Name: **Enrolment No:**	

UPES

End Semester Examination, May 2023

Course: Big Data Security **Semester :VIII**

Program: B.Tech CSE (Big Data) **Time : 03 hrs.**

Course Code: CSBD4002 **Max. Marks : 100**

Instructions: Calculator is not allowed.

SECTION A
(5Qx4M=20Marks)

S. No.	Answer all the questions.	Marks	CO
Q 1	List down the various types of malware and discuss their features.	**4**	**CO1**
Q 2	Explain different aspects of Kerberos briefly.	**4**	**CO2**
Q 3	Illustrate the various security features of Hadoop in brief	**4**	**CO3**
Q 4	Explain the functionalities of Digital Envelop precisely.	**4**	**CO4**
Q 5	Interpret Data Ingestion in brief.	**4**	**CO5**

SECTION B
(4Qx10M= 40 Marks)

Q 6	Discuss briefly various security goals and explain the security triad elaborately. Discuss the various security design techniques.	**6+4**	**CO1**
Q 7	Discuss the internal architecture of Kerberos with a suitable diagram and related protocols in detail.	**10**	**CO2**
Q 8	Demonstrate the various authorization models of Apache Sentry. Define column-level privileges. OR Illustrate the working principle of DES with the suitable example.	**7+3** **10**	**CO3**
Q 9	Explain the Diffie-Hellman Key Exchange process in brief. Write short notes on Internet Key Exchange (IKE).	**6+4**	**CO4**

SECTION-C (2Qx20M=40 Marks)			
Q 10	Figure out the applications and limitations of a gateway in packet filtering. Explain the client-side and server-side encryption mechanisms in AWS. Illustrate the Key Management system in AWS briefly.	**6+8+6**	**CO4**
Q 11	Interpret the various types and layers of data ingestion in brief. Explain the various advantages of data ingestion. Summarize the various security aspects of data ingestion. OR Explain the following in brief. a) WPA3 handshake b) Monoalphabetic Cipher c) Certificate-based authentication system d) StackGourd	**7+6+7** **20**	**CO5**