ANSWER and EXPLANATION:

1. Option A is correct because materialized views periodically cache the results of a query for increased performance. Materialized views are suited to small datasets that are frequently queried. When underlying table data changes, the materialized view invalidates the affected portions and re-reads them.

2. Option D is correct because the data used to build the original model is no longer relevant. Retraining the model with recent data from the last 30 days will improve the predictions. To keep a watch on future data drifts, monitor the incoming data.

3. Option C is correct because the recommended approach is to use Cloud SQL Auth proxy. Permissions can be controlled by IAM. You don't need to track authorization lists for changing user IP addresses.

4. Option A is correct because Cloud Spanner supports interleaving that guarantees data being stored in the same split, which is performant when you need a strong data locality relationship.

5. Option B is correct because Cloud Spanner provides a global-scale, highly available database that supports relational data.

6. Option A is correct because the design does not monotonically increase, thus avoiding hotspots.

7. Option A is correct because if you have multiple BigQuery projects and users, you can manage costs by requesting a custom quota that specifies a limit on the amount of query data processed per day.

8. Option A is correct because Key Visualizer for Bigtable generates visual reports for your tables that detail your usage based on the row keys that you access, show you how Bigtable operates, and can help you troubleshoot performance issues.

9. Option D is correct because using a Transfer Appliance is recommended to transfer hundreds of terabytes of data. For large data transfers that occur regularly, a dedicated, hybrid networking connection is recommended.

10. Option A is correct because graceful decommissioning will finish work in progress on a worker node before it is removed from the Dataproc cluster.

11. Option D is correct because Cloud SQL provides managed MySQL, PostgreSQL, and SQL Server databases, which will reduce administrative effort. Twenty-five TB can be accommodated efficiently on Cloud SQL.

12. Option D is correct because Connected Sheets gives you a direct and easy way to share BigQuery data through Google Sheets.

13. Option B is correct because Dataflow is the recommended data processing product for streaming data. Dataflow can be programmed to remove duplicates, delete empty fields, and perform other custom data processing.

14. Option A is correct because you use hopping windows to compute moving averages.

15. Option A is correct because Bigtable is the recommended database for time series data that requires high throughput reads and writes.

16. Option A is correct because Dataproc is a fully managed service for hosting open source distributed processing platforms, such as Apache Spark, Presto, Apache Flink and Apache Hadoop on Google Cloud. Cloud Storage is the preferred storage option for all persistent storage needs.

17. Option C is correct because the amount of data is relatively low and also varied. A model built using only this data wouldn't be accurate. AutoML is appropriate because it uses transfer learning based on other similar data.

18. Option B is correct because this model appears to be overfitting. Using cross-validation will run the validation on multiple folds of the data, which reduces the overfitting.

19. Option C is correct because Cloud DLP is the recommended approach to redact, mask, tokenize, and transform text and images to help protect data privacy.

20. Option B is correct because pull mode allows new event data to be pulled for processing on demand when the previous data is processed. Pub/Sub will absorb and retain new events in the interim without losing them.