

Pandit Deendayal Energy University, Gandhinagar

School of Technology

Internal Examination 1

B. Tech. (ICT)

Date: 17/09/2021

Course Name : Information Security

Semester – V

Time: 03.00 PM to 04:30 PM

Course Code : 20IC310T

Max. Marks: 30

Instructions :

- Submit legible hand written assignment on foolscap A4 size pages as single pdf- named with your roll no. and name.
- Write your name, roll no., subject name and code at top of the assignment.
- Assume suitable data wherever essential and mention it clearly.
- Writing appropriate units, nomenclature, and drawing neat sketches/schematics wherever required is an integral part of the answer.
- Submit assignment online through Teams only.
- Each question is of 10 marks
- Only handwritten answers allowed.

No	Question	Mark	CO
1	Assume that you are in ancient jungle and found one old calculator who will support arithmetic operations (+, -, *, /, mod) upto 4 decimal places only. For example, in $A * B$, $A < 10000$ and $B < 10000$. Using this device find the answer to following puzzle. (1 mark for answer, 9 marks for step). Find $(7656 * 987 * 5435 * 432 * 9898 * 20 * 1234 * 2222) \bmod 9$	10	CO2
2	Sherlock Holmes got the following ciphertext “EMMENGSNBXT” over the open channel. Holmes immediately deduce that the person has used 5X5 Playfair cipher with the key “CRONOP” to encrypt the message. Find the plaintext from above information. (1 mark for answer, 9 marks for step).	10	CO4
3	Discuss the security issues with relevant to COVID-19 only as follows. <ul style="list-style-type: none">• Justify the need of security (1 mark)• Discuss the effect of Active Attack with an example (3 marks)• Discuss the effect of Passive Attack with an example (3 marks)• Discuss the need of symmetric ciphers (i.e. DES/AES) with an example (3 marks)	10	CO6