PBV-003-1081003   Seat No. _____

M. Sc. (I.T.) (Sem. I) (CBCS) Examination

November / December - 2018

CS - 03 : NoSQL Database : MongoDB

Faculty Code : 003
Subject Code : 1081003

Time : $2\frac{1}{2}$ Hours]   [Total Marks : **70**

Instruction : Write answers of all the questions in main answer sheet.

1 (a) Attempt the following objective questions.   **4**
    (1) What is document ?
    (2) What is the default port address of the MongoDB ?
    (3) Define NoSQL.
    (4) What is scalability ?

  (b) Attempt any one of the following :   **2**
    (1) Define Database and Collection in MongoDB.
    (2) Write a note on advantages of NoSQL.

  (c) Attempt any one of the following :   **3**
    (1) Write a note on data model and working with data.
    (2) What is database-as-a-service ? Explain it.

  (d) Attempt any one of the following :   **5**
    (1) List out types of NoSQL databases and explain it.
    (2) Explain characteristics of NoSQL.

2 (a) Attempt the following objective questions.   **4**
    (1) How does a new database get created in MongoDB ?
    (2) What is relational model ?
    (3) In MongoDB, the _____method is used to add or insert new documents into a collection in your database.
    (4) To check the created collections, _____ command is used.

(b) Attempt any one of the following :　　　　　　**2**
(1) Explain findOne( ) method.
(2) Explain sort( ) method.

(c) Attempt any one of the following :　　　　　　**3**
(1) Explain insert() method with example.
(2) Write a note on managing relationships between documents.

(d) Attempt any one of the following :　　　　　　**5**
(1) Explain update( ) with example.
(2) Explain find( ) method in detail.

3　(a) Attempt the following objective questions.　　　　　**4**
(1) What is HTTP session ?
(2) Is HTTP stateless protocol ?
(3) What is session_id( ) ?
(4) Define session_destroy( ).

(b) Attempt any one of the following :　　　　　　**2**
(1) Write a note on limitations of php native session handling.
(2) Advantages of HTTP session.

(c) Attempt any one of the following :　　　　　　**3**
(1) Write a code for php native session handling.
(2) What is session manager ? Explain it.

(d) Attempt any one of the following :　　　　　　**5**
(1) Explain session_set_save–handler( ) with its arguments.
(2) Write a code to create login, logout and user profile page using session.

4　(a) Attempt the following objective questions.　　　　　**4**
(1) What is real time analytics ?
(2) What is map phase ?
(3) The concept of MapReduce has been derived from _____ programming paradigm.
(4) The result of group( ) method has to be less than _____ in size.

(b) Attempt any one of the following : **2**
    (1) Explain runCommand( ).
    (2) Explain emit( ) method.

(c) Attempt any one of the following : **3**
    (1) Write a note on difference between MapReduce and group( ).
    (2) Write a code for listing distinct values for specific field.

(d) Attempt any one of the following : **5**
    (1) Explain concept of MapReduce in detail.
    (2) Write a code to find department wise maximum salary using MongoDB.

5 (a) Attempt the following objective questions. **4**
    (1) In replication, _____ operations are performed on slave.
    (2) The _____ collection of GridFS will contain the file name, type, size, upload time etc. information.
    (3) What is optimization ?
    (4) What is GridFS ?

(b) Attempt any one of the following : **2**
    (1) Explain files and chunks collection.
    (2) Explain getGridFS( ) method.

(c) Attempt any one of the following : **3**
    (1) Write a code for uploading file in GridFS.
    (2) Explain the concept of replication.

(d) Attempt any one of the following : **5**
    (1) What is sharding ? Explain it.
    (2) Write a code reading files in chunks from GridFS.

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