Importance ■■■■■ most asked ■■■□□ often ■□□□□ rarely

Cyber crime ■■■■□

Cyber crime: any crime in which a computer, phone or network is the tool or the target.

Case questions describe a situation and ask you to name the crime. Find the clue.

CRIME	CLUE IN THE QUESTION
Phishing	fake email, SMS or site asks for password, OTP or card details ("you won a lottery", "account blocked")
Identity theft	using someone's details or logged-in account to act as them
Hacking	getting into a computer or account **without permission**
Cyber bullying	**repeated** insults, threats, rumours or private photos posted online
Cyber stalking	following someone online with repeated unwanted messages
Cyber troll	provoking comments posted on purpose to upset people
Ransomware	files locked or encrypted until money is paid
Spam	unwanted bulk commercial email

Ethical hacking (white hat) is done **with** the owner's permission to find and fix weak points: not a crime.

If it happens to you: don't reply, keep screenshots, block and report, tell a parent or teacher. Report at `cybercrime.gov.in` or call **1930**.

! Banks never ask for a password or OTP by message or call: any such request is **phishing**.

Intellectual property rights ■■■■□

Intellectual property: a creation of the mind (story, song, program, invention, logo). **IPR**: the legal rights that let its creator control and earn from it.

RIGHT	PROTECTS	HOW LONG	EXAMPLE
Copyright ©	creative work, **software code**; automatic	life + 60 years	novel, song, app
Patent	an **invention**; must be granted	20 years	new water filter
Trademark ® ™	**brand** name, logo, slogan	10 years, renewable	company logo

! Code or app → **copyright**, not patent. Logo or brand name → **trademark**. New machine or process → **patent**.

E-waste ■■■■□

E-waste: discarded electrical and electronic devices: phones, computers, TVs, batteries, chargers.

TOXIN	FOUND IN	HARMS
Lead	circuit boards, old screens	brain, nerves, kidneys
Mercury	old screens, switches	brain, kidneys
Cadmium	batteries, chips	kidneys, bones
Plastics	casings, cables	burning gives poisonous smoke

Harm to the environment: toxins leak into **soil and groundwater**; burning pollutes the **air**.

Manage it: the 3 Rs in order, **reduce → reuse → recycle**. Give old devices to an **authorised recycler** or the maker's take-back scheme; wipe your data first. Repairing and reselling = **reuse**. India's **E-Waste (Management) Rules, 2022** make producers collect and recycle what they sell.

! For "harmful effects", **name the substance** (lead, mercury) and what it damages for full marks.

Plagiarism and infringement ■■■□□

VIOLATION	WHAT IT IS	EXAMPLE
Plagiarism	passing off someone's work as yours, **no credit**	copying a website into a project
Copyright infringement	using copyrighted work **without permission**	pirated software, film uploads
Trademark infringement	using a same or look-alike brand	fake branded shoes

Avoid plagiarism: cite the source, write in your own words, use quotation marks for exact words.

! Giving credit avoids plagiarism but **not** copyright infringement: you still need permission or a licence.

Digital footprints ■■■□□

Digital footprint: the trail of data you leave online. Also called a **digital tattoo**: very hard to remove.

	ACTIVE	PASSIVE
Made by	you, on purpose	sites and apps, often unnoticed
Examples	posts, comments, emails, forms, photos	IP address, location, cookies, browsing history

Why it matters: colleges and employers search it, ads target you, criminals use it to guess passwords.

! Browsing with **location on** or a site logging your IP → **passive**. Anything you typed or uploaded → **active**.

Cyber law and the IT Act ■■■□□

Cyber law: the law for computers, the internet, online transactions and online crime.

Information Technology Act, 2000 (amended 2008) is India's main cyber law. It gives legal recognition to **electronic records and digital signatures** (so e-commerce is valid), defines cyber crimes and their penalties, and protects data and privacy.

! Watch the wrong options: "Cyber Crime Prevention Act", "Digital Act 2008". The answer is the **IT Act, 2000**.

Netiquette ■■■□□

WHERE	BE…	MEANS
Online, in general	ethical · respectful · responsible	no copied material; respect privacy and diversity; don't feed the troll
Email, chat, forums	precise · polite · credible	short, clear subject; no ALL CAPS (shouting); check facts first
Social media	secure · reliable	strong password, private profile; check news before forwarding

Data protection

Keeping **personal data** (Aadhaar, PAN, bank details, passwords, health records) safe from theft and misuse. India's **DPDP Act, 2023** needs your **consent** to use your data and lets you see, correct and erase it.

Protect yours: share less, strong passwords, two-factor authentication, never share OTPs, keep profiles private. Companies should **encrypt** stored data.

Open source and licences

A **licence** is the owner's written permission: what you may do with a work, and what you must do in return.

KIND	MEANS
Proprietary	code secret; buy a licence to use; no copying or changing
FOSS	Free and Open Source: run, study, change, share. "Free" = freedom, not price (Linux, Python, LibreOffice)
Freeware	free to download but code closed: **not** FOSS
GPL	software, **copyleft**: your changed version must stay open
Apache	software, **permissive**: your version may be closed; keep the notice
Creative Commons	for photos, articles, music; built from the conditions below

CC LICENCE	YOU MAY USE IT IF YOU…
CC BY	credit the creator; anything else is allowed
CC BY-SA	credit, and share your version under the same licence
CC BY-NC	credit, and don't use it to make money
CC BY-ND	credit, and share it only unchanged
CC0	no conditions: public domain

	GPL	APACHE
Use, change, sell	yes	yes
Your version	must stay open, with source	may be closed
Used by	Linux, MySQL	Android base, Apache server

! CC is for **creative content**; GPL and Apache are for **software**. Freeware and shareware are not open source.

Health and technology

PROBLEM	PREVENTION
Eye strain	**20-20-20**: every 20 min, look 20 ft away for 20 s
Neck, back pain	screen at eye level, sit straight (**ergonomics**)
Wrist pain (RSI)	breaks, straight wrists
Poor sleep	no screens an hour before bed
Internet addiction	time limits, offline hobbies, exercise
Hearing damage	low volume on earphones, breaks

Quick practice: name it

Situations in the style of board questions. Cover the right column and answer.

SITUATION	ANSWER
SMS: "You won ₹10 lakh, send your OTP to claim"	**Phishing**
Forgot to log out; a classmate emails others in your name	**Identity theft**
Group keeps posting rumours about a student	**Cyber bullying**
Office files locked, payment demanded in crypto	**Ransomware**
Firm hires an expert to break into its own site	**Ethical hacking**
Protect the code of a water-tracking app	**Copyright**
Protect a new solar water purifier	**Patent**
Protect the company's logo	**Trademark**
Project copied from a website, no source named	**Plagiarism**
Geo-location on while browsing	**Passive footprint**
Old phone repaired and given to a cousin	**Reuse**
Message typed in ALL CAPITALS	**Not polite (netiquette)**
India's law for e-commerce and cyber crime	**IT Act, 2000**

Expand it

`IPR`	Intellectual Property Rights
`FOSS`	Free and Open Source Software
`GPL`	GNU General Public License
`CC`	Creative Commons
`IT Act`	Information Technology Act, 2000
`DPDP`	Digital Personal Data Protection Act, 2023
`OTP`	One-Time Password
`RSI`	Repetitive Strain Injury