UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2022

Course: IT Application & Data Security   **Semester: III**
Program: B.Tech CSE+BLCH   **Time: 03 hrs.**
Course Code: CSSF 2005   **Max. Marks: 100**

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Name any five hardware based mechanisms/tools to enhance data security.	4	CO1
Q 2	How crucial is input validation?	4	CO2
Q 3	In short elaborate what is cookie replay?	4	CO1
Q 4	How can be an elevation of privilege associated with data security?	4	CO4
Q 5	Highlight the importance of code analysis.	4	CO3

SECTION B
(4Qx10M= 40 Marks)

Q 6	Examine the effective process of data erasure in detail.	10	CO2
Q 7	Classify various web application attacks and suggest countermeasures to prevent web application threats.	10	CO3
Q 8	What is cryptography and what are the major cryptographic techniques? Cryptographic techniques safeguard data or application security, discuss.	6+4	CO4
Q 9	Highlight the procedure employed by a malicious user to execute a SQL injection attack. **OR** Highlight the procedure employed by a malicious user to execute a cross site scripting attack.	10	CO2

SECTION-C
(2Qx20M=40 Marks)

Q 10	How is auditing and logging crucial for an effective cyber security establishment. What are all important steps to be covered in auditing and logging?	20	CO5
Q 11	Write short notes on: a) Excessive privilege abuse. b) Cryptanalysis c) Malware threat techniques d) Bluetooth threat countermeasures **OR** For the below listed threat techniques, identify and document the applicable countermeasures. a) SQL Injection b) Phishing attacks c) Buffer Overflow d) XSS attacks	**5 ×4**	**CO1** **CO2**