**Give brief answers to the questions below:**

1. **Why Map-reduce program is needed in Pig Programming?**

Pig is an application that runs on top of MapReduce and abstracts Java MapReduce jobs away from developers. It is needed to make use of advanced application programming interface.

1. **What are advantages of pig over MapReduce?**

It has many built-in functions and operations.

1/20th lines of code as compared to MapReduce.

Java is not a preferred choice for many.

It simplifies the use of Hadoop by allowing SQL-like queries to a distributed dataset.

1. **What is pig engine and what is its importance?**

Pig parses, compiles, optimizes and fires MapReduce statements. Pig Engine acts as an interpreter between Pig Latin Script and MapReduce jobs.

1. **What are the modes of Pig execution?**

There are two modes of pig execution:

* 1. Local mode

Type the command “pig –x local” to enter into local mode

* 1. MapReduce or Hadoop mode

Type the command “pig” or “pig –x mapreduce”

1. **What is grunt shell in Pig?**

It is an interactive shell for executing the Pig commands.

It is used when script file is not provided.

It can execute scripts via run or exec commands.

1. **What are the features of Pig Latin language?**

It is a SQL-like language.

Using Pig Latin, programmers can perform MapReduce tasks easily without having to type complex codes in Java.

It reduces the length of the code.

Rich set of operators.

It handles both structured and unstructured data.

Using the existing operators’ users can develop their own functions to read, process, and write data.

Pig provides the facility to create User-defined Functions in other programming languages such as Java and invoke or embed them in Pig Scripts.

1. **Are Pig Latin commands case sensitive?**

Function names PigStorage and COUNT are case sensitive. KeywordsLOAD, USING, AS, GROUP, BY, FOREACH, GENERATE, and DUMP are case insensitive

1. **What is a data flow language?**

In a data flow language a stream of data is passed from one instruction to other to be processed.