

VIVEKANAND COLLEGE, KOLHAPUR
(An Empowered Autonomous Institute)

Department Of MCA

NOTICE

Date: 20/01/2025

All the students of **MCA-I** are here by informed that, our department has organized a Unit Test on the subject **Cyber Security** on 21st January 2025 by 9.00am in Room no.405 of Engineering Building.

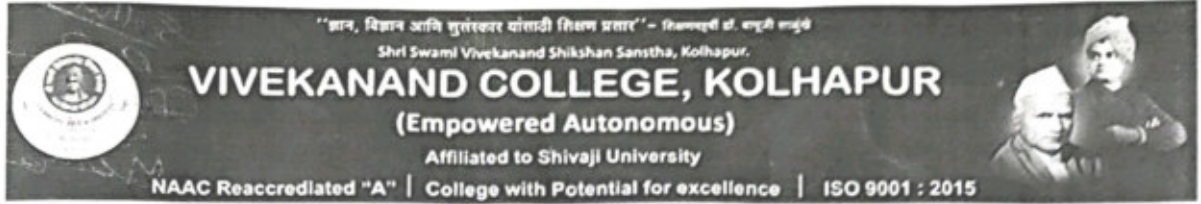
So, hereby we request to all the students to attend the Unit Test.



Mr. V. B. Pujari

HEAD
DEPARTMENT OF M. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Cyber Security



MCA DEPARTMENT - (UNIT TEST)

Date- 21/7 /2025

ROLL NO.	NAME	SIGN
1	AGLAVE AARTI HARIDAS	<u>Agelme</u>
2	*AMANE SALONI SATISH	
3	*APATE KOMAL ARVIND	<u>Apate</u>
4	*BAVADEKAR MANASI PRAKASH	<u>Bavadekar</u>
5	*BHOI SHREYA SACHIN	<u>S.S.B</u>
6	BHOSALE KARTIK KUMAR	<u>K.K.B</u>
7	*BHOSALE DEVIKA RAMCHANDRA	<u>Bhosale</u>
8	CHAVAN ABHISHEK RAJESH	<u>A.R.C.</u>
9	*CHAVAN PRANALI SUHAS	<u>P.S.C</u>
10	*CHECHAR ADITI UTTAM	<u>Aditi</u>
11	*SHIVANI DATTATRAY CHOPADE	<u>Shivani</u>
12	CHOPADE JAMES PRAVIN	<u>Chopade</u>
13	*CHORMARE PRERANA SANJAY	<u>P.S.C.</u>
14	*CHOUGALE NANDINI SHASHIKANT	<u>N.S.C.</u>
15	*JADHAV HARSHADA MOHAN	<u>H.M.J.</u>
16	JADHAV AKASH SURYAKANT	<u>A.J.J.</u>
17	*JADHAV RADHIKA NITIN	<u>R.N.J.</u>
18	*JADHAV NISHA GUNDOPANT	<u>AB</u>
19	KAKADE SIDDHESH VINIT	<u>AB</u>
20	*KALE SHRUTI SATISH	<u>Shruti</u>
21	*KAMAT SWATI SHRIKANT	<u>SSK</u>
22	KAMBALE SHREYASH RAJENDRA	<u>Kambale</u>
23	KAMBLE RUTVIK MURALIDHAR	<u>Kamble</u>
24	KAMBLE VINAY KAKASO	<u>AB</u>
25	KHADRE JAY SANJAY	<u>Khadre</u>
26	*KHAMBE VAISHNAVI MADHUKAR	<u>VMK</u>
27	*KHOT SAKSHI DATTATRAY	<u>Sakshi</u>
28	*KOKATE SANDHYA ARUN	<u>AB</u>
29	KORADE SIDDHESH RAMAKANT	<u>Korade</u>
30	*KOTAMIRE POURNIMA UJWAL	<u>P.U.K.</u>
31	KUMBHAR SOURABH RAJESH	<u>Kumbhar</u>
32	*KUMBHAR POOJA MARUTI	<u>AB</u>
33	*LOKHANDE ASHLESHA ANANDA	<u>AB</u>

34	LOTAKE OM RAHUL	<u>Platke</u>
35	*MAGDUM JYOTI KUMAR	J.K.M.
36	MAHADIK SANGRAMSINH TATYASAHEB	S.T.M.
37	*MARALKAR PRATIKSHA VITTHAL	<u>Sedha</u>
38	NADAWADE PRASANNAJEET BHAGAVAN	<u>NaB</u>
39	NIGADE SNEHAL RAMCHANDRA	<u>SNigade</u>
40	*NILKANTH NIKITA NAMDEV	N.N.N.
41	PATEL MUHAFIJ GOUSMAHAMAD	<u>M.M.</u>
42	PATHAN AAKIBMATIN FIROZKHAN	<u>A.A.F.</u>
43	*PATIL SHIVALI SANDIP	<u>Shil</u>
44	*PATIL SHRAVANI MALGOUNDA	S.M.P.
45	*PATIL SHREYA SHAMRAO	<u>Shil</u>
46	*PATIL VAISHNAVI VISHWAS	V.V.P.
47	*PATIL VAISHNAVI BALIRAM	V.B.P.
48	*PATIL ROHINI DATTATRAY	R.D.P.
49	PRASAD VIVEK KALPNATH	<u>V.K.</u>
50	*SANGAR SHITAL RAVINDRA	S.R.S.
51	*SHAIKH SUMAIYA AMAN	<u>S.A.</u>
52	SHELAKH PARTH PRABHAKAR	<u>Shel</u>
53	*SHINDE ARATI ARUN	<u>Shinde</u>
54	SHIVASHARAN ADITYA RAMESH	<u>A.S.</u>
55	*THOMBARE SHRUTI VILAS	S.V.T.
56	*TUPE SHREYA MOHAN	<u>Shupe</u>
57	*VADD SHWETA YASHVANT	<u>Vadd</u>
58	*VARNE SAKSHI SUNIL	<u>Varne</u>
59	*WAINGADE SAMRUDDHI SANJAY	S.S.W.
60	YADAV AISHWARYA SANJAY	<u>Ayadav</u>
61	*KHADE SHARVARI EKNATH	S.E.K.

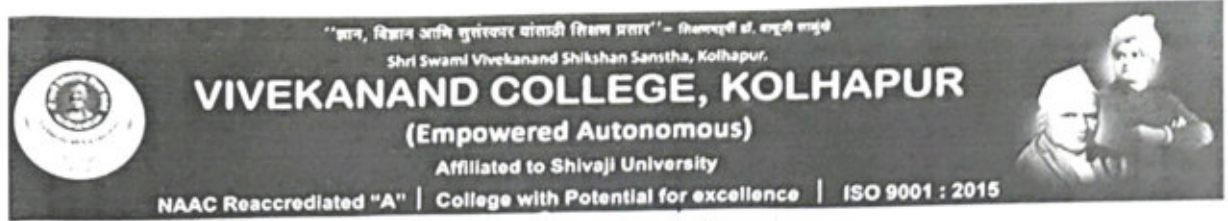
Vajari

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Cyber Security



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Date-21/01/2025

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VIVEKANAND COLLEGE, KOLHAPUR

Roll No - 01

DATE	

Activity -

17
20

CYBER

SECURITY

Unit Test

Subject: [Web Technology] under
Cyber Security.

Name: Aglave Aarti Haridas

Q.1 Critically comment on what is cyber security & explain the diff't types of unauthorized threat in detail



Cybersecurity is the practice of protecting internet connected devices, networks, programs & data from cyberattacks.

The goal of cybersecurity is to prevent cyber criminals from accessing, altering or destroying sensitive information.

Cybersecurity is important because it protects against phishing schemes, ransomware attacks, identity theft, data breaches, & financial losses.

Cybersecurity is a critical issue for orgⁿ & the general Data protection regulation (GDPR) requires orgⁿ to implement security measures to protect personal data.

UN AUTHORIZED THREAT -

- Phishing — A common method to trick users into giving up confidential info' by using deceptive emails, messages or websites.
- Brute force attacks — Cybercriminals use automated tools to try many combinations of usernames & password until they find the right 1.
- Social engineering - Manipulating people through

psychological trick to gain unauthorized access

- **Malware** - malicious software that can perform malicious action such as stealing trade secrets, displaying malicious ads or damaging infected machines.
- **Ransomware** - A type of malware that encrypts a user's personal data & demands a ransom to give access back.
- **Insider threats** - When an employee or contractor leaks data either intentionally or accidentally.
- **Unauthorized access attacks** - When a threat actor attempts to access systems or data using an authorized user account.
- **Man in the middle attacks** - An attacker relays & possibly alters communication between two parties who believe they are communicating directly.
- **Password attacks** - trying to guess or crack a user's password using various techniques.
- **Identity theft** - An individual accesses a computer to steal a user's personal information, which is then used to steal that person's identity or access their accounts.

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Q 2 Define diff^t types of cybersecurity with the help of ways to securing those attacks.

→ 1. Network Security —

Network Security is the practice of securing a Computer Network from unauthorized access or attacks. It includes the use of firewalls, intrusion detection & prevention systems (VPN) virtual private network. The primary goal of network security is to protect network infrastructure routers, switches, & other network devices.

2. Application Security —

Application security refers to the measures taken to secure software application from cyber-attacks. It includes testing the code, identifying vulnerabilities & ensuring that the app is free from any security flaws.

- regular security testing & updates.

3. Information Security — information security involves the protection of digital information such as data stored in database files, or other repositories. Information security ensures the confidentiality, integrity & availability of data by protecting it from unauthorized access, disclosure, modification or destruction.

- key —
- regular backups of critical data
 - monitoring & logging of system & netk activity

- DATE / /
- 4 Cloud security - Cloud security refers to the protection of data & system hosted on cloud platforms, such as amazon web services (AWS) microsoft & google cloud.
- cloud security includes a combination of technical & administrative control that aim to secure data stored in the cloud as well as the cloud infrastructure itself.
-

- 5 Internet of things Security - The IoT refers to the network of connected devices, such as smartphone, smart homes, wearables. IoT security involves securing the devices themselves as well as that connects them.
- regular software updates & patches
 - use of strong authentication & access control mechanisms.

- 6 Identity Access management - identity & access management (IAM) is the practice of managing user identities & controlling access to resources within an org.
- regular security audits & compliance check
 - implementations of password policies & regular password updates.

Preventing cyber attacks involves a combination of technical, administrative & educational measures.

● Way to secure cyberattacks -

① Use of Antivirus & malware software -

Antivirus & malware software are essential tool that can help protect your computer from various cyber threats such as viruses, spyware, ransomware.

② regular software updates - Software updates often include security patches that fix known vulnerabilities. Ensure that you regularly update all software applⁿ. include your operating system.

③ Strong passwords & multi-factor Authentication - Strong passwords & multi-factor authentication can help prevent an authorized access to your accounts. Ensure that you use a upper, lowercase letter, number, symbol in your password.

Q3. Analyze & Comment on What is cyberspace define the Architecture of cyberspace.

→ Cyberspace can be defined as an intricate env^t that involves interaction betⁿ people, software & services. It is maintained by the worldwide distribution of infor^t & communication technology devices & networks.

Architecture - refers to the structural framework & infrastructure that support the interconnected network of digital system.

- including the internet, data centers, cloud services & various communication netk.

1.

It encompasses a broad spectrum of component technologies & protocol that enable the seamless flow of information across the digital domain.

• Key Components -

1] Network infrastructure - At the core of cyberspace architecture lies the network infrastructure which includes physical & virtual component such as routers, switches server & transmission lines.

2] Data centers - Data centers server as the centralized hubs for storing, processing & managing vast amount of digital info. They house servers storage systems & networking equipment, providing the necessary computing resource to support a wide range of online service application.

3] Protocol & standards - Cyberspace architecture relies on a multitude of protocol & standards to ensure interoperability & seamless communication betⁿ diff^t devices & platforms. e.g. TCP/IP for internet communication HTTP for web browsing & SMTP for email transmission.

4] Cloud Computing infrastructure -

- The rise of cloud computing has significantly influenced cyberspace architecture with cloud providers offering scalable resources, virtualized environment, on-demand services to support diverse workload & applications.

Design principles of cyberspace Architecture -

Scalability -

Cyberspace architecture is designed to accommodate exponential growth in data traffic, user interactions & digital services. Scalability ensures that the infrastructure can adapt to increasing demand without compromising performance or reliability.

Security - Protecting the integrity & confidentiality of data within cyberspace is paramount. The architecture incorporates robust security measures such as encryption, access controls, firewalls.

Interoperability -

Cyberspace architecture emphasize interoperability by adhering to open standards & protocols. This enables seamless communication & data exchange between disparate systems & devices.