K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2024	
(B. Tech) Program: COMP/AIDS/IT/EXTC Scheme IIB	
HONOURS Regular Examination: TY Semester: V	
Course Code: HCSC501 and Course Name: Ethical Hacking(Cybersecurity Honors)	
Date of Exam: 05/12/24 Duration: 02.5 Hours Max. Marks: 60	

Instructions:
(1) All questions are compulsory.
(2) Draw neat diagrams wherever applicable.
(3) Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any **two** questions out of three: (05 marks each)	10		
a)	What is the purpose of subnetting in a network?		CO1	U
b)	Write a short note on biometric authentication.		CO2	U
c)	What is penetration testing and state it's significance in cyber security.		CO3	U
Q 2	Solve any **two** questions out of three: (05 marks each)	10		
a)	Write a short note on clickjacking.		CO4	U
b)	Describe in short about side channel attacks.		CO5	U
c)	List the different security levels of DVWA & how do they affect testing.		CO6	U
Q.3	Solve any **two** questions out of three. (10 marks each)	20		
a)	What is the role of router in a network. Demonstrate the routing protocols using cisco packet tracer.		CO1	Ap
b)	Demonstrate the use of meterpreter payload with suitable example.		CO3	Ap
c)	Describe the key ethical considerations when perform sqlmap during penetration testing.		CO4	U
Q.4	Solve any **two** questions out of three. (10 marks each)	20		
a)	What is the purpose of shared prime number p & base g in diffie-hellman. Calculate the secret key exchanged between Alice & Bob using prime value q=17 & primitive root=5. If Alice's secret key is 4 and bob's secret key is 6.		CO2	Ap
b)	Demonstrate the process of analyzing a DDOS attack in wireshark with		CO3	An

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	suitable casestudy.			
c)	List the type of attacks perform with SQL injection & enumerate the steps to perform union-based sql injection to extract data from a vulnerable database.		CO4	U

Instructions:
(1) All questions are compulsory
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(3) Assume suitable data, if necessary

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Q. No	Question	Max. Marks	CO	BT level
Q.1	Solve any two questions out of three (05 marks each)	10		
a)	What is the purpose of subnetting in a network?		CO1	U
b)	Write a short note on biometric authentication?		CO2	U
c)	What is penetration testing and state it's significance in cyber security.		CO3	U
Q.2	Solve any two questions out of three (05 marks each)	10		
a)	Write a short note on clickjacking.		CO4	U
b)	Describe in short about clientel attacks.		CO5	U
c)	List the different security levels of DVWA & how do they affect testing		CO6	U
Q.3	Solve any two questions out of three (10 marks each)	20		
a)	What is the role of router in a network. Demonstrate the routing protocols using cisco packet tracer.		CO1	Ap
b)	Demonstrate the use of interpreter payload with suitable example.		CO3	Ap
c)	Describe the key ethical considerations when perform sqlmap during penetration testing		CO4	U
Q.4	Solve any two questions out of three (10 marks each)	20		
a)	What is the purpose of shared prime number p & base g in diffie-hellman. Calculate the secret key exchanged between Alice & Bob using prime value q=7 & primitive root=5. If Alice's secret key is 4 and Bob's secret key is 6.		CO2	Ap
b)	Demonstrate the process of analyzing a DDOS attack in wireshark with		CO3	An