UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course: Data Security **Semester: I**
Program: M.Tech CSE **Time 03 hrs.**
Course Code: CSCS7001P **Max. Marks: 100**

Instructions: Attempt all Sections

SECTION A

Attempt all questions. Each question carries 4 marks   **[20 marks]**

S. No.		Marks	CO
Q1	Differentiate between active and passive attack with suitable examples.	4	CO1
Q2	State the properties a digital signature should have. Also bring out the essential points in digital signature scheme.	4	CO1
Q3	Explain the various IDS techniques. How can we prevent false alarms in IDS	4	CO2
Q4	Draw a matrix that shows the relationship between security mechanism and attacks.	4	CO2
Q5	Write short notes on: Rogue Access Points, DoS, DDoS, Passive Capturing	4	CO3

SECTION B

Attempt all questions. Each question carries 10 marks   **[40 marks]**

Q6	"Top-down approach to data security is superior to bottom-up approach" Comment.	10	CO3
Q7	Explain security management system in online shopping and payment gateway system.	10	CO4
Q8	In PGP, can an e-mail message use two different public key algorithms for encryption and signing? How is this defined in a message sent from Alice to Bob?	10	CO4
Q9	"A bank is performing all its transactions over the internet". What kind of security is required? Illustrate with any bank as an example **OR** Bring out the steps you will take to conclude that a URL is malicious. Also steps you will take when you encounter a malicious URL	10	CO5

SECTION-C

Attempt all questions. Each question carries 20 marks   **[40 marks]**

Q10	Explain the National Cyber Security Policy in India. Also give your opinion on the effectiveness of the Indian Policy in comparison to that of the United States.	20	CO5
Q11	Referring to the case study on Wearable Medical Sensor Systems discuss the Wireless Communication Trade-offs. **OR** Referring to the Data Privacy Case Study how can Data Privacy be Practiced.	20	CO2