Vidyalankar Institute of Technology
Semester 7 – CMPN - Mid Semester Assessment – 2

Date: 30/09/24	Big Data Analytics	30 Marks/60 mins. /1 hour

1		Solve any two (5 marks each)	CO
	A	Explain columnar archiutectural style of Google Big Table	CO3
	B	Compare key-value pair with document style architecture.	CO3
	C	Explain DSMS architecture. What are standing queries? Give one exxample of a standing query.	CO3
2		Solve any two (5 marks each)	
	A	Determine number of distinct elements in the below strem of data using FM algorithm. S=1,3,2,1,2,3,4,3,1,2,3,1 h(x)=(6x+1) mod 5	CO4
	B	How Bloom filter effectively determines whether an element is present in set or not? Illustrate with an example	CO4
	C	An E-commerce website has thousands of products and millions of transactions. The wesite wants to determine (approximately) how many times a product X is sold in last K sales. Suggest and explain a suitable technique.	CO4
3		Solve any one (10 marks each)	
	A	An online music store (Example: Spotify) wishes to create your profile based on songs/ music that you like to hear so that it can recommend you new songs/ music launched recently. For example: You like to listen to songs of Arijit Singh then it can notify you (without you making a specific request) that a new album of Arijit Singh is released on Spotify which you may like to listen. List filtering constraints, suggest suitable filtering technique to be used by the recommendation system and state it's limitations.	CO5
	B	A social media platform having billions of users wants to determine communities wherein a group of users can be identified to be closely related/ following/ friends with others in the group. What big data technique will be useful? Illustrate with suitable example.	CO5

CO3	Understand different NoSQL systems and handles big data.
CO4	Apply advanced techniques for emerging applications like stream analytics.
CO5	Achieve adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc..