Name: Enrolment No:	

UPES

End Semester Examination, December 2023

Course: CRYPTOGRAPHY AND NETWORK SECURITY **Semester: V**

Program: BT-(CSE-H+NH)-All Spec **Time : 03 hrs. Max**

Course Code: CSEG 3040P

Marks: 100

SECTION A
(4+4+4+4+4=20Marks)

S. No.		Marks	CO
Q 1	Calculate 2^100 mod 7.	**4**	**CO1**
Q 2	Calculate 10^100 mod 70. Why the previous calculation is different from calculation of 2^100 mod 7.	**4**	**CO2**
Q 3	Deine and discuss Euler Totient Function. Why it is important in cryptography.	**4**	**CO1**
Q 4	Discuss why for Euler totient function f(xy), following relation is true = f(xy) = f(x)f(y) for integer x,y > 0.	**4**	**CO1**
Q 5	Explain asymmetric key cryptography in a short note.	**4**	**CO1**
SECTION B **(10+10+10+10 = 40 Marks)**			
Q 6	Describe the differences between block and stream cypher. Explain with example.	**10**	**CO2**
Q 7	Describe zero knowledge proof.	**10**	**CO2**
Q 8	Explain why cracking Deffi Hillman key exchange is considered to be hard?	**10**	**CO2**
Q 9	Explain the reason behind the following believe: “With quantum computer, message encrypted with Deffi Hillman algorithm can be cracked.”	**10**	**CO4**
SECTION-C **(2Qx20M=40 Marks)**			
Q 10	Explain Deffi Hillman algorithm with an example.	**20**	**CO3**
Q 11	Describe different kind of viruses and mallwares.	**20**	**CO4**