

Name:  
Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, Dec 2022**

Program Name : M. Tech (CSE)

Semester : 1<sup>st</sup>

Course Name : Cyber Security and Ethics

Time : 3 hr

Course Code : CSCS 7002

Max. Marks : 100

Nos. of page(s) : 01

Instructions :

**SECTION A**

| Q. No. | Questions                                                                                                                   | Marks | CO  |
|--------|-----------------------------------------------------------------------------------------------------------------------------|-------|-----|
| 1      | Why do we need to worry about information security?                                                                         | 4     | CO2 |
| 2      | How can we responsibly and safely store and transmit sensitive information?                                                 | 4     | CO1 |
| 3      | Do our documented policies match what is actually happening in practice? If yes, then explain it with proper justification. | 4     | CO2 |
| 4      | How can we promote a culture of moral growth and maturity in security research and testing?                                 | 4     | CO1 |
| 5      | What are Intellectual Property Laws in India?                                                                               | 4     | CO3 |

**SECTION B**

|   |                                                                                                                                     |    |     |
|---|-------------------------------------------------------------------------------------------------------------------------------------|----|-----|
| 6 | Describes the information security governance and risk management.                                                                  | 10 | CO2 |
| 7 | Can we detect an attempted or successful cybersecurity incident, brute force attack, or data breach? If yes, then how we detect it. | 10 | CO1 |
| 8 | What are risks in implementing the RSA algorithm without padding?<br><b>OR</b><br>Describe security architecture and design.        | 10 | CO3 |
| 9 | Define:<br>I. Threat<br>II. DoS Attack<br>III. Malware<br>IV. Macro Virus<br>V. Spoofing                                            | 10 | CO1 |

**SECTION-C**

|    |                                                                                                                                                                                         |    |     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|
| 10 | Dexter wants to set up his own public and private keys. He chooses $p = 23$ and $q = 19$ with $e = 283$ . Find $d$ so that $ed$ has a remainder of 1 when divided by $(p - 1)(q - 1)$ . | 20 | CO2 |
| 11 | Explain the security issues with hardware, storage device and downloadable devices.<br><b>OR</b><br>Explain the intellectual property in cyberspace.                                    | 20 | CO3 |