1. Choose the odd one out. Normal spark streaming takes care of:
   a. automatic looping between the batches
   b. storing intermediate results
   c. combining results to previous batch result
   d. ***Future upgrades and enhancements**

   Explanation: D is odd man out because future enhancements are expected, its not provided right now.

2. Normal spark streaming (Dstream) is built on top of RDDs
   a. ***TRUE**
   b. FALSE

3. Spark structured streaming API:
   a. offers unified model for batch and stream processing.
   b. runs over the spark sql engine. Takes advantage of the sql based optimizations.
   c. native support for event time semantics.
   d. ***All of the above**

   Explanation: All of the above are true in regards to Spark structured streaming API

4. Append output mode is not supported with streaming aggregation
   a. ***TRUE**
   b. FALSE

5. Spark structure Streaming supports spark sql engine optimization.
   a. ***TRUE**
   b. FALSE

6. How many shuffle partitions will be created by default?
   a. 2
   b. 20
   c. ***200**
   d. 2000

Explanation: In streaming, default number of partitions is 200

7. Which DataStream writer output mode is not allowed while doing a streaming aggregation?
   a. update
   b. Insert
   c. *append
   d. complete

   Explanation: Append is not support for streaming aggregation.

8. Choose the correct configuration to gracefully shutdown Spark streaming application.
   a. spark.streaming.config("stopGracefullyOnShutdown","false")
   b. spark.streaming.config("stop.GracefullyOnShutdown","true")
   c. *.config("spark.streaming.stopGracefullyOnShutdown","true")
   d. .config("spark.streaming.stop.GracefullyOnShutdown","true")

   Explanation:
   .config("spark.streaming.stopGracefullyOnShutdown","true")

9. Data Stream reader allows us to define the trigger.
   a. TRUE
   b. *FALSE
   c. Explanation: Data Stream write supports defining the trigger.

10. A series of fixed size, overlapping window is called:
    a. slicing time window
    b. Tumbling time window
    c. Overlapping time window
    d. *sliding time window

    Explanation: A series of fixed size, overlapping window is called sliding time window

11. A _____ is a threshold to specify how long the system waits for late events
   a. *watermark
   b. sliding window
   c. batch interval
   d. event time

   Explanation: A **watermark** is a threshold to specify how long the system waits for late events

12. The default output mode of a spark streaming event?
   a. *append
   b. update
   c. complete
   d. insert

   Explanation: append is default output mode of a spark streaming event

13. Events within the watermark may or may not be taken.
   a. TRUE
   b. *FALSE
   Explanation: Events within the watermark are considered

14. Stateful operations can lead to out of memory error.
   a. *TRUE
   b. FALSE

15. Which built-in output sink stores the output to a specified directory?
   a. Console Sink
   b. Memory Sink
   c. *File Sink
   d. Foreach Sink

   Explanation: File is a built in stores the output to a specified directory.