

TILAK MAHARASHTRA VIDYAPEETH, PUNE
BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
(CYBER SECURITY- 464)/
BACHELOR OF SCIENCE (CYBER SECURITY-760)
EXAMINATION : MAY-2026
SEMESTER – II

Sub: Cyber Security - I (BCA-CS-245-20/BCAC23-204/BSCC24-204)

Date : 30/05/2026

Total Marks : 60

Time: 10.00 am to 12.30 pm

Instructions:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagrams wherever necessary.

Q.1. Fill in the blanks.

(5)

1. IPV4 Address consists of _____ Bits
 - a) 32
 - b) 64
 - c) 256
 - d) 128
2. _____ spans a large geographical area often a country or a continent.
 - a) WAN
 - b) MAN
 - c) WLAN
 - d) LAN
3. _____ is a defined way to breach the security of an IT system through vulnerability.
 - a) Exploit
 - b) Vulnerability
 - c) Attack
 - d) Threat
4. _____ are self-propagating programs that travel around the Internet at lightning speed.
 - a) Virus
 - b) worm
 - c) spyware
 - d) Trojan
5. _____ cryptography, also known as Public-key cryptography.
 - a) Symmetric-key
 - b) asymmetric-key
 - c) public
 - d) private

Q.2. State True/False.

(5)

1. Routers provide interconnectivity between like and unlike devices on the network.
2. Crackers are the people who indulge in cyber crimes and frauds and use their knowledge for offensive purposes.
3. Shoulder Surfing involves the collection of information by eavesdropping.
4. Active fingerprinting is also based on the differential implantation of the stack and the various ways an OS responds to it.
5. In windows OS password is stored in passwd file.

Q.3. Answer the following. (Solve any 5)

(10)

1. Define the term "Virtual Port".
2. Define the term "White Hat Hacker".
3. Define the term "Smart Mutation".
4. What is Honeygot?

5. What is use of proxy?
6. Define the term "Rootkit".
7. What is the use of Digital signature?

Q. 4. Answer the following in detail. (Solve any 6) (30)

1. Write a short note on TCP's 3-Way Handshake.
2. Write a short note on IP address classes.
3. Define the term Ethical Hacker. Explain classes of Hackers.
4. What is port scanning? Explain types of port scanning attacks.
5. Explain in detail stages involved in the Reverse Engineering Process.
6. Define the term Malware. Explain any two types of malwares.
7. Explain any two types of DoS attacks.

Q. 5. Answer the following in detail. (Solve any 1) (10)

1. Explain in details OSI 7 Layer model with neat sketch.
 2. Explain any five types of attack used in application password cracking.
-