## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
### End Semester Examination, Jan 2022

**Course:  M. Tech. CSE**        **Semester:  1**
**Subject: Cyber Security and Ethics**        **Time: 03 hrs.**
**Subject Code: CSCS7002P**        **Max. Marks: 100**
**Instructions: The marks for each question are given before.**

### SECTION A

| S. No. | | Marks | CO |
|---|---|---|---|
| Q 1 | Describe the term Threat, Vulnerability, Attack and Control related to computer security. | 4 | CO1 |
| Q 2 | Discuss the phases of virus operations. List some types of viruses. | 4 | CO2 |
| Q 3 | Deliberate the 5 areas of information assurance? | 4 | CO1 |
| Q 4 | Differentiate between security architecture and security design? | 4 | CO4 |
| Q5 | Deliberate intrusion detection system? Discuss its various types | 4 | CO3 |

### SECTION B

| Q 6 | Describe the term Interception, Interruption, Modification and Fabrication related to threats. List five security possible threats. | 10 | CO1 |
|---|---|---|---|
| Q 7 | Engrave the steps of policy review process. Label roles and responsibility of security policies. | 10 | CO4 |
| Q 8 | Differentiate between symmetric and asymmetric cipher. Encrypt the plaintext using this Play fair cipher having key "Sunil" and message is: "cryptography is a secret writing". | 10 | CO2 |
| Q 9 | Express digital signature in cyber security?  What is difference between Direct and Arbitrated digital signatures? | 10 | CO1 |

| OR | | | |
|---|---|---|---|
| | Discuss SSL protocol architecture. How does SET work? Describe dual signature of SET and its purpose. | 10 | CO1 |

## SECTION C

| Q 10 | Discuss the professional ethics in cyber security? Why is ethics important in information technology? Explain with example | 20 | CO2 |
|------|---|---|---|
| Q 11 | Discuss the role of information security governance and risk management in cyber security? State the tools and techniques for developing secure information system. | 10<br><br>10 | CO3 |
| Or | | | |
| | Discuss the role of www policies in cyber security? List different types of security policies with real time example. | 20 | CO3 |