

22594

23124

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) Define Cloud Computing.
- (b) List two features of Platform as a Service (PaaS).
- (c) Define Data Pipeline.
- (d) State the use of cloud data governance.
- (e) Define DevOps.
- (f) State two advantages of AWS SageMaker.
- (g) State difference between Hybrid and Multi-cloud Kubernetes.

**2. Attempt any THREE of the following :**

**12**

- (a) Explain the properties and characteristics of cloud computing.
- (b) Compare Public, Private and Hybrid cloud deployment model (any 4 points).
- (c) Enlist data pipeline characteristics.
- (d) Elaborate cloud data warehouse functions.



- 3. Attempt any THREE of the following : 12**
- (a) Describe containerization in cloud computing.
  - (b) Describe evolving from ETL to ELT.
  - (c) Illustrate SLA in cloud with example.
  - (d) Compare commercial and open source ML systems.
  - (e) State advantages of cloud computing in Machine learning.
- 4. Attempt any THREE of the following : 12**
- (a) Explain Elastic Resources with example.
  - (b) Explain Software as a service in detail.
  - (c) Describe different challenges and risks in cloud computing.
  - (d) Discuss cloud based tools used for data in ML in detail.
  - (e) Describe data delivery in cloud computing.
- 5. Attempt any TWO of the following : 12**
- (a) Elaborate container registries.
  - (b) Explain Batch data and Streaming data.
  - (c) Discuss various ML systems available in market and state any 3 benefits of using managed ML platforms.
- 6. Attempt any TWO of the following : 12**
- (a) Describe any six issues which are common with Kubernetes.
  - (b) Elaborate Azure ML Studio.
  - (c) Explain modern data pipeline architecture.
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