

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

Nov – Dec 2025			HCSC 501
(B. Tech) Program: All Branches Scheme III			
Regular/Supplementary Examination: TY Semester: V			
Course Code: HCSC501 and Course Name: Ethical Hacking			
Date of Exam: 05/12/2025	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 IP addressing? Explain the types of IP addresses (Classful and Classless) and illustrate with examples.		CO1	U
b)	Describe the process of key exchange using the Diffie–Hellman protocol. Why is it considered secure?		CO2	U
c)	Illustrate any two information-gathering techniques used during the reconnaissance phase of ethical hacking.		CO3	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Discuss how attackers hijack sessions and explain mechanisms for securing cookies.		CO4	U
b)	Describe the categories of power analysis and their impact on security.		CO5	U
c)	What is SQL Injection (Blind) module in DVWA. How does it differ from normal SQLi?		CO6	U
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Demonstrate the procedure for subnetting with a suitable example. Why is subnetting important in network design?		CO1	U
b)	Draw the architecture of DES algorithm and explain its steps with the help of example		CO2	U
c)	Explain the types of DDOS attacks		CO3	U
Q.4	Solve any two questions out of three. (10 marks each)	20		

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Course Code: HCSC601 and Course Name: Ethical Hacking		
Date of Exam: 05/12/2025	Duration: 02.5 Hours	Max. Marks: 60

a)	Consider a big single network having ip address 200.1.2.0. Divide this network in to three subnets. Use the concept of ip subnetting?	CO1	Ap
b)	Explain the steps in performing web application vulnerability scanning using metasploit with the help of example?	CO3	U
c)	Demonstrate the steps of performing wifi hacking using cracking method	CO4	Ap
