# Intro to MLEP

1. Static datasets are used for production ML modeling.
   - False
   - True

   *Dynamic real-world data is used.*

2. In production ML, the design priority is fast training.
   - No
   - Yes

   *Fast training and choosing a high-performance algorithm are the design priorities for prototypes or research ML.*

3. Developers adhere to modern software development to produce low-maintenance software, and to address project evolution. Select all the key aspects of modern software development (Check all that apply):
   - Monitoring

     *The deployed model's performance is properly evaluated.*
   - Fast Training
   - Testability

     *The data entering the system is continuously monitored and tested.*
   - Best practices
   - Correct

     *Perfect! Software development best practices must be resolved.*

4. Model-performance needs to be continuously monitored, and new data, ingested and re-trained.
   - Yes
   - No

     *After deployment, it's necessary to continuously evaluate the model's performance.*

5. ML pipeline workflows are almost always DAGs.
   - True
   - False

*The components of an ML pipeline are scheduled based on dependencies defined by a DAG.*

6. TensorFlow Extended (TFX) is an end-to-end platform for deploying production ML pipelines.
   - No
   - Yes

7. Production machine learning combines which two key disciplines?
   - Machine learning development

     *ML Development focuses on specific issues related with data and model predictions quality.*
   - Software testing
   - Modern software development

     *Well-designed software that adheres to best practices is key for the success of a production grade machine learning system.*
   - Feature selection and engineering

8. What are the unique challenges to overcome in a production-grade ML system? (Check all that apply)
   - Deploying the model to serve requests.
   - Handling continuously changing data.

     *Data will change over the life cycle of a production system, which can harm its performance.*
   - Optimizing computational resources and costs.

     *You want your ML system to be as frugal as possible.*
   - Continually operating while in production.

     *ML systems need to be flexible to operate while the system stages or modules are being changed or redesigned.*
   - Assessing model performance.
   - Training the model on real world data.
   - Building integrated ML systems.

     *ML systems perform all operations starting from ingesting the data into the system to deployment.*

9. Production grade machine learning challenges are addressed by implementing an important concept:
    - Machine learning pipelines
    - Directed Acyclic Graphs (DAGs)
    - Orchestrators
    - Tensorflow Extended (TFX)

    *ML pipelines provide support for automating, monitoring and maintaining a model as you continue to train it over its lifetime.*

10. TensorFlow Lite is a deep learning framework to deploy TFX pipelines into:
    - Mobile devices
    - Web browser
    - Servers

    *Tensorflow Lite is the tool for deploying TFX pipeline into mobile and IoT devices.*