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| **UT/IPCQP/1223/A 6-NOV-2023** | | | | | |
| **UNIT TEST (2023-24)** | | | | | |
| **Subject: Informatics Practices-C**  **Grade: XII** | | | Max. Marks:50Time:2½ hours | | |
| **Name:** | | **Section:** | | **Roll No:** | |
| General Instructions:  1. This question paper contains five sections, Section A to E.  2. All questions are compulsory.  3. Section A have 10 questions carrying 01 mark each.  4. Section B has 07 Very Short Answer type questions carrying 02 marks each.  5. Section C has 04 Short Answer type questions carrying 03 marks each.  6. Section D has 02 Long Answer type questions carrying 05 marks each.  7. Section E has 01 question carrying 04 marks .  8. All programming questions are to be answered using Python Language only | | | | | |
|  | **SECTION A** | | | |  |

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|  | The networking device that forwards data packets between computer network is \_\_\_   1. Modem b. Router 2. Repeater d. None of the above | [ 1 ] |
|  | Ewaste is responsible for the degradation of our environment if not properly treated or disposed of. Some of the feasible methods of e-waste management are reduce,and recycle.  a. reuse b. recheck  c. resubmit d. regular | [ 1 ] |
|  | \_\_\_\_\_\_\_Software available free of cost and also can be copied and redistributed but no source code is available.   |  |  | | --- | --- | | 1. Free and Open Software | 1. Open-Source Software | | 1. Proprietary Software | 1. Free Software | | [ 1 ] |
|  | The axis 0 identifies a dataframe’s \_\_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | 1. rows | 1. columns | | 1. values | 1. dtype | | [ 1 ] |
|  | Which method is used to access horizontal subset of a dataframe.?   |  |  | | --- | --- | | 1. iterrows() | 1. itercols() | | 1. iteritems() | 1. iterindex() | | [ 1 ] |
|  | \_\_\_\_\_\_\_websites are ones that are fixed and display the same content for every user.   |  |  | | --- | --- | | 1. Static | 1. XML page | | 1. Dynamic | 1. HTML page | | [ 1 ] |
|  | This is a licence granting general permission to copy and reproduce intellectual property.   |  |  | | --- | --- | | 1. Copyright | 1. Copyleft | | 1. Trademark | 1. Patent | | [ 1 ] |
|  | Primary law in India for matters related to e-commerce and cyber crime is :   * 1. IT Act 1995 b. IT Act 2000   c. IT Act 1998 d. IT Act | [ 1 ] |
|  | Q9 and 10 are ASSERTION AND REASONING based questions. Mark the correct choice as   * 1. Both A and R are true and R is the correct explanation for A   2. Both A and R are true and R is not the correct explanation for A   3. A is True but R is False   4. A is false but R is True |  |
|  | **Assertion (A):** The internet is a collection of interconnected computer networks.  **Reason (R):** World Wide Web is a collection of interconnected documents. | [ 1 ] |
|  | **Assertion (A):-**DataFrame has both a row and column index.  **Reasoning (R):** - A DataFrame is a two-dimensional labelled data structure like  a table of MySQL. | [ 1 ] |
|  | **PART B** |  |
|  | Differentiate between Plug ins and Addons. | [ 2 ] |
|  | What is Identity theft? Write any two measures to reduce it. | [ 2 ] |
|  | As a citizen of India, what advice you should give to others for e-waste disposal? | [ 2 ] |
|  | Differentiate between bus and star topology. Draw the layout for connecting 5 computers in bus and star topology. | [ 2 ] |
|  | Explain the steps to add legend in a linegraph. | [ 2 ] |
|  | Explain the terms Web Site and Web Server. | [ 2 ] |
|  | Consider the Data Frame below and answer the questions that follow.    a. Which command will produce the following output to extract only a part of data frame?     * 1. To display the height of Prem and Prakash. | [ 2 ] |
|  | **SECTION C** |  |
|  | Consider the given DataFrame ‘Market’:    Write suitable Python statements for the following:  i. Add a new item named ‘Guava' having price 175.  ii. Add a column called Margin ie 10% of S\_Price  iii. Remove the column Margin. | [ 3 ] |
|  | Consider the following DataFrame “df” and write the command for the following questions.  **Name UT1 UT2 UT3 UT4**  1 Prerna Singh 24 24 20 22  2 Manish Arora 18 17 19 22  3 Tanish Goel 20 22 18 24  4 Falguni Jain 22 20 24 20  5 Kanika Bhatnagar 15 20 18 22  6 Ramandeep Kaur 20 15 22 24   1. To add a new column, Grade with the values, ‘A’, ‘B’, ‘A’, ‘A’, ‘B’, ‘A’ to the DataFrame. 2. To display the UT1,UT3 column of Tanish Goel. 3. To add new record of Navya Jain,30,87,67,45, A. | [ 3 ] |
|  | Priyanka is using her internet connection to book a flight ticket. This is a classic example of leaving a trail of web activities carried by her.   1. What do we call this type of activity? 2. What are the types of this activity? 3. What is the risk involved by such kind of activity? | [ 3 ] |
|  | What do you understand by Intellectual Property Rights? Why is there a need  to protect Intellectual Property Rights? | [ 3 ] |
|  | **SECTION D** |  |
|  | Sheetal Development Company has set up its new center at Jaipur for its office and web-based activities. It has 4 blocks of buildings named Block A, Block B, Block C, Block D.    Shortest distances between various Blocks in meters:     1. Suggest most suitable place to house server of this company with proper reason. 2. Suggest the layout of connection between the blocks and identify the topology of the layout. 3. Suggest the placement of the Modem in the network with justification.   (iv) The company wants to design a website for its customers that can be   changing the contents as per the responses of customers. What type of   website static or dynamic can they design for this purpose?  (v) What type of network would be formed if the Raipur office is connected  to their New Delhi office which is more than 1250km from Raipur.   Which type of network out of LAN, MAN, or WAN will be formed?  Justify your answer. | [ 5 ] |
|  | Write a script to draw a graph by importing appropriate package: | [ 5 ] |
|  | Consider the following DataFrame STAFF:    Here, ID of the staff are row labels and  Personal details (Name, Age, Designation) are the column labels.  Answer the following questions based on the above dataframe:   1. Predict the output of the following python statement: 2. print(df.loc[‘T102’:’T104’,[“Name”,”Designation”]]) 3. df.rename(index={“T100”:101, “T012”:”103”, ”T104”:105})   print(df)  B. Write a python code to Display the name and designation of employees whose age more than 40 | [1+1+2] |

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