

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Supplementary Semester Examination, May 2022

Course: IT Systems Security	Semester: VI
Program: B. Tech. CSE + CSF	Time 03 hrs.
Course Code: CSSF3005	Max. Marks: 100

SECTION A

- 1. Each Question will carry 5 Marks**
- 2. Instruction: Complete the statement / Select the correct answer(s)**

S. No.	Question	CO
Q 1	What is Port Number for FTP for Command Control? a) 18 b) 19 c) 20 d) 21	CO1
Q2	Which method of hacking will record all your keystrokes? a) Keyhijacking b) Keyjacking c) Keylogging d) Keyboard monitoring	CO3
Q3	Which one of the following is the recommended action to prevent the risk of access to a network by other users? a) Disconnect the computer from the network b) Complain to the IT Helpdesk c) Change the default WEP or WPA access key d) Adjust the Internet Security settings to HIGH	CO3
Q4	This is a small piece of code used as the payload in the exploitation of a software vulnerability. It starts the command shell and the attacker can control the machine. Commonly it is written in Machine code. What is this piece of code generally called? a) Bourne Shell b) Korn shell c) Shellcode d) Bourne Again Shell	CO4
Q5	X is a metaphorical name given to a computer connected to the Internet that has been compromised by a hacker, computer virus or Trojan horse program and can be used to perform malicious tasks such as sending spam emails, launch DoS attacks of one sort or another under remote direction. What is X? a) Chatbot b) Text-reading bot c) Web Crawler d) Zombie	CO2
Q6	Which of the following is a SPAM? a) Gathering information about a person or organization without their knowledge b) Performing unauthorized, malicious actions like deleting files c) Putting unnecessary load on the network by running multiple PING commands d) Sending unwanted bulk emails	CO1

SECTION B

- 1. Each question will carry 10 marks**
- 2. Instruction: Write short / brief notes**

Q 7	System Port numbers range from 0 to 65535, but only 0 to 1023 are reserved for privileged services and designated as well-known ports. <ul style="list-style-type: none">• Explain the terms - Ports and Sockets?• What are the major tasks of an Operating System?• What are the different models of securing an OS?• Give examples of Windows, Linux, Mobile, and Server OS.	CO2
Q 8	User processes performing malicious tasks equate to application and program level threats and attacks. Mention at least five application threats.	CO3
Q 9	Secure System Development Lifecycle involves processes and procedures to enable development teams to create software and applications that can significantly reduce security risks, eliminate security vulnerabilities, and reduce costs <ul style="list-style-type: none">• Explain all the phases of the Secure System Development Lifecycle.• If you are the IT Head, how would you implement Security Controls for Data and IT Operations?	CO4
Q 10	Due to the crucial role of an Operating System in the functioning of any computer system, the security (or lack of security) has a fundamental impact on the overall security of the computer system, including application and data security within the system. Discuss at least five threats faced by Windows 10 Operating Systems.	CO4
Q 11	Businesses are constantly at risk of theft, particularly when their physical assets aren't fully secure. The best way to keep threats and thieves at bay is to break down security into layers. Explain the layers of Physical Security. <p style="text-align: center;">OR</p> Servers are central repositories to hold information and system programs accessed by users within the network. Web Servers and Application Servers are employed to deliver sites and deliver operations between users and back-end business applications of the organization. Compare and differentiate between Web Servers and Application Servers with examples.	CO3
Section C		
<ol style="list-style-type: none">1. Each Question carries 20 Marks.2. Instruction: Write long answer.		
Q12	Discuss at least five Mobile, Application and Database Security Threats. What do these threats lead to? <p style="text-align: center;">OR</p> Illustrate with examples the difference between the outer layer and the inner layer of Physical Security as compared with IT Security.).	CO1