 **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) 02 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’]+2B)  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 |