ReportsDev- Test- VIT-2021

Name: Ankur Kumar Singh
Reg No: 17BIT0147
Personal email: ankursingh20145@gmail.com
College email: ankurkumar.singh2017@vitstudent.ac.in
Mobile No: 9451591467

Section 1 – Queries:

1. Write a query to print the number of employees per department in the organization

ANS: SELECT COUNT(*) FROM Employee GROUP BY DEPARTMENT;

2. Write an SQL query to find the name of the top-level manager of each department;

Note: Here I am assuming top-level manager means manager with max number.

ANS: SELECT CONTCAT(FIRST_NAME,' ',LAST_NAME) AS FULL NAME FROM Employee WHERE MANAGER=(SELECT MAX(MANAGER) FROM Employee);

3. Write a query to find the total incentive received by a given employee in a given month.

ANS: SELECT EMPLOYEE.FIRST_NAME,EMPLOYEE.LAST_NAME, SUM(INCENTIVES.INCENTIVE_AMOUNT) AS TOTAL_INCENTIVE FROM EMPLOYEE INNER JOIN INCENTIVES ON EMPLOYEE.EMPLOYEE_ID=INCENTIVES.EMPLOYEE_REF_ID GROUP BY INCENTIVES.EMPLOYEE_REF_ID;

4. Write a query to find the month where employees got maximum incentive

ANS : SELECT MONTH(INCENTIVE_DATE),MAX(MAXIMUM) FROM (SELECT INCENTIVE_DATE,SUM(INCENTIVE_AMOUNT) AS MAXIMUM FROM Incentives GROUP BY MONTH(INCENTIVE_DATE));

Section 2:

5. You have two sand timers, which can show 4 minutes and 7 minutes respectively. Use both the sand timers (at a time or one after other or any other combination) and measure a time of 9 minutes.

ANS:

Step 1: we can start both sand timer at the same time.
Step 2: 4 minutes sand timer runs out and flip it. 7 minutes sand timer is left with 3 minutes.
Step 3: 4 minutes sand timer is left with 1 minute. 7 minutes sand timer runs out and flip it.
Step 4: 4 minutes sand timer runs out and 7 is filled with 6 minutes and 1 minute on the other side. Flip it as the sand is left with 1 minute.
Step 5: 7 minutes sand timer becomes empty from above side.
Now we can measure 9 minute.

6. John and Mary are a married couple. They have two kids, one of them is a girl. Assume safely that the probability of each gender is 1/2. What is the probability that the other kid is also a girl?

ANS:

Total possible permutations of gender for two children:

1. [Girl, Girl]
2. [Boy, Boy]
3. [Boy, Girl]
4. [Girl, Boy]

We know one is girl child so total permutation reduce to following

1. [Girl, Girl]
2. [Boy, Girl]
3. [Girl, Boy]

From above possibility of 2nd will we girl child will be : 1/3

7. The following appeared as part of a campaign to sell advertising time on a local radio station to local businesses.

Ron's Cafe began advertising on our local radio station this year and was delighted to see its business increase by 10 percent over last year's totals. Their success shows you how you can use radio advertising to make your business more profitable. Discuss how well reasoned you find this argument. In your discussion be sure to analyze the line of reasoning and the use of evidence in the argument.

For example, you may need to consider what questionable assumptions underline the thinking and what alternative explanations or counterexamples might weaken the conclusion. You can also discuss what sort of evidence would strengthen or refute the argument, what changes in the argument would make it more logically sound and what, if anything, would help you better evaluate in conclusion.

ANS: Radio advertising might be seen as old fashioned especially with the rise of the Internet and other types of media and that their audience has decreased. But that not the case many people use radio in India with six plus hour of listening time.

Other advantage of radio advertising

1. **Selective Targeting**
2. **Increased frequency**
3. **More memorable**
4. **Cost effective**
5. **Time efficiency**