

SYNERGY INSTITUTE OF ENGINEERING AND TECHNOLOGY, DHENKANAL

Near NH-55, Banamali Prasad – 759001



Assignment-III

Full Marks-40

Duration-Within 1 Week from Notification

Name-

Registration No-

Subject with Code: Database Engineering(CSPC2004)

Course & Branch: B. Tech: CSE

Year & Semester: 2nd & 4th

Section- A

Answer All Questions

1. What is database normalization, and why is it important in database design??
[2marks][CO3][L1]
2. What is the First Normal Form (1NF) in database normalization??
[2marks][CO3][L1]
3. What is the Third Normal Form (3NF), and how does it further refine the database schema??
[2marks][CO3][L1]
4. What is the purpose of the Fourth Normal Form (4NF), and when is it applied in database design?
[2marks][CO3][L1]

Section-B

Answer All Questions

1. Explain the inference rule?
[5marks][CO3] [L2]
2. Explain 2NF in DBMS?
[5marks][CO3] [L2]

Section-C

Answer All Questions

1. What is BCNF? Explain how to convert 3NF to BCNF with suitable example?
[10 marks][CO3][L2]
2. Given a relation R(A, B, C, D, E) and Functional Dependency set $FD = \{ A \rightarrow B, B \rightarrow E, C \rightarrow D \}$, determine whether the given R is in 2NF? If not convert it into 2 NF.
[10 marks][CO3][L3]