Name: Enrolment No:	⬡ UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, Dec-2021

Course: Information Safety	Semester: V
Program: BCA	Time : 03 hrs.
Course Code: CSBC3003	Max. Marks: 100

Instructions: Attempt all questions. Assume any missing data, draw diagrams wherever applicable, provide appropriate examples

SECTION A
(Scan and upload)   (5Q X 4M =20 Marks)

S. No.		Marks	COs
Q 1.	Write a short note on Stuxnet.	4	CO1
Q 2.	What is the use of DNS?	4	CO1
Q 3.	Explain the purpose of sniffing.	4	CO2
Q 4.	Write a short note on Code Red Worm.	4	CO2
Q 5.	Illustrate the basic difference between Cyber Hackers and Cyber attackers.	4	CO3

SECTION B
(Scan and upload)   (4Q X 10M =40 Marks)

Q 6.	Describe CIA triad in details	10	CO1
Q 7.	Who are Threat Actors? Explain any four of them.	10	CO2
Q 8.	Illustrate the Vulnerability Management Life Cycle with its diagram.	10	CO3
Q 9.	How do organizations like UPES restrict themselves from intruders? Explain in detail.	10	CO4
	OR		
	Discuss the need for ISO27001 in Information Security Management System.		CO4

SECTION C
(Scan and upload)   (2Q X 20M =40 Marks)

Q 10.	UPES data centre has been attacked by some XYZ ransomware. Some of its servers are in critical attack. Propose a plan so that we can avoid these types of cyberattacks make them secure for future such cyber vulnerabilities. Hint [Antimalware protection, Host-based malware protection,network based malware protection, firewall, network security etc.]	20	CO3
Q 11.	Governments, businesses, and individual users are increasingly the targets of cyberattacks and experts predict that these attacks are likely to increase in the future.	20	CO4

	Cybersecurity education is a top international priority as high-profile cyber-security related incidents raise the fear that attacks could threaten the global economy. The Center for Strategic and International Studies estimates that the cost of cybercrime to the global economy is more than $600 billion annually.
	Some of the famous attacks are:
	
	       o **The Stuxnet Virus**
	       o **Marriott data breach**
	       o **United Nations data breach**
	       o **Microsoft customer support database breach**
	       o **Colonial Pipeline ransomware attack**
	
	Select one of the high-profile cyberattacks from above and write an analysis of the attack and answers to the questions below.
	
	  1. Who were the victims of the attacks?
	  2. What technologies and tools were used in the attack?
	  3. What Systems were targeted?
	  4. What was the outcome of the attack? (stolen data, ransom, system damage, etc.)		

	OR		
	You have been appointed System Security Consultant for Uttarakhand Government. Propose a network and information security plan for Uttarakhand State Data Centre. Students are supposed to draw diagrams, give examples, provide tools and technologies involved during the setup. The answer should be concluded with the justification that how State Data Centre will become more secure after implementing your proposed plan. [Hint: Focus on Servers OS/Ports/Firewalls and then on Network setup/VPN/VLAN etc.]		**CO4**