Subject Code: CDV 4025
Subject: REAL-WORLD
SCALABLE ARCHITECTURES

Duration: 3 hours
Max. Marks: 100

Instructions
- All Questions are compulsory
- The Question paper consists of 2 sections - Part A contains 10 questions of 2 marks each. Part B consists of 5 questions of 16 marks each.
- There is no overall choice. Only Part B question include internal choice.

PART – A
(2 * 10 = 20 Marks)

1. Give example of data source
2. Give an example of growth of big data.
3. Draw a diagram of streaming architecture with an example.
4. Explain sample Kafka architecture with an example.
5. What are the components of zeta architecture?
6. Give examples of distributed file system.
7. What are the examples of worldwide IoT devices?
8. What are the real-life examples of actuation?
9. Give overview and challenges of scalable architecture applications.
10. What are the real-life examples of performance tuning tricks?

PART – B
(16 * 5 = 80 Marks)

11. a) Explain with examples, how fault scalability can be obtained? (8+8)

OR

b) With examples, explain lambda architecture and use cases.

12. a) Give benefits and limitations of real time machine learning model. (8+8)

OR

b) What are the use cases: CEP on streams?

13. a) Give examples and explanation of global resource management in context of enterprise applications. (8+8)

OR

b) What are the types of pluggable compute model/execution engine? Explain with examples. (8+8)

14. a) Compare different layers for IOT.

OR

b) Give an account of event driven architectures.

15. a) Give overview and challenges of Airbnb. Also give examples (8+8)

OR

b) With an explanation, give examples of informal philosophies.