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| **PRE-BOARD EXAMINATION – (2022-23)**  **Sub: Informatics Practices [065]**  **Session: 2022-23**  **Class-XII**  **Answer Key**  **TIME: 3 HOURS M.M.70** | | |
|  |  | [ 1 ] |
|  | **c. Mesh**  ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | **c. copyrightinfringements**  ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | **d. Emissionof gases**  ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. All of the above   ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. Collection of values   ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. **Free Software**   ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | **SELECT PUBLICATION, MIN(PRICE) FROM BOOK GROUP BY PUBLICATION;**  ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | **c.Date functions**  ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | b) Month  ***(1 mark for the correct answer)*** |  |
|  |  | [ 1 ] |
|  | b.len(S)  ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. columns   ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. itercols()   ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | a.Static  ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. Both (b) and (c) |  |
|  |  | [ 1 ] |
|  | a.Copyright  ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | b.Passive digital footprint  ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | 1. Both A and R are true and R is not the correct explanation for A   ***(1 mark for correct answer)*** |  |
|  |  | [ 1 ] |
|  | i)Both A and R are true and R is not the correct explanation for A  ***(1 mark for correct answer)*** |  |
|  | **PART B** |  |
|  |  | [ 2 ] |
|  | |  |  | | --- | --- | | **Add-on** | **Plug-in** | | Add-on refers to a program utility or a hardware unit that can be added to a computer for enhancing its capabilities. | Plug-in refers to a small add-on program that is used to extend the functionalities of the desktop program and web application. | | An add-on doesn’t work as a complete program. | A plug-in works as a complete program. | | Add-on is supported in Mozilla Firefox. | Plug-in is no longer supported in Mozilla Firefox. | | The usage of the add-on has a limitation, it only works in web browsers. | The plug-in, apart from the usage in web browsers, is also used to run files. | | Cards for memory, graphics, sound accelerations, and modem capability. | Adobe Flash Player, Unity Web Player, QuickTim |   ***(1 marks for 1 point of difference and 1 mark for examples)*** |  |
|  | Or  In the **star topology,** all the computers connect with the help of a hub. This cable is called a central node, and all other nodes are connected using this central node. It is most popular on LAN networks as they are inexpensive and easy to install.  The **mesh topology** has a unique network design in which each computer on the network connects to every other. It is develops a P2P (point-to-point) connection between all the devices of the network. It offers a high level of redundancy, so even if one network cable fails, still data has an alternative path to reach its destination.  ***(1 marks for 1 point of difference and 1 mark for diagram)*** |  |
|  |  | [ 2 ] |
|  | **SELECT Deptcode, Max(Salary)**  **FROM EMPLOYEE GROUP BY Deptcode;**  ***(1 Mark for error identification 1 Mark for writing correct query)*** |  |
|  |  | [ 2 ] |
|  | GROUP BY clause is used in a SELECT statement in conjunction with aggregate functions to group the result based on distinct values in a column.  SELECT genre, SUM(qty) AS total  FROM books  GROUP BY genre;  ***( 1 mark for the correct explanation of Group by clause and 1 mark for the example)*** |  |
|  |  | [ 2 ] |
|  | import pandas as pd  L=[“English”,”B.Studies”,”Accounts”,”Maths”,”Mktg”]  marks=[75,80,45,95,78]  pd.Series(L,index=marks)  ***(1 mark for each correct python statement)*** |  |
|  |  | [ 2 ] |
|  | As an Indian citizen, I would advise people to dispose of e-waste properly because e-waste is not bio-degradable. People can take e-waste to recycling centres. E-waste should not be dumped in landfills. One can sell old electronics to companies, individuals, and repair shops.  ***( 2 marks for 2 points)***  OR  Protect your computer and smartphone with strong, up-to-date security software. ...  Learn to spot spam and scams. ...  Use strong passwords. ...  Monitor your credit scores. ...  Review your credit score. ...  Freeze your credit. ...  Only use reputable websites when making purchases. ...  Stay alert.  ***(1 mark for explanation and 1 mark for measures)*** |  |
|  |  | [ 2 ] |
|  | ***( 1 mark for each correct output)*** |  |
|  |  | [ 2 ] |
|  | 1. df.iloc[1:4,1:2] 2. df[df['Name']=='Piyush']   ***(1 mark for each correct output)*** |  |
|  | **SECTION C** |  |
|  |  | [ 3 ] |
|  | **i. 01**  **ii. isto**  **iii.30000,20000**  ***(1 mark for each correct output)*** |  |
|  |  | [ 3 ] |
|  | import pandas as pd  country\_data = {"Country Name":["India","Canada","Australia"],  "Capital": ["New Delhi","Ottawa","Canberra"],  "Population" : ["136 Cr","10 Cr","50 Cr"]  }  countries = pd.DataFrame(country\_data)  print(countries)  *( ½ mark for import , ½ mark for print,1 mark for dictionary,1 mark for creating dataframe)* |  |
|  |  | [ 3 ] |
|  | 1. df['Grade']=[ ‘A’, ‘B’, ‘A’, ‘A’, ‘B’, ‘A’] 2. print (df.loc[3,['UT1','UT2']) 3. df.loc[7]=['Navya Jain',30,87,67,45,'A']   ***(1 mark for each correct python statement)*** |  |
|  |  | [ 3 ] |
|  | 1. We call this type of activity as Digital Footprints 2. Two types: Active and Passive 3. Risk involved: It includes websites we visit emails we send, and any information we submit online, etc., along with the computer’s IP address, location, and other device specific details. Such data could be used for targeted advertisement or could also be misused or exploited.   ***(1 mark for naming the activity,1 mark for its types and 1 mark for mentioning any one risk )*.**  **OR**  Ans IPR (Intellectual Property Rights) are the rights of the owner of information to decide how  much of the information is to be exchanged, shared or distributed.  Intellectual Property Rights are needed because :  ● It encourages individuals and businesses to create new software as well as improvingexisting applications.  ● Ensures new ideas and technologies are widely distributed.  ● Promotes investment in the national economy  (Any two needs)  ***( 1 mark for explanation of IPR and 2 marks for any 2 needs of protecting IPR)*** |  |
|  |  | [ 3 ] |
|  | a. select Type, avg(Price) from Vehicle group by Type having count(\*) > 20;  b. select Company, count(distinct Type) from Vehicle group by Company;  c. Select Type, sum(Price\* Qty) from Vehicle group by Type;  **a. ½ mark for the Select with avg(), ½ mark for the having clause**  **b. ½ mark for the Select with count() , ½ mark for group by clause**  **c. ½ mark for the Select with sum() , ½ mark for the group by clause**  **OR**  GROUP BY clause is used in a SELECT statement in combination with aggregate functions to group the result based on distinct values in a column. For example: To display total number of male and female students from the table STUDENT, we need to first group records based on the gender then we should count records with the help of count() function. |  |
|  | **SECTION D** |  |
|  |  | [ 5 ] |
|  | 1. SELECT MONTHNAME(CURDATE()); 2. SELECT TRIM(" DIGITAL FOOTPRINT "); 3. SELECT DAYNAME(DOB) FROM EMPL; 4. SELECT INSTR("NETTIQUETES","QUE"); 5. SELECT MOD(45,4);   ***(1 mark for the corrected query)***  OR   1. LCASE() :LOWER()/LCASE() It returns argument str, with all letters in lowercase.   SELECT LOWER(ENAME) FROM EMPL;   1. LTRIM() : LTRIM() It removes the spaces from the left of the given string.   SELECT LTRIM(' abcdefgh');   1. POW() :POWER/POW() This function returns mn , a number m raised to the nth power.   SELECT POWER(3,4);   1. YEAR() . Return the year part of a date:   SELECT YEAR("2017-06-15");   1. NOW() : Return current date and time:   SELECT NOW();  ***( ½ mark for the explanation and ½ mark for the example)*** |  |
|  |  | [ 5 ] |
|  | 1. Block C would be the most suitable place to house server as it has maximum number of computers. 2. The most suitable layout would be   Topology : Star/Tree  (iii) Modem should be placed where the server is therefore it should be placed  at Block C.  (iv) Dynamic website as the dynamic website can alter based on customer’s   choice.  (v) WAN as the distance between the two locations would be more than 100KM WAN, as the given distance is more than the range of LAN and MAN.  ***( 1mark for each correct answer)*** |  |
|  |  | [ 5 ] |
|  | OR  Create a line Graph  import matplotlib.pyplot as plt  plt.title("student marks")  month=['jan', 'feb', 'march', 'april']  n1=[0,4,7,8]  n2=[2,4,6,8]  plt.plot(month,n1)  plt.plot(month,n2)  plt.xlabel("month")  plt.ylabel("number of classes")  plt.show() |  |
|  |  | [1+1+2] |
|  | 1. Select left(city,2),p\_id from charity;***(1 mark)*** 2. Select lastname,contribution,round(contribution/10,2) from charity;***(1 mark)*** 3. Select firstname, lastname from charity where instr(firstname,’at’)=2 or instr(firstname,’at’)=3;***(2 marks)*** |  |
|  |  |  |
|  | Ans:-  A.  i. Nmae Designation  T102 Shyam Teacher  T103 Vinod Accountant  ii.    *( 1 mark for each correct output)*  B.STAFF.loc[(STAFF.Age>40)& (STAFF.Age<50),[‘Name’,’Designation’]]  OR (Option for part iii only)  STAFF.loc[[STAFF.Name==’SHYAM’,’Designation’]=’Vice Principal’  *( ½ mark for loc() ,1 mark for correct row condition, ½ mark for columns*) |  |

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