GANPAT UNIVERSITY
B. TECH SEM-VI (COMPUTER ENGINEERING/INFORMATION TECHNOLOGY)
FIRST INTERNAL EXAMINATION – FEBRUARY-MARCH 2023
2CEIT6PE3: Cryptography and Network Security

TIME: 1 Hour   TOTAL MARKS: 20

Instructions:
4) Figures to the right indicate full marks.
5) Be precise and to the point in your answer.
6) The text just below marks indicates the Course Outcomes Numbers, (CO) followed by the Bloom's taxonomy level of the question, i.e., R: Remembering, U: Understanding, A: Applying, N: Analyzing, E: Evaluating, C: Creating.

Q.1 Explain Security Mechanism and also describe the relation between Security Services and Security Mechanisms.   **[4]**
                                                                           1U

Q.2 Differentiate Mono-alphabetic and Polyalphabetic cipher and Describe Polyalphabetic cipher with example.   **[4]**
                                                                           3NU

Q.3 Calculate the Multiplicative Inverse of 1098 in Z_{511} using Extended Euclidian Algorithm. **[4]**
4A

Q.4 Solve the following Linear Congruence and calculate the value of 'x' and 'y'. **[4]**
$5x + 7y + 3 \equiv 10 \pmod{7}$
4A
$2x + 3y + 7 \equiv 10 \pmod{7}$

Q.5 Explain following with suitable example: **[4]**
5) Set of Residues **1U**
6) Congruence
7) Additive Inverse
8) GCD

-------------**END OF PAPER**--------------