |
|  | **SECTION B** |  |
| **22.** | (i) print(SER1.mul(SER2, fill\_value=2))    (ii)print(SER1.loc[‘A’:’D’]) | 2 |
| **23.** | print(s1+3)    print(s1.shape)  (4, ) | 2 |
| **24.** | **Select department, sum(commission) from techno group by department having count(\*) > 2;** | 2 |
| **25.** |  | 2 |
| **26.** | i) ITEM.size  ii) ITEM.columns  iii) ITEM.T  iv) ITEM.loc[1003:1004,[‘Name’:’Price’]]  ITEM.iloc[[2,3],[0,2]] | 2 |
| **27.** | i) player.index=[‘P1’,’P2’,’P3’,’P4’,’P5’]  ii)player=player.rename({‘points’:’netpoint’},axis=1) | 2 |
| **28.** | Delete is for removing records where drop is for removing tables or database.  Eg- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; | 2 |
|  | **SECTION C** |  |
| 29. | i) a. Select \* from Teacher order by Salary;     |  |  |  |  |  | | --- | --- | --- | --- | --- | | Tid | Tname | Department | Salary | No of Periods | | 102 | Neelu | Chemistry | 66000 |  | | 101 | Lakshmi | Hindi | 55000 | 25 | | 100 | Joseph | Physics | 45000 | 25 | | 103 | John | Physics | 40000 | 25 |   i) b. Select Department, count (\*) from Teacher group by Department;     |  |  | | --- | --- | | Department | Count(\*) | | Physics | 2 | | Hindi | 1 | | Chemistry | 1 |   ii) CREATE TABLE BOOKS ( BOOKID INT(4) PRIMARY KEY,  NAME VARCHAR(20) NOT NULL,  CATEGORY VARCHAR(20) UNIQUE,  PRICE FLOAT(7,3),  STOCK INT(4)); | 3 |
| 30. | import pandas as pd  s=pd.Series(['H','He','Li','Be'],  index=['Hydrogen','Helium',  'Lithium','Beryllium'])  a=pd.Series([1,2,3,4],index=['Hydrogen','Helium',  'Lithium','Beryllium'])  chemicals=pd.DataFrame({'Symbol':s,'Atomic number':a})  print(chemicals) | 3 |
| 31. | i) Disease[‘Number of cases’]=[12,34,21,15]  ii) Disease.loc[4]=[‘Malaria’,’Protozoa’,13]  iii) Disease=Disease.drop(3,axis=0) | 3 |
| 32. | i) ALTER TABLE MOVIE ADD GENRE VARCHAR(15) ;  ii) ALTER TABLE MOVIE DROP DOR;  iii) ALTER TABLE MOVIE ADD PRIMARY KEY ( MOVIE\_ID); | 3 |
|  | **SECTION D** |  |
| 33. | i) select avg(marks) from school group by gender;  ii) select min(marks) from school where grade=10;  iii) select count(\*) from school group by club having count(\*)>1;  iv) select count(distinct club) from school; | 4 |
| 34. | A)  i) mdf.loc[[0,3]] or mdf.iloc[[0,3]]  ii)mdf[‘English’]=mdf[‘English’]+2  B)  mdf.loc[mdf[‘Hindi’]<15,[‘Rollno’,’Name’]]  **OR**  mdf[‘total marks’]=mdf[‘English’]+mdf[‘Hindi’]+mdf[‘Maths’]  mdf.to\_csv( “D:\Marks.csv”) | 2+2 |
|  | **SECTION E** |  |
| 35. | i) select \* from product where price is not null;  ii) select itemname from product where stockdate > ‘2000-12-31’;  iii) update product set discount=discount+10 where company=’Logitech’;  iv) select \* from product where itemname like ‘%o%’;  v) delete from product where price < 15000; | 5 |
| 36. | A. Write Python commands to do the following:  (i) Sports[ : :-1]  (ii) Sports.tail(3)  (iii) ‘House’  B. Predict the output for the following:  (i)   |  |  |  | | --- | --- | --- | |  | First | Third | | 0 | 5 | 6 | | 1 | 10 | 4 | | 2 | 8 | 15 | | 3 | 12 | 12 | | 4 | 5 | 10 | | 5 | 10 | 3 |     (ii)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | House | First | Second | Third | | 2 | Tagore | 8 | 13 | 15 | | 3 | Raman | 12 | 9 | 12 | | 5 |
| **37**. | import matplotlib.pyplot as plt  names=[‘Sahil’,’Deepak’,’Anil’,’Ravi’,’Riti’]  marks=[10,40,30,60,54]  plt.plot(x,marks)  plt.xlabel(‘Student Name’)  plt.ylabel(‘Marks Scored’)  plt.title(“Marks secured by students in Term-1”)  plt.grid()  plt.show()  **OR**  import matplotlib.pyplot as plt  production=[450,300,500,650]  area=[‘South-East’,’North-West’,’West’,’East’]  plt.bar(Production,Area,linestyle=’dashed’,color=[‘r’,’b’,’y’,’g’])  plt.xlabel(‘Area’)  plt.ylabel(‘Production’)  plt.title(“Production VS Area”)  plt.savefig(“graph.jpg”)  plt.show() | 5 |