


RAN-2511001005033001

B.Sc. (Computer Science) NCF-NEP (Sem. V) Examination October - 2025
Major - Handling Database Using Python (CC5-505-MJ3)

Time: 2 Hours]
[Total Marks: 25
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
 Fill up strictly the above details on your answer book

Seat No.:

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Student's Signature

Q-1. Answer the following.
[08]
(A) Answer any four.
[04]

- The Shulba Sutras are primarily associated with:
 - Astronomy
 - Geometry of altar constructions
 - Poetry
 - Algebraic equations
- The Shulba Sutras belong to which part of Vedic literature?
 - Brahmanas
 - Samhitas
 - Aranyakas
 - Vedangas
- The formula of area of a cyclic quadrilateral according to Brahmagupta is:
 - $\sqrt{[(s-a)(s-b)(s-c)(s-d)]}$
 - $\frac{1}{2} \times \text{base} \times \text{height}$
 - πr^2
 - $ab + cd$
- The term “Shulba” in Shulba Sutras literally means:
 - Number
 - Rope
 - Angle
 - Circle
- The trigonometric term Kotijya in Aryabhatiya refers to:
 - Cosine
 - Tangent
 - Cotangent
 - Secant

(B) Answer any four
[04]

- Define NoSQL and explain why it is needed.
- What is CAP theorem?
- What is Neo4j used for?
- Differentiate between RDBMS and NoSQL.
- List two advantages of MongoDB over RDBMS.

Q-2. Answer the following.
[12]

- (A) Explain CRUD operations in MongoDB with example.

[07]
OR

- (A) Explain inserting and querying data. How are sort, limit, and skip used?

[07]

- (B) Explain the need, features, and data model classifications of NoSQL databases.

[05]

Q-3. **Answer any one.** **[05]**

- (A) Explain connect() and execute() methods in sqlite3 module.
 - (B) Explain how to import and export CSV files in SQLite using Python.
 - (C) Describe geometry management in Tkinter with examples of place(), packf(), and grid()
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