

- (d) Oozie
- 1-d. Used for collection and ingestion of semi-structured data. (CO2) 1
- (a) Hbase
 - (b) PIG
 - (c) Flume
 - (d) Sqoop
- 1-e. Hadoop streaming allows running map reduce program in which of the languages are used (CO3) 1
- (a) R
 - (b) Python
 - (c) Pearl
 - (d) All of the above
- 1-f. Which one is name of the C++ interface to hadoop mapreduce? (CO3) 1
- (a) Hadoop streaming
 - (b) Hadoop Pipes
 - (c) Mahaout
 - (d) Oozie
- 1-g. It is not a property of cloud computing? (CO4) 1
- (a) virtualization
 - (b) composability
 - (c) scalability
 - (d) all of the mentioned
- 1-h. It is an example of a SaaS cloud service? (CO4) 1
- (a) Google Workspace
 - (b) Dropbox
 - (c) Salesforce
 - (d) All of the above
- 1-i. _____ firewalls are a combination of other three types of firewalls. (CO5) 1
- (a) pocket filtering
 - (b) circuit level gateway
 - (c) Application level gateway
 - (d) statefull multilayer inspection

- 1-j. Physical or logical arrangement of network is _____ (CO5) 1
- (a) Topology
 - (b) Routing
 - (c) Networking
 - (d) Control

2. Attempt all parts:-

- 2.a. Define Veracity. (CO1) 2
- 2.b. Define Edit logs. (CO2) 2
- 2.c. Explain Hadoop archives? (CO3) 2
- 2.d. List out any two components of Open Stack. (CO4) 2
- 2.e. Define Cloud Datastore. (CO5) 2

SECTION B

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3. Answer any five of the following:-

- 3-a. How data integration, visualization, transmission could be a challenge for conventional systems. (CO1) 6
- 3-b. Differentiate between Parallel and Distributed computing. (CO1) 6
- 3-c. Can you explain the MR frameworks. (CO2) 6
- 3-d. Write internal procedure of Map reduce work. (CO2) 6
- 3.e. Elaborate SCALA ? Explain all the components in SCALA. (CO3) 6
- 3.f. Explain Cloud service model in detail. (CO4) 6
- 3.g. Define the NoSQL Bigdata services in cloud. (CO5) 6

SECTION C

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4. Answer any one of the following:-

- 4-a. How Cloud Computing provides scalability and fault tolerance. (CO1) 10
- 4-b. Explain in terms of cloud computing - (A) On demand Services (B) Elasticity on demand (C) Reliability (D) Resource pooling (CO1) 10

5. Answer any one of the following:-

- 5-a. Explain MRv2 in detail with all it's components. (CO2) 10
- 5-b. Explain in detail the following terms related to YARN. (1) Resource Manager (2) Node Manager (3) HBASE (4) Container (CO2) 10

6. Answer any one of the following:-

- 6-a. Explain in detail about HDFS. Write all advantages.(CO3) 10

6-b. Write all the differences between regular FileSystem and HDFS. (CO3) 10

7. Answer any one of the following:-

7-a. Explain Conceptual level, Logical and operational level and Infrastructure level in terms of Cloud Federation. (CO4) 10

7-b. Explain the need of Cloud Computing in Hadoop in detail. (CO4) 10

8. Answer any one of the following:-

8-a. Define IP Address. Explain Classification of its classes. (CO5) 10

8-b. Explain the benefits, advantages, usage and features of VPC. (CO5) 10

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