POWER BI INEREVIEW QUESTIONS

1. **Power BI services?**

Ans:- Power BI services is a cloud based business analytics service that enable any one to visualize and data analysis will generator speed efficient and understanding. It will give a single view of your most critical data.

Power BI support wide support wide range of data sources. Power BI has several components that helps users created and share data reports.

2. **What are the Limitations of Power BI?**

Ans:- Schedule refresh is not there. We can't share it with any one, through power bi desktop

3. **What is Power Pivot?**

Ans:- It will allows us to connect multiple sources. We can load the data. We can create relationship between the data and here we will create measure.

4. **What is Power View?**

Ans:- With the help of power view we can create visualization

5. **What is Power Query?**

Ans:- It will perform transformations, SQL operations can be performed in power bi with query. Direct query is a direct connection to data source, data will not be stored in power bi model.

Power bi will be a visualizations layer, then query the data from data source every time(Table name, Column Name, Relationship) but not the data.

Example:- SQL SERVER, SAP HANA, AZURA SQL DATABASE, AMAZON REDSHIFT

6. **Name some Commonly used tasks in the query editor?**

Ans:- 1. Connect to data   2. Shape and combine data

    3. Group rows   4. Pivot columns

    5. Create custom columns   6. Query formulas

7. What are the components of Power Bi?

A) Components of Power BI are

1. Power query:- In power query we can able to do transformation like changing data types, deleting duplicates etc.

2. Power pivot :- In Power pivot will do modelling and will connect to different sources and also can view the data.

3. Power view:- In Power view we can able to generate the visuals.

4. Power Map:- Lets you create geospatial representation of your data.

5. Power Q & A:- Lets you use natural language to get answer to query.

8. What are the building blocks of Power BI?

A) Following are the building blocks of power BI

1. Visualization:- Visualization is a charts, graphs or similar visual representation of data.

2. Dataset:- A dataset is the group of data used to create a visualization, such as a column of sales figures. Dataset can be combine and filtered from different source using built in connectors

3. Reports:- A report is a group of visualization on one or more pages

4. Dashboard:- Dashboard is a collection of tiles.

5. Tile:- Tile is single visual pin from report.

9. What is data size in power BI.

Ans:- The file size limit is 1GB in PRO and 10GB for premium members/users.

10. What is Direct Query?

Ans:- Direct query is a direct connection to data source. Data will not be stored in power BI model. Power BI will be a visualization layer, then query the data from data source every time. Power BI only store metadata of table (Table Name, Column name, relationship……) but not the data.

Example:- SQL SERVER, SAP HANA, AZURE SQL database, Amazon Redshift.

11. How many records we are able to see in your power bi desktop.

Ans:- 1 Million

12. What are the difference sources that you worked on?

Ans:- Excel, SQL Server, CSV Files and Azure SQL Server.

13. What is dashboard?
Ans:- A dashboard is a collections tiles. Tile is nothing but a visual pin from the report

14. Can we delete datasets in pro from works space?

Ans:- Yes

15. What are the power BI services?

Ans:- It can do all admin activities of power bi, It is a web based server.

1. We can schedule refresh   2. We can create dashboard

3. We can share the reports   4. We can apply securities

16. <mark>What is Relationship? How many types of relationship?</mark>

Ans:-

➢ When you import multiple tables, you are going to do some analysis using data from all those tables.
➢ Relationship between those table are necessary in order to accurate calculate result and display the correct information in your reports.
➢ Power BI desktop makes creating those relationship easy. The auto detect feature can do it for you.
➢ If you query two or more table at the sometime, when the data is loaded, power bi desktop attempts to find and create relationship for you.
➢ Cardinality, cross filter direction and active properties are automatically set

Types of Relationships

1. Active Relationship.
2. De-active Relationship.

Active Relationship:-

This means the relationship service as the active, default relationship. Where there is more than one relationship provides a way of power bi desktop to automatically create visualizations that include both table.

17. What is Cardinality?

Ans:- The cardinality of the relationship means having unique or multiple instances per value for the joining field between two tables.

Cardinality defined by the relationship. Cardinality refers to the relationship between two tables. Cardinality can be of 3 types
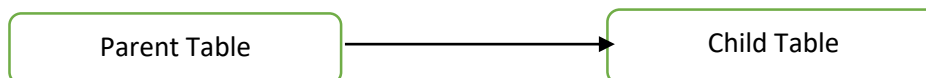
1. Many to One
2. One to Many
3. Many to Many

The cardinality refers to the uniqueness of a columns in a table. The columns with all unique values would be having the high cardinality and the columns with all duplicates values would be having the low cardinality.

18. What is Bi-Directional Cross filters/ What is Cross Filter?

Ans:- Cross filtering is nothing but relationship between two tables. Cross filtering, filters the data in two ways
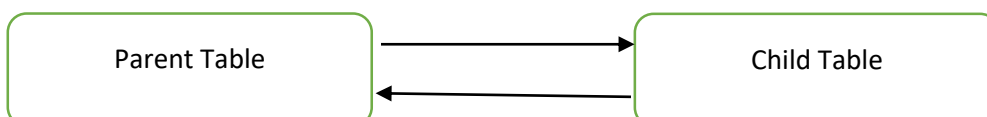
1. Single
2. Both

Single:- If we have parent and child table, If I can apply single direction filter the data in parent table automatically it will effect /filter the child table.

Parent Table	➝	Child Table

If I can filter the data in child table it will not filter the parent table.

Both:- if we apply both directions filtering then the data get changes in both the tables even if we modify in single table.

Parent Table	⇄	Child Table

Edit Relationship➜Cross Filter Direction ➜ Select both and Apply security filter in both directions.

19. Can we delete report/dataset from workspace?

Ans:- Yes, Once the app get published we cannot delete it until unless we un-publish the app.

20. Is dataset and report different?

Ans:- At desktop level both are same but in the service we can see at different levels.

21. What is Dashboard?

Ans:- A dashboard is a collections tiles. Tile is nothing but a visual pin from the report

22. Can we create a dashboard from visual from multiple page with the report or multiple report?

Ans:- Yes

23. What is Dataset?

Ans:- A data set is a collection of related, discrete items of related data that may be accessed individually or in combination or managed as a whole entity.

24. Can we import data direct power BI service?

Ans:- Yes (Through get data)

25. What is difference b/w Dataset and Power BI dataset?

Ans:- No, Both are same.

26. Can connect direct query excel?

Ans:- Yes

27. Can we can get the data through need to SQL Script?

Ans:- Yes

28. What are Reports?

Ans:- A power BI report is a series of visualizations, filters and static elements on a canvas. Power BI reports are saved as a single PBIX file and connect to a single dataset.

29. What are the different types of sharing we have

 Ans:- By App, Through Content packs, By email

30. How can you import local images in to power BI desktop?

Ans:- Using BASE64 code we will convert to local image to binary code then we will use images in required reports.

Go to Get data→ select More Options and Choose Folder option→ Give path of Image folder→ Click Edit

And Select Invoke Custom functions and select Given Folder Name (It will convert image to BASE64 code as separate column)→ Close and apply.

Than Change data category (above created column)→ Image URL

31. Difference between Power BI Pro and premium?

Ans:-

Power BI Pro	Power BI Premium
Maximum storage 10GB Per Users	Maximum storage 100GB Per Users
Maximum size of individual data set 1GB	Maximum size of individual data set 10 GB
Maximum no.of Automatic refresh per day 8	Maximum no.of Automatic refresh per day 48
Able to publish reports to be shared	Unable to publish reports to be shared
Unable do incremental data refresh	Able do incremental data refresh
Licensed by deducted cloud computed and storage server not available	Licensed by deducted cloud computed and storage server available

32. What is RLS?

Ans:- Row level security is the ability to filter content based on a user's role.

Both Direct Query and data imported to the model support RLS

Note: If the members of the group associated to the Workspace have edit permissions, row level security in Power BI will be ignored.

SSAS: SQL Server Analysis Services implements RLS on its own. SSAS requires the enterprise gateway to implement LiveConnection and RLS. RLS is supported by using EffectiveUserName on the connection from Power BI to the on-premises SSAS instance.

33. Using the username() or userprincipalname() DAX function?

Ans:- username() will return a user in the format of *DOMAIN\User*
userprincipalname() will return a user in the format of *user@boyinasoft.com*.

Within the Power BI service, *username()* and *userprincipalname()* will both return the user's User Principal Name (UPN). This looks similar to an email address.

34. Can I use RLS to limit the columns or measures accessible by my users?
Answer: No. If a user has access to a particular row of data, they can see all the columns of data for that row.

35. Does RLS let me hide detailed data but give access to data summarized in visuals?
Answer: No, you secure individual rows of data but users can always see either the details or the summarized data.

36. Creating Static RLS?
Ans:- Security model doesn't change dynamically for each logged in user
Create Roles in Power BI Desktop--> Test Roles in Desktop
Publish to Power BI Service ---------> Add Users to Power BI Service

37. Creating Dynamic RLS?
Ans:- Static RLS is about creating roles manually, If we have too many Roles to create Static RLS is not an option. Thus comes the Dynamic RLS.

Example: if you want to restrict the user based on the state then we need to create Role for each state.

38. What if I had previously created roles and rules for a dataset in the Power BI service? Will they still work if I do nothing?
Answer: No. Visuals will not render properly. You will have to re-create the roles and rules within Power BI Desktop and then publish to the Power BI service.
39. What is visual?

Ans:- A *visual* is a graphic representation of the data in your model.

40. Can I create these roles for Analysis Services data sources?
Answer: You can if you imported the data into Power BI Desktop. If you are using a live connection, you will not be able to configure RLS within the Power BI service. This is defined within the Analysis Services model on-premises.

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Answer: No, you secure individual rows of data but users can always see either the details or the summarized data.

43. Can I use a custom URL as a hyperlink in a table or matrix?
Ans:- No. You can use a link icon. If you need custom text for your hyperlinks and your list of URLs is short, consider using a text box instead.

44. What is Reports?

Ans:- A collection of visuals in one Power BI Desktop file is called a *report*. A report can have one or more pages just like an Excel file can have one or more worksheets.

45. Can we delete datasets in pro from works space?

Ans:- Yes

46. **Can we create a dashboard from visuals from multiple pages within the report?**
Ans:- Yes, we can create a dashboard from multiple pages .

47. Can we create a dashboard from visuals from multiple reports?
Ans:- Yes we can create a dashboard from visuals from multiple reports.

48. Can we create reports in service?
Ans:- Yes we can create reports in service.

49. Can we create Calculated columns and measures in Service?
Ans:- No, we cannot create calculated columns and measures in service

50. What are the difference between filters?

Ans:-

Filter is used to filter the data statically at developer level, and share limited data to the users by using filters we can restrict the data.

There are three types filters are here

1. Visual Level Filter
2. Report Level Filter
3. Page Level Filter

Visual Level Filter:- This Visual level filter applies to a single visual on a report page.

Report Level Filter:- Report level filter applies to all pages in the report or this filter works on the entire report. It will works on all pages and all visualizations.

Page Level Filter:- Page level filter applies all the visual on the report page. This filters works at reports page level. Difference pages in the same report can have different page level filter

51. Difference between Import, Direct and Live?

Ans:-

Import:- Data is **inside** the Power bi, Metadata is **inside** the power bi.

Data (SQL Server)(Inside) + Metadata(Inside)= Import Data. When dataset is small then will use import.

Direct:- Data is in **outside** the power BI, Meta data is **inside** the power BI

Data (SQL Server)(Outside) + Metadata(Inside)= Direct connection. When dataset is large

Live:- Data is **outside** the power BI, Metadata is **outside** Power BI

Data (SQL Server)(Outside) + Metadata(Outside)= Live connection

We don't have relationship and model.

52. Difference between the Append and Merge?

Ans:-

APPEND:- It is similar to Union all, It will not remove any duplicates. Append is used to combine two similar queries into a single query. It is **increases rows** in a columns.

Example:- If we have Two table called T1 and T2. We are Append these two table. See result **Append table** (output table).

T1	
ID	Name
1	Ram
2	Raja
3	Kamal

T2	
ID	Name
7	Ramesh
8	Mitesh
9	Pooja

OUTPUT TABLE

ID	Name
1	Ram
2	Raja
3	Kamal
7	Ramesh
8	Mitesh
9	Pooja

MERGE:- It will work like a join. When I have two difference queries by using common columns we will merge into single query.

Example:- If we have Two table called T1 and T2. We are Merge these two table. See result **Merge table** (output table). This merge table increases columns.

T1	
ID	Name
1	Ram
5	Sham
7	Kamal

T2	
ID	Courses
1	Power BI
5	AWS
7	Share Point

Merge Table

ID	Name	Courses
1	Ram	Power BI
5	Sham	AWS
7	Kamal	Share Point

53. What is gateway? How many types? How it works?

Ans:-

Gateway creates the connection power BI cloud based analysis technology and the data source located on premises. Gateway acts as Bridge between the On Premises dashboard and power BI service.

There are two types of Gateways

1. Personal Mode
2. On- Premises

Personal Mode:-

- It allows one user to connect to source and cannot be shared with others.
- Power BI services supported
- You cannot use it in a team development scenario
- Multiple developers cannot leverages this Gateways

On-Premises:-

- It allows multiple users to connect to multiple on premises dashboard and can be shared with others.
- It will support import, direct query and Live connections
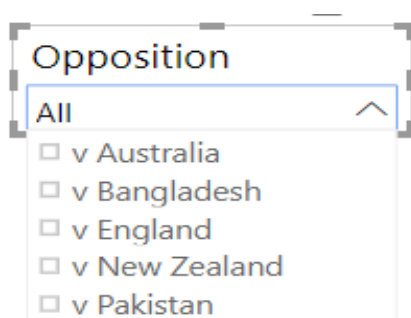- Central data source management

Settings→ Manage Gateway→ we can see Gateway on left side→to that gateway add data source details→Add source setting→ Add data source, Give source type, UI, Pass→ Add.

54. Slicer and Sync Slicer

Ans:-

Slicer:- Slicer is used to filter data dynamically. It will work on single page.

Example:- I have different visuals in one page but I want to filter England only .

Opposition

All ∧
- v Australia
- v Bangladesh
- v England
- v New Zealand
- v Pakistan
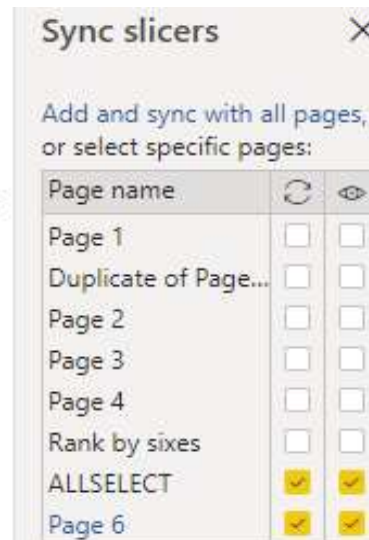
Select required column in

a filed→ Drag and Drop Slicer visual in visualization pane

Sync Slicer: -Sync Slicer is used to filter data dynamically.

It will work data on multiple page.

Examples:- For example, if I have 6 different pages and I want to filter data in ALLSELECT page and 6rd pages at that time we use sync slicer.

GO TO VIEW -->
SELECT SYNC
SLICER--> SELECT
REQUIRED PAGES IF
YOU WANT

Sync slicers ✕

Add and sync with all pages,
or select specific pages:

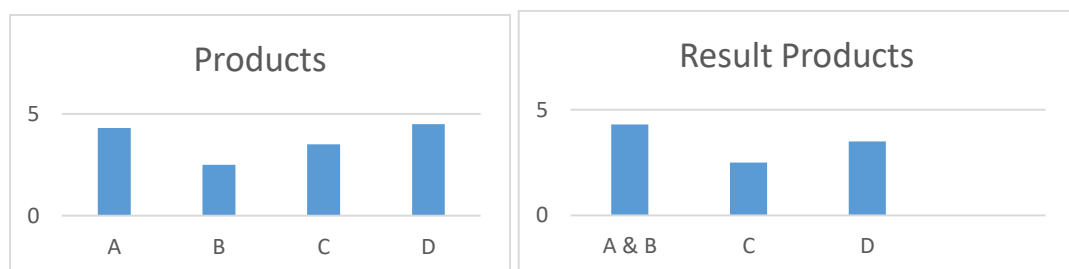| Page name	⟳	👁
Page 1	☐	☐
Duplicate of Page...	☐	☐
Page 2	☐	☐
Page 3	☐	☐
Page 4	☐	☐
Rank by sixes	☐	☐
ALLSELECT	☑	☑
Page 6	☑	☑

55.What is Book marks.

Ans:- Book mark are used to save the current state or current position in

a report for separate pages.

Example:- For example, I have 3 pages in a report and I want to see page3 as first page at that time we need to add page3 in the bookmarks as first page.

56.What is New Group?.

Ans:- New group is used to combine some difference set of information into a single information.

Example: If we have A,B,C and D cities in a charts, if I need to combine A&B cities in a single bar at that time we will use **New group** option.

GO TO FIELD—>RIGHT CLICK ON TABLE →Select New Group

57.How can you create virtual table with DAX functions.

Ans:- 1. CALCULATE   2. SUMMARIZE   3. VALUES

58. **What are the Aggregation DAX functions?**

Ans:- 1. SUM   2. MIN   3. COUNT   4. MAX   5. DIVIDE

59. What are the iterating DAX function?

Ans:- SUMX, COUNTX, MINX, MAXX, FILTERX, RANKX, AVERAGEX and ADDCOLUMNS.

60. Can you change the column data dynamically?

Ans:- we are able to do through use Parameter

Go to Edit Query→ create New Parameter→ fill necessary→ ok→

61. User acceptance test?

Ans:- BI Testing is the process of validating the data, format and performance of the reports, subject areas and security aspects of the BI Projects. BI Testing is key for improving the quality of the BI Reports and user adoption. Testing of BI projects is different from traditional web application testing since the content of the reports is automatically generated by the BI tool based on the BI tool metadata.

62. Can we import data directly to power bi service?
Ans:- Yes, we can import data directly to power bi service by using **get data.**
By using **get data** in service we can import data from the files as well as from database present in the cloud like azure sql server, SQL server analysis service(SSAS) etc.

63. Can we have direct query for Database?
Ans:- Yes, we have direct query for database along with import.

64.What is Parameter?

Ans:- Parameter are used to make your report dynamic. Parameter are used to filter a dataset.

65. How to implement Parameter:

1. By using parameter are can filter the data before loading into power bi.
2. By using filter we can first load the data in power bi. After that we can apply the filter.

66. What are the components in power bi?

Ans:- There are three components in power bi

1. Power bi desktop
2. Power bi edit query
3. Power bi services.

67. Difference between the CALCULATED COLUMN and Measures?

Ans:-

Sl.N	Measures	CALCULATED COLUMN
1	It is have an own unique and responsibility.	Calculate columns as unique at table level not at model level
2	It is kind of expression told in a model and it will get executed when it used it only.	Calculated columns is which is created based on the existing columns with the help of function.
3	It don't store any data physically	It is going to occupy the memory, along with original columns and it
4	It don't occupy any memory	These columns are stored along with a model
5	You can't create any duplicate measures in your entire model	
6	It is suitable for only numeric vales	You can put Text, Numeric values and date values in a columns
7	It is dynamics one	It is static one
8	It is Slower	It is faster

68. Can you what account need to creation of APP work space?

Ans:- Yes we need to **Pro account** for creation of **App work** space.

69. Explain the Term M-Language?

Ans:- This is the Programming Language used in power query. It's functional **case-sensitive language** that's similar to other **programming languages** and easy to use.

70. What are the different types of sharing in power BI?

Ans:-

By E-Mail:- By email providing Email we can share the data.

Through Content Pack:- Content pack is the combination of **datasets, reports and Dashboards.**

Two ways we are able to sharing **1. Specific Group 2. My entire organizations.**

Content pack is nothing but creating specific group of report and publish entire organizations content pack library.

We can provide access to the specific group or entire organization.

Example:- If I have 10 reports in my projects, I want to share 10 reports to entire organizations at that time, I will create content pack.

By App:- By using App we can provide access to specific group of people or entire organization for specific reports, multiple reports or entire reports.

Example:- If I have 10 reports in my projects, at that time, I want to share 4, 5 or 2, reports to the users on that time I need to share entire organization at that time I will go through App.

71. Different between Content pack and App's?

Ans:-

When publish content pack you can select objects (**dataset, reports and dashboard**).

There is known choice whatever content (**dataset, reports and dashboards**) in workspace all those things we need to publish.

72. How to create mobile compatible reports?

Ans:- First we need to create visualizations as per the user requirement.

Once reports creation is done, then we have to **go view→ page layout→ Adjust the visual as per the page layout size.**

Example:- I create report and publish. It will show as per the power bi service.

If I want to see the data in model at that time, it will not show properly for this purpose we can go for mobile compatible.

73. How to configure power bi reports schedule refresh?

Ans:- To refresh data in your power bi reports, a scheduled refresh plan must be created.

Select reports→ Right Click→ Select Manage option→ Data source fill require credentials.

Manage→ New Schedule refresh plan → Create schedule refresh plan

Data refresh in power BI:-

Power BI must query the underlying data source, possible load the source data into a dataset and then update any visualization in your reports or dashboard that relay.

74. What is Content Pack?

Ans:- A Content pack is a readymade, predefined collection of visualizations, dataset, dashboards and reports using your chosen service.

75. Why would you use one? (Content pack)

Ans:- You would use one when you want to Get up and running quickly, instead of creating a reports from scratch.

76. What is Edit Interaction?

Ans:- Report authors can modify the visual interaction behaviour such that selections on certain visuals don't impact other visuals or only impact certain visuals. Additionally, for the visuals set to the highlight interaction by default, report authors can revise the interaction behaviour to filter.

If I have 3 Visual in a page, If I want to filter only one visual at that time, we will use edit interaction. **Format→ edit interactions→it will show the filter icon.**

We need to make it as none which ever visual we not required.

77. How many types of interactions are there in Power BI?

Ans:- The available types are - Drill down, roll up, filter, highlight and no impact.

78. Explain Charts in power BI?

Ans:-

1. **Bar Chart:**
   Bar chart is used to display comparative analysis in the visualization
2. **Line Chart:**

Line chart is used to display the time series analysis

3. **Combo Chart:**
   Combo chart allow you to combine a bar chart and line chart on the same visual.
4. **Tree Chart:**
   It will show the data from left to right, it will show bigger measure in a smaller size. Each measure will display in different colour.
5. **Water Fall Chart:**
   It is used to show the change in the particular value over a given period of time.

79. What type saving power BI file?

Ans:- Power BI file format is .pbix

80. How many types of joins in power BI?

Ans:- There are four types of Joins in power BI

   1. Right Join   2. Left Join   3. Inner Join   4. Full outer Join

81. What is Button?

Ans:-The Buttons are used to pop-up of multiple pages in a report.

82. **What is Custom Sort?**

Ans:- Custom sort allows you to define a specific order for displaying data. It is an easy way to predefine your own order for displaying data.

83. **Where is data stored in Power BI?**

Ans:- When data is ingested in Power BI, it is basically stored in Fact and Dimension Tables.

- **Fact Tables:** The central table in a start schema of a data warehouse, a fact table stores quantitative information for analysis and is not normalized in most cases.
- **Dimension Tables:** It is just another table in the star schema that is used to store attributes and dimensions that describe objects that are stored in a fact table.

84. What are many-to-many relationships and how can they be addressed in Power BI?

Ans: Many to Many relationships involve a bridge or junction table reflecting the combinations of two dimensions (e.g. doctors and patients). Either all possible combinations or those combinations that have occurred.

85. Difference between RELATED() and RELATEDTABLE()?

Ans:- RELATED refers to the column RELATEDTABLE() is used to reference a table on the many side of the relationship.

A simple example is to add a new calculated column to count how many sales there have been for each product.

= COUNTROWS(RELATEDTABLE(SalesFact))

You know RELEATEDTABLE() RETURNS A TABLE, and COUNTROWS() counts the rows in that table. This calculated column in the products table honor the row context.

86. Mechanism used to refresh and scheduled refresh?

Ans:- We did at power bi services at dataset level we used scheduled refresh.

Refresh→ on time (Manual)

Scheduled refresh→ Automatically

We will do min 30minitus per once but limit is 8 times per day in pro and 48 times per day in premium.

87. What are the issues faced in your project?

Ans:-

1. We have on issue with the large dataset we polling.
2. We tacked issue by creating the aggregate tables in the Azure SQL Server.
3. We configured the aggregate table in power bi using manage aggregation. So, when the user click on the details reports it will hit the base table for higher level information it will hit aggregate table.

88. What are the roles and Responsibility?

Ans:- Creating reports, sitting up the security, cleaning the data, making sure the report are getting refresh and share the reports and dashboards.

89. How can you interactive with client?

Ans:- I am interactive through

1. Daily meeting (Telephonic conversions)

2. BRD(Business requirement desk) .

90. How much time required for creating 10 measures, 10 reports and 20 or 30 visuals?

Ans:- It's all depends, If the we have the data model ready then it will take 1 to 2 weeks else 1 to 2 months.

 91. What are the customs visual used ?

Ans:- 1. Dot-Plot   2. Heap-Map   3. Bubble- Chart   4. Gauge   5. Double KPI's

92. What are the visuals ued?

Ans:- 1. Card   2. Water Chart   3. Tree Maps   4. Pie Chart   5. Tables   6. KPI

7.Donut Chart   8. Clustered Chart   9. MAP's   10. Multi row card

11. Line and stacked column chart   12.Stacked Bar Chart.

93. Which one u suggested for organizations. If the organization consists of 700 total users – 100 are Developer and the remaining 600 occasionally view BI content.

Ans:- The most economical deployment option would be to license Power BI Pro for the 100 users BI Developers and Power BI Premium for the 600 seeking occasional access to view BI content.

94.