

Practical: Google BigQuery

Question 1

The screenshot shows the Google BigQuery interface with the following details:

Query Editor:

```
1 -- 1. Filter all transactions that occurred in the year 2023
2 SELECT *
3 FROM `diesel-studio-478918-v1.sales.data`
4 WHERE EXTRACT(YEAR FROM Date) = 2023;
```

A note indicates: "This query will process 72.69 KB when run." and "Using on-demand processing quota".

Query results:

Row	Transaction ID	Date	Customer ID	Gender	Age	Product Category	Quantity	Price per Unit
1	191	2023-10-18	CUST191	Male	64	Beauty	1	
2	204	2023-09-28	CUST204	Male	39	Beauty	1	

Results per page: 50 1 – 50 of 998

Question 2

The screenshot shows the Google BigQuery interface with the following details:

Query Editor:

```
1 -- Q2. Display all transactions where the Total Amount is more than the average Total Amount of the entire dataset.
2 SELECT *
3 FROM `diesel-studio-478918-v1.sales.data`
4 WHERE `total amount` > (
5   SELECT AVG(`total amount`)
6   FROM `diesel-studio-478918-v1.sales.data`)
```

A note indicates: "Query completed".

Query results:

Customer ID	Gender	Age	Product Category	Quantity	Price per Unit	Total Am
CUST021	Female	50	Beauty	1	500	
CUST028	Female	43	Beauty	1	500	

Results per page: 50 1 – 50 of 350

Question 3

The screenshot shows a data processing interface with the following details:

- Query:**

```
1 -- Q3. Calculate the total revenue (sum of Total Amount).
2 SELECT
3 | SUM(`total amount`) AS `Total Revenue`
4 FROM `diesel-studio-478918-v1.sales.data`
```
- Status:** Query completed.
- Message:** Using on-demand processing quota.
- Results:** A table titled "Query results" showing the total revenue.

Row	Total Revenue
1	456000
- Page Navigation:** Results per page: 50, 1 – 1 of 1, navigation icons.

Question 4

The screenshot shows a data processing interface with the following details:

- Query:**

```
1 --Q4. Display all distinct Product Categories in the dataset.
2 SELECT DISTINCT `Product Category`
3 FROM `diesel-studio-478918-v1.sales.data`;
```
- Status:** Query completed.
- Message:** Using on-demand processing quota.
- Results:** A table titled "Query results" showing distinct product categories.

Row	Product Category
1	Beauty
2	Clothing
3	Electronics
- Page Navigation:** Results per page: 50, 1 – 3 of 3, navigation icons.

Question 5

The screenshot shows a database query editor interface. The top navigation bar includes 'Untitled query', 'Run', 'Download', 'Share', 'Schedule', 'Open in', 'More', and 'Save'. A message 'Query completed' is displayed. Below the editor area, a note says 'Using on-demand processing quota'. The main area is titled 'Query results' and contains a table with two rows. The table has columns 'Job information', 'Results', 'Visualisation', 'JSON', 'Execution details', and 'Execution graph'. The 'Results' tab is selected. The table data is as follows:

Row	Product Category	Total Quantity
1	Beauty	771
2	Clothing	894

Question 6

The screenshot shows a database query editor interface. The top navigation bar includes 'Untitled...ery', 'Run', 'Download', 'Share', 'Schedule', 'Open in', 'More', and 'Save'. A message 'Query completed' is displayed. Below the editor area, a note says 'Using on-demand processing quota'. The main area is titled 'Query results' and contains a table with three rows. The table has columns 'Job information', 'Results', 'Visualisation', 'JSON', 'Execution details', and 'Execution graph'. The 'Results' tab is selected. The table data is as follows:

Row	Customer ID	Age	Age_Group
1			
2			
3			

At the bottom, there is a pagination control: 'Results per page: 50 ▾ 1 – 50 of 1000 |< < > >|'.

Question 7

Untitled query

Run Download Share Schedule Open in More Save

```
1 --Q7. For each Gender, count how many high-value transactions occurred (where TotalAmount > 500).
2 SELECT
3   Gender,
4   COUNT(*) AS `High Value Transactions`
5 FROM `diesel-studio-478918-v1.sales.data`
6 WHERE `Total Amount` > 500
```

Query completed

Using on-demand processing quota

Query results

Save results Open in

Job information Results Visualisation JSON Execution details Execution graph

Row	Gender	High Value Trans...
1	Female	155
2	Male	144

Results per page: 50 1 – 2 of 2 |< < > >|

Question 8

Untitled query

Run Download Share Schedule Open in More Save

```
2 SELECT
3   `Product Category`,
4   SUM(`Total Amount`) AS `Total Revenue`
5 FROM `diesel-studio-478918-v1.sales.data`
6 GROUP BY `Product Category`
7 HAVING SUM(`Total Amount`) > 5000.
```

Query completed

Using on-demand processing quota

Query results

Save results Open in

Job information Results Visualisation JSON Execution details Execution graph

Row	Product Category	Total Revenue
1	Beauty	143515
2	Clothing	155580

Results per page: 50 1 – 3 of 3 |< < > >|

Question 9

The screenshot shows a database query editor interface. At the top, there are buttons for Run, Download, Share, Schedule, Open in, More, and Save. The query itself is:

```
1 SELECT
2   'Transaction ID',
3   'Price per Unit',
4   CASE
5     WHEN 'Price per Unit' < 50 THEN 'Cheap'
6     WHEN 'Price per Unit' BETWEEN 50 AND 200 THEN 'Moderate'
7     WHEN 'Price per Unit' > 200 THEN 'Expensive'
8   END AS 'Unit Cost Category'
9 FROM `diesel-studio-478918-v1.sales.data`
10
```

A green checkmark indicates "Query completed". Below the code, a message says "Using on-demand processing quota". The results section is visible at the bottom.

Question 10

The screenshot shows a database query editor interface. At the top, there are buttons for Run, Download, Share, Schedule, Open in, More, and Save. The query itself is:

```
1 SELECT
2   'Customer ID',
3   'Age',
4   'Total Amount',
5   CASE
6     WHEN 'Total Amount' > 1000 THEN 'High'
7     ELSE 'Low'
8   END AS 'Spending Level'
9 FROM `diesel-studio-478918-v1.sales.data`
10 WHERE `Age` >= 40;
```

A green checkmark indicates "Query completed". Below the code, a message says "Using on-demand processing quota". The results section is visible at the bottom.