



Gurukul Technicals Institute

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FREE EBOOK

ENGLISH, CAREERS AND VOCATIONAL SKILLS

Careers in Computers

Paths after class 10 and 12: skills, courses and first jobs

INSIDE THIS BOOK

- Why computer skills matter in every job
- Choosing your path after class 10 and class 12
- Office jobs: data entry, office assistant and accounts assistant
- Creative jobs: graphic designer and DTP operator
- Web developer and software developer
- ...and 6 more chapters, practice questions and a glossary

Beginner

Students of class 9 to 12, graduates and parents

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Careers in Computers

A plain guide to the computer careers open after class 10, class 12 and graduation. It explains what each job involves, the skills it needs and a sensible way to learn them. It then shows how to build a portfolio, start freelancing safely, weigh certificates against real skills and spot fake job offers.

WHO IT IS FOR	Students of class 9 to 12, graduates and parents
LEVEL	Beginner
SUBJECT AREA	English, careers and vocational skills
WHAT IS INSIDE	11 chapters, practice questions with answers, and a glossary

HOW TO USE IT

Read one chapter at a time and try the examples as you go: on a computer, at your workbench or in your notebook. The boxes give tips, safety points and short activities. When you finish, test yourself with the practice questions and check your answers at the end. Words you may not know are explained in the glossary.



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Why computer skills matter in every job

Look around your town for one day and count the computers. The chemist prints your bill from a computer. The bank clerk checks your account on a screen. The petrol pump, the railway counter, the hospital reception and the kirana shop with a billing machine all use computers. Even a farmer may check crop prices and weather on a phone, and a phone is a small computer.

So computer skills are no longer only for "computer people". They help in almost every job.

Two kinds of computer careers

It helps to see two groups:

- 1. Jobs that use computers.** A nurse, a shop manager, a receptionist or a police constable uses software every day, but their main work is something else. For them, computer skills make the work faster and open the door to better positions.
- 2. Jobs that are about computers.** A web developer, a network technician or a graphic designer earns a living from computer work itself. Most of this book is about these jobs.

The basic skills everyone needs

Whatever path you choose, start with these:

Skill	What it means in practice
Typing	Typing with all ten fingers, without looking at the keys
Files and folders	Saving, naming, finding, copying and backing up your work
Word processing	Writing a neat letter, application or report
Spreadsheets	Making a table of figures and adding them with formulas
Email	Writing a clear, polite email and attaching files

Skill	What it means in practice
Internet search	Finding reliable information and checking where it came from
Online safety	Strong passwords, never sharing an OTP, spotting fraud

EXAMPLE

Ramesh works as an assistant at a medical store in Nagpur. When he joined, he could only type with two fingers. He practised typing for twenty minutes a day and learnt to use the shop's billing software. Within a few months the owner trusted him to manage the stock list on the computer. His main job did not change, but his computer skills made him more useful.

Skills that are not on a screen

Employers also look for soft skills. These are personal habits, such as speaking clearly, working well with others, being on time and staying calm with an angry customer. A technician who explains a fault politely gets more repeat customers than one who knows more but speaks rudely.

The most important habit of all is learning. Software changes every year. New tools, including AI tools that help people write and code, keep arriving. People who keep learning, and who check the work these tools produce instead of trusting them blindly, stay valuable.

TRY THIS

Write down five places where you saw a computer or phone being used for work this week. Next to each, write what the person was doing with it.

CHAPTER 2

Choosing your path after class 10 and class 12

There is no single right road into computers. Some people start after class 10, some after class 12 and some after a degree in a different subject. What matters is choosing a road that suits you and then walking it steadily.

Start with yourself

Before you pick a course, ask yourself what you enjoy. Your interest will keep you going when the work gets hard.

If you enjoy...	You may like...
Numbers and neat records	Accounts assistant, data entry, office work
Drawing, colours and layouts	Graphic design, DTP
Puzzles and logic	Programming, web development
Opening things to see how they work	Hardware, networking, mobile repair
Talking to people and explaining	Teaching, digital marketing, customer support
Protecting things, finding clues	Cyber security

Paths after class 10

- **Continue school.** Many boards offer computer subjects in classes 11 and 12. For example, CBSE offers Computer Science and Informatics Practices. You can take a computer subject in science, commerce or arts.
- **ITI.** An Industrial Training Institute teaches trades. One trade is called Computer Operator and Programming Assistant (COPA), which covers office software, basic programming and networking.
- **Polytechnic diploma.** A diploma in computer engineering or IT can be started after class 10. In many states, diploma holders can join the second year of an engineering degree later. This is called lateral entry.
- **Short certificate courses.** Courses in computer basics, typing, accounting software or DTP can be done alongside school.

Paths after class 12

- **Degrees.** Common choices are BCA (Bachelor of Computer Applications), B.Sc in Computer Science or IT, and B.Tech or B.E. in Computer Science. Engineering admissions usually go through entrance exams such as JEE Main or a state exam. Rules for BCA and B.Sc differ by university, and some ask for maths in class 12, so read each admission notice.

- **Commerce and arts students.** A B.Com or BA together with strong computer skills (accounting software, spreadsheets, design) is a very practical combination.
- **Diplomas and certificates.** A one-year diploma in computer applications, or a focused course in one skill, can lead to a first job sooner.

A typical learning path

Whatever the course, most successful learners follow the same four steps:

1. **Basics.** Typing, files, office software, internet and safety.
2. **One main skill.** Pick one area, such as accounting software, design or programming, and go deep.
3. **Practice and projects.** Make real things: invoices, posters, websites, a repaired computer.
4. **First job or internship, then keep learning.** Your first job is where real learning speeds up.

REMEMBER

For parents: ask any institute how much hands-on lab time a student gets and what they will be able to do at the end. Be careful of anyone who guarantees a job in return for a fee. Genuine teachers promise effort and skills, not jobs.

CHAPTER 3

Office jobs: data entry, office assistant and accounts assistant

Every office needs people who can handle documents, records and accounts on a computer. These jobs are a common first step, and good performers often move up to supervisor or accountant roles.

Data entry operator

A data entry operator types information into a computer. It might be customer forms into a database, survey answers into a spreadsheet, or old paper records into new software. The work sounds simple, but one wrong digit in a phone number or an amount can cause real trouble.

Skills needed:

- Fast, accurate typing. Speed is measured in words per minute (wpm), where a "word" usually means five keystrokes.
- Typing in Hindi or a regional language, for many government and local offices.
- Spreadsheet basics: entering data, sorting, filtering and checking.
- Patience and concentration, and the habit of checking your own work.

TIP

Practise accuracy first and speed second. A typist at 30 wpm with no mistakes is more useful than one at 50 wpm who makes five errors a page.

Office assistant

An office assistant keeps the office running. Typical work includes typing letters, replying to emails, keeping files in order, scanning and printing, making simple spreadsheets and presentations, and keeping a diary of meetings. Clear written English or Hindi, good manners on the phone and neat organisation matter as much as software skill.

Accounts assistant

An accounts assistant records a business's money. Many small and medium businesses in India use accounting software, and Tally (its current version is called TallyPrime) is one of the most widely used. The work includes:

- Entering vouchers, the records of each sale, purchase, payment and receipt.
- Keeping ledgers, which are the accounts of each customer, supplier, bank and expense.
- Making GST invoices and helping prepare the data for GST returns.

- Matching the business's bank records with the bank statement, called bank reconciliation.
- Printing reports such as the day book, outstanding payments and stock summary.

You need basic commerce knowledge: debit and credit, how GST works in general, and why records must be correct.

EXAMPLE

Meena Traders in Kanpur sells goods for ₹ 5,000 in cash. The accounts assistant records a sales voucher: the Cash account is debited (cash comes in) and the Sales account is credited (a sale is made). If GST applies, the software adds the tax lines as well. At the end of the day, the cash in the drawer should match the Cash account in the software. If it does not, the assistant finds out why before going home.

DID YOU KNOW

Tax rules and rates change from time to time. A good accounts assistant never relies on memory for a rate. They check the current figure on the official portal, such as gst.gov.in, or ask the accountant.

CHAPTER 4

Creative jobs: graphic designer and DTP operator

If you love colours, letters and layouts, the creative side of computers may suit you. Two common jobs here are the DTP operator and the graphic designer. They overlap, but they are not the same.

DTP operator

DTP stands for desktop publishing: preparing pages on a computer so they can be printed. A DTP operator in a print shop might make wedding cards, visiting cards, pamphlets, letterheads, forms, calendars and school magazines. Many shops use CorelDRAW for cards and pamphlets, and Photoshop for photos. Book and magazine pages are often laid out in a program such as InDesign.

Skills needed:

- Fast, accurate typing in English and in Hindi or a regional language.
- Using the main DTP software confidently.
- Print knowledge: paper sizes such as A4 and A3, resolution (how many dots of colour per inch; about 300 dots per inch is the usual target for print), and CMYK, the four ink colours printers use.
- Bleed: extending the background a few millimetres past the edge of the page, so no white strip shows after cutting. Ask the printer how much they need; 3 mm is common.
- Proofreading. A spelling mistake in a name on 500 wedding cards is an expensive error.

Graphic designer

A graphic designer plans how something should look so that it communicates a message. A designer might create a logo, posters, social media posts, packaging, a menu card or a whole look for a brand. Common tools include Photoshop, Illustrator, CorelDRAW and simple online design tools. Some designers also design screens for apps and websites; this is called UI design (user interface design).

Software is only half the job. A designer also needs:

- **Design principles:** alignment, contrast, spacing, balance and a clear order of importance.
- **Typography:** choosing and pairing fonts that are easy to read.
- **Colour sense:** choosing colours that suit the message and print well.
- **Listening:** understanding what the client really wants.

EXAMPLE

Sharma Sweets in Agra wants a Diwali offer poster. The designer first writes a short brief: who the poster is for (local families), the main message ("Diwali gift boxes, order early"), the details to show (shop name, phone number, address), the size (A3 for the counter, square for WhatsApp) and the deadline. Only then does the designer open the software. A brief saves hours of changes later.

REMEMBER

Do not copy pictures, logos or fonts from the internet into client work without permission. Use your own photos, images you have the right to use, or free resources whose licence allows your use. Copying can get your client into legal trouble.

How to learn

Start with one software and practise daily on real-looking jobs: a visiting card for a relative, a poster for a school event, a menu for a local dhaba. Study good designs around you, such as posters, packets and signboards, and ask yourself why they work.

CHAPTER 5

Web developer and software developer

Programmers write instructions that computers follow. Two broad jobs are web developer and software developer. Both need logical thinking and lots of practice, but neither needs you to be a genius.

Web developer

A web developer builds websites and web applications. The work is often split in two:

- **Front-end:** what you see in the browser. It uses HTML for the structure of a page (headings, paragraphs, buttons), CSS for the look (colours, fonts, layout) and JavaScript for behaviour (what happens when you click).
- **Back-end:** what happens on the server, the computer that stores the website and its data. Back-end developers use languages such as PHP, Python, Java or JavaScript, and databases that use SQL, the language for storing and finding data.

Someone who does both is called a full-stack developer. A good web developer also makes sure pages work well on phones, load quickly and are safe from common attacks.

Here is a small piece of JavaScript that a shop's billing page might use. It multiplies price by quantity for each item and adds up the total.

JAVASCRIPT

```
const items = [
  { name: "Notebook", price: 40, qty: 5 },
  { name: "Pen", price: 10, qty: 12 },
  { name: "Geometry box", price: 120, qty: 1 }
];

let total = 0;
for (const item of items) {
  const amount = item.price * item.qty;
  console.log(item.name + ": ₹" + amount);
  total = total + amount;
}
console.log("Total: ₹" + total);
```

When it runs, it prints the amount for each item (! 200, ! 120 and ! 120) and then the total, ! 440.

Software developer

A software developer writes programs: mobile apps, desktop software, games, or the systems that run banks and railways. Common languages are Python, Java, C++ and JavaScript. Here is a short Python program that finds a student's total and percentage.

PYTHON

```
marks = {"Hindi": 78, "English": 85, "Maths": 92, "Science": 88, "Computer": 95}
total = sum(marks.values())
percentage = total / len(marks)
print("Total:", total)
print("Percentage:", round(percentage, 1))
```

It prints a total of 438 and a percentage of 87.6.

Skills for both jobs:

- **Problem solving:** breaking a big problem into small steps.
- **One language, well.** Learn one language properly before jumping to the next.
- **Data structures and algorithms:** ways of organising data and solving common problems efficiently. Many company interviews test these.
- **Git:** a tool that saves every version of your code and lets a team work together.

- **Testing:** checking your program with normal, unusual and wrong inputs.

TIP

Type every example yourself instead of copying and pasting. Then change it: add an item, change a price, make it print a discount. Changing working code is how understanding grows.

CHAPTER 6

Hardware, network and mobile technicians

Some people learn best with their hands. Technician careers suit them. Every office, school, shop and home with a computer, a Wi-Fi router or a smartphone needs someone to set it up and fix it.

Hardware technician

A hardware technician assembles, upgrades and repairs computers and printers.

Typical tasks:

- Assembling a computer from parts: processor, motherboard, memory, storage, power supply and cabinet.
- Installing the operating system, drivers and common software.
- Upgrading memory or replacing an old hard disk with a faster SSD (solid-state drive).
- Finding faults step by step: no display, no power, very slow, strange noises, printer jams.
- Backing up a customer's data before any repair.

Network technician

A network is a group of computers and devices connected so they can share files, printers and the internet. A network technician lays and tests cables, fits connectors, sets up switches, routers and Wi-Fi, and fixes connection problems. They understand IP addresses, the numbers that identify each device on a network. Many also install IP cameras for CCTV systems.

Mobile technician

A mobile technician repairs smartphones and tablets. Software work includes updates, backups, fixing apps and resetting phones. Hardware work includes replacing screens, batteries, charging ports, speakers and buttons. Advanced repair work involves soldering tiny parts under a microscope.

SAFETY

Always switch off and unplug a computer before opening it. Never open a power supply unit or the power section of a monitor or printer: parts inside can hold a dangerous charge even after unplugging. Wiring of sockets, boards and electrical fittings is mains work and must be left to a licensed electrician. Students under 18 should solder only with an adult supervising.

SAFETY

A swollen, dented or punctured phone battery can catch fire. Never press, bend or puncture it. Keep it away from heat and store it in a safe place until it can be disposed of properly.

Honesty is part of the job

Technicians handle people's private data and devices. A good technician never opens a customer's photos or messages, deletes customer data only with permission, and tells the truth about what was repaired. Changing a phone's IMEI number (the unique number that identifies a phone on mobile networks) is illegal in India. Never unlock a phone unless the customer can show it is theirs.

TRY THIS

Ask permission to look inside an old, unplugged desktop computer with an adult. Without removing anything, find and name the motherboard, memory sticks, storage drive, fans and power supply.

Cyber security and digital marketing

These two careers look very different. One protects computers and data, and the other uses them to sell. Both are growing as more of India's work and shopping moves online.

Cyber security

Cyber security means protecting computers, networks and data from attacks, theft and damage. Some common roles:

- **Security analyst:** watches alerts from an organisation's systems, spots suspicious activity and responds to it.
- **Penetration tester (ethical hacker):** tries to break into systems, but only with written permission from the owner, to find weaknesses before criminals do.
- **Security administrator:** sets up firewalls, user accounts, updates and backups.
- **Digital forensics investigator:** collects and studies digital evidence after a crime or an attack.

Skills needed:

1. Strong networking basics: how data travels, IP addresses, common services.
2. Operating systems, both Windows and Linux.
3. Basic scripting in a language such as Python, to automate tasks.
4. Curiosity, patience and careful note-taking.
5. Above all, ethics.

SAFETY

Breaking into a computer, account or network without the owner's permission is a crime under India's Information Technology Act, 2000, even if you "only wanted to test it". Practise only on your own machines, on training labs built for practice, and in legal competitions called capture the flag (CTF).

DID YOU KNOW

India has a national agency for handling cyber security incidents, called CERT-In (the Indian Computer Emergency Response Team). Many cyber security professionals read its alerts about new threats.

Digital marketing

Digital marketing means promoting a business online. The main areas are:

- **SEO** (search engine optimisation): helping a website appear when people search for what it offers.
- **Social media marketing**: planning posts, reels and replies on social platforms.
- **Content writing**: blogs, product descriptions and emails that are useful and clear.
- **Paid advertising**: running ads that are shown to chosen groups of people, and controlling their cost.
- **Analytics**: measuring what is working using numbers such as visits, clicks and enquiries.

EXAMPLE

Ahmed runs a small bakery in Hyderabad. A digital marketer helps him set up the bakery's business listing on maps, posts photos of fresh items three times a week and adds the shop's WhatsApp number to every post. After a month, they compare the number of enquiries with the month before and decide which kind of post to make more of.

Good digital marketers are honest. They never buy fake followers, post fake reviews or make claims the business cannot prove. These tricks can get accounts banned and damage trust.

Teaching computers

Many people who love computers find their best career in teaching others. A good computer teacher changes lives: the student who learns to type confidently or make a spreadsheet may get a job because of it.

Where computer teachers work

- **Schools:** teaching computer subjects from primary classes to class 12.
- **Computer training institutes:** teaching courses in office software, accounting software, design or programming.
- **Companies:** as corporate trainers, teaching staff to use new software.
- **Online:** teaching individual students or small groups through video calls.
- **Community programmes:** helping adults and senior citizens learn to use phones, digital payments and government services safely.

Skills needed

Skill	Why it matters
Strong basics	Students ask unexpected questions
Clear explanation	Big ideas must be broken into small steps
Patience	Some students need the same thing shown many times
Lesson planning	Every class needs a goal and a plan
Lab management	Thirty computers, thirty students and one teacher
Kindness and fairness	Students learn best when they feel safe to make mistakes

Qualifications

Schools usually ask for a degree in a computer subject, and many also ask for a teaching qualification such as B.Ed. The exact rules differ by board, state and school, so always read the recruitment notice carefully. Training institutes often look at your skills and your teaching ability, and may ask you to give a demo class, a short sample lesson.

TIP

Before a demo class, choose one small topic, such as "making a table in a word processor". Plan a two-minute introduction, a clear demonstration, a short task for the students and a quick check at the end. Practise it aloud in front of a family member. Staying calm and clear matters more than covering a lot.

Start teaching now

You do not need a job to start. Teach your grandparents to make a video call. Help a younger cousin with a school project on the computer. Each time, notice which words confused them and how you could explain better. That is how good teachers are made.

REMEMBER

A teacher's most important skill is not knowing everything. It is being honest when you do not know, finding the answer and coming back with it.

CHAPTER 9

Building a portfolio

A portfolio is a collection of your best work that shows what you can do. A certificate says you finished a course; a portfolio proves your skill. For freshers with no job experience, a good portfolio is often the strongest thing they can show an employer.

What to put in it

Career	Good portfolio items
Accounts assistant	A full set of entries for an imaginary shop, its GST invoices and reports
Data entry / office	A typing test result, a well-formatted letter, a clean spreadsheet
DTP operator	Wedding cards, visiting cards, a pamphlet, a page in Hindi
Graphic designer	Logos, posters, social media posts, with the brief for each
Web developer	Two or three working websites and their code

Career	Good portfolio items
Software developer	Small programs and one bigger project, with notes on how they work
Technician	Photos and notes of computers you assembled or networks you set up

How to present each item

For each piece of work, write a few lines:

- 1. The problem:** what was needed, and for whom.
- 2. What you did:** the steps you took.
- 3. Tools used:** software, languages or equipment.
- 4. The result:** what changed, with a screenshot or photo.

EXAMPLE

Arjun, a BCA student in Pune, made a website for his uncle's tailoring shop. In his portfolio he wrote: "Problem: customers kept phoning to ask about shop timings and services. What I did: built a three-page website with a services list, timings and a WhatsApp enquiry button that works well on phones. Tools: HTML, CSS, JavaScript. Result: my uncle now shares the site link instead of answering the same questions." That short paragraph tells an employer more than a long list of skills.

Where to keep it

- Programmers often keep their code on a code-sharing site such as GitHub.
- Designers can use a design portfolio site or a neat PDF of their best work.
- Everyone can keep a folder on their phone ready to show in an interview.

Keep only your best work, perhaps five to eight pieces, and remove weak ones as you improve. Never show a client's work, or real customer data, without their permission. For practice projects, use imaginary names and figures.

TRY THIS

Choose your target career from the table. Plan three portfolio projects for it, using people and businesses in your own town as imaginary clients. Finish the first one this month.

CHAPTER 10

Freelancing basics

A freelancer works for themselves and takes on separate jobs, called projects, for different clients, instead of working for one employer. Designers, developers, writers, digital marketers and data entry workers often freelance, full time or alongside study or a job.

The good and the hard parts

Good parts	Hard parts
Choose your own work and hours	Income can go up and down
Work with many kinds of clients	You must find clients yourself
Learn business skills early	No paid leave or fixed salary
Build a portfolio quickly	You handle your own records and taxes

Getting the first clients

Start close to home: relatives, neighbours, local shops, your school or college. Do a few small projects well and ask happy clients to recommend you. Some people also join well-known freelancing platforms. Read each platform's rules carefully: some charge a small fee for sending proposals or take a share of what you earn.

Agree everything in writing

Before you start, send a short written agreement, even by email or WhatsApp. It should say:

1. **The work:** exactly what you will deliver.

2. The deadline.

3. **The price** and when it will be paid. Many freelancers ask for part of the payment in advance.

4. **Revisions:** how many rounds of changes are included.

5. **Ownership:** who owns the final files once payment is complete.

EXAMPLE

Priya, a design student in Indore, quotes for a logo for a new coaching centre. These figures are only for practice. She estimates 8 hours of work and decides on ₹ 300 an hour, so her price is $8 \times ₹ 300 = ₹ 2,400$. Her agreement says: three logo ideas, two rounds of changes, final files in two formats, delivery in seven days, ₹ 1,200 in advance and ₹ 1,200 on delivery. Because everything is written, there is no argument later.

Records, payment and safety

- Send an invoice, a bill listing the work, the amount and your payment details.
- Take payment through traceable methods such as bank transfer or UPI, and keep a record of every payment.
- Income from freelancing can be taxable, and some businesses must register for GST. The rules and limits change, so check incometax.gov.in and gst.gov.in, or ask a qualified tax professional.

SAFETY

A real client pays you; you never pay a client. If a "client" asks for a registration fee, a software fee or a deposit before giving you work, or sends extra money and asks you to return the difference, it is a scam. Never share an OTP or UPI PIN with anyone.

CHAPTER 11

Certificates, skills and fake job offers

This last chapter is about two things that confuse many students: how much certificates matter, and how to tell a real job offer from a trap.

Certificates versus skills

A certificate is a document that says you completed a course or passed a test. A skill is something you can actually do. Both have a place:

- A certificate from a known, trusted body can help your resume get noticed and is sometimes required for government jobs.
- Your skill is what gets you through the practical test and keeps you in the job.

Many employers test skills directly: a typing test for data entry, a set of entries for an accounts job, a short design task, a coding problem or a fault to find on a real computer. A pile of certificates without the skill behind them fails these tests.

Before you join any course, ask:

1. What exactly will I be able to do at the end?
2. How much of the time is hands-on practice?
3. Is there a fair test before the certificate is given?
4. Who issues the certificate, and is that body widely known?

REMEMBER

Never buy a certificate for a course you did not study, or for marks you did not earn. Using a fake certificate is fraud and can end a career when it is checked, even years later.

Fake job offers

Fraudsters know that job seekers are hopeful and sometimes desperate. Fake offers often look real, with logos and official-sounding letters. Watch for these warning signs:

- You are asked to pay: a registration fee, training fee, security deposit or laptop charge.
- You are "selected" without a proper interview, or the whole process happens only on WhatsApp or Telegram.
- The pay is far too high for very simple work, such as liking videos or rating hotels.
- You are given small paid tasks first, then asked to deposit your own money to unlock bigger earnings.

- You are asked for an OTP, your bank PIN, or to let someone use your bank account.
- You are pressured: "Only today. Pay now or lose the seat."

SAFETY

Never let anyone use your bank account or UPI to receive and forward money, however small the "commission". People who do this are called money mules. The money usually comes from fraud, and the account holder can face police action and a frozen account.

How to check an offer

1. Find the company's official website yourself, not through a link in the message.
2. Look for the job on the company's careers page.
3. Call the company's official number and ask whether the offer is genuine.
4. Talk to a teacher or a parent before you send money or documents to anyone.

If you have been cheated, call the national cyber crime helpline, 1930, as soon as possible, and report it at cybercrime.gov.in. Reporting quickly gives the best chance of stopping the money.

DID YOU KNOW

Genuine employers spend money to hire you. They do not make money from your joining. That one idea will protect you from most job scams.

CHECK YOURSELF

Practice questions

1. Name two kinds of computer careers described in this book, and give one example of each.
2. List four basic computer skills that almost every job needs.
3. What are soft skills? Give two examples.
4. Name two paths into computers that you can start after class 10.
5. What is lateral entry?

6. What are the four steps of the typical learning path?
7. How is typing speed usually measured, and what counts as one "word"?
8. Name three tasks an accounts assistant does in accounting software.
9. Meena Traders sells goods for ₹ 5,000 in cash. Which account is debited and which is credited?
10. What is bleed, and why does a DTP operator need it?
11. Give two differences between the work of a DTP operator and a graphic designer.
12. What are HTML, CSS and JavaScript each used for?
13. In the JavaScript billing example, how is the total of ₹ 440 worked out?
14. Why must you never open a power supply unit?
15. Why is changing a phone's IMEI number a serious matter?
16. What must an ethical hacker have before testing a system?
17. Name three areas of digital marketing.
18. What is a demo class, and how should you prepare for one?
19. What four things should you write about each item in your portfolio?
20. List the five points a freelancer's written agreement should cover.
21. Priya estimates 6 hours for a poster at a practice rate of ₹ 300 an hour. What should she quote, and how much is half of it as an advance?
22. What is the difference between a certificate and a skill?
23. Give four warning signs of a fake job offer.
24. What is a money mule, and why is it dangerous to become one?
25. What should you do first if you lose money to a job scam?

Answers

1. Jobs that use computers, such as a nurse or receptionist, and jobs that are about computers, such as a web developer or network technician.
2. Any four of: typing, managing files and folders, word processing, spreadsheets, email, internet search and online safety.
3. Personal habits that help you work well with others. Examples: speaking clearly, teamwork, being on time, staying calm with customers.
4. Any two of: continuing school with a computer subject, an ITI trade such as COPA, a polytechnic diploma, or a short certificate course.
5. Joining the second year of an engineering degree after completing a diploma, which many states allow.
6. Learn the basics, choose and learn one main skill, practise through projects, then get a first job or internship and keep learning.
7. In words per minute (wpm). One "word" usually means five keystrokes.
8. Any three of: entering vouchers, keeping ledgers, making GST invoices, bank reconciliation and printing reports.
9. The Cash account is debited because cash comes in, and the Sales account is credited because a sale is made.
10. Bleed means extending the background a few millimetres past the edge of the page, so that no white strip shows after the printed sheet is cut.
11. A DTP operator mainly prepares pages for printing, such as cards and pamphlets, and needs fast typing and print knowledge. A graphic designer plans how something should look to communicate a message, such as a logo or a brand's look, and needs strong design principles.
12. HTML gives a page its structure, CSS controls how it looks, and JavaScript controls what happens when the user interacts with it.
13. Notebooks $40 \times 5 = ₹ 200$, pens $10 \times 12 = ₹ 120$ and the geometry box $120 \times 1 = ₹ 120$. Then $200 + 120 + 120 = ₹ 440$.
14. Parts inside can hold a dangerous electric charge even after the computer is unplugged.
15. It is illegal in India, because the IMEI number identifies a phone on mobile networks and changing it can hide stolen phones.
16. Written permission from the owner of the system.
17. Any three of: SEO, social media marketing, content writing, paid advertising and analytics.

- 18.** A short sample lesson given to show your teaching ability. Choose one small topic, plan an introduction, demonstration, task and check, and practise it aloud.
- 19.** The problem, what you did, the tools used and the result.
- 20.** The work to be delivered, the deadline, the price and payment terms, the number of revisions, and who owns the final files.
- 21.** $6 \times ! 300 = ! 1,800$. Half of it, $! 900$, can be asked as an advance.
- 22.** A certificate is a document saying you completed a course or test; a skill is something you can actually do.
- 23.** Any four of: being asked to pay a fee or deposit, selection without a proper interview, pay far too high for simple work, paid tasks followed by a request to deposit money, requests for OTP or bank details, and pressure to act immediately.
- 24.** A person who lets their bank account be used to receive and forward money for others. The money usually comes from fraud, so the account holder can face police action and a frozen account.
- 25.** Call the national cyber crime helpline, 1930, as quickly as possible, and report it at cybercrime.gov.in.

WORD LIST

Glossary

Accounts assistant

a person who records a business's sales, purchases, payments and receipts, usually in accounting software.

Back-end

the part of a website or app that runs on the server and handles data.

Bank reconciliation

matching a business's own bank records with the bank statement and explaining any difference.

Bleed

extra background that runs past the cutting edge of a printed page.

Brief

a short written note of what a design must say, for whom, at what size and by when.

CMYK

the four ink colours used in printing: cyan, magenta, yellow and black.

Cyber security

protecting computers, networks and data from attack, theft and damage.

Demo class

a short sample lesson given to show how well someone can teach.

DTP

desktop publishing, the work of preparing pages on a computer for printing.

Freelancer

a person who works for themselves on separate projects for different clients.

Front-end

the part of a website that the user sees and uses in the browser.

Full-stack developer

a developer who works on both the front-end and the back-end.

IMEI number

the unique number that identifies a mobile phone on mobile networks.

Invoice

a bill that lists the work done, the amount due and how to pay.

IP address

a number that identifies a device on a network.

Lateral entry

joining the second year of a degree after completing a related diploma.

Ledger

the account of one customer, supplier, bank or expense in a set of books.

Money mule

a person whose bank account is used to receive and pass on money, often from fraud.

Portfolio

a collection of your best work that shows what you can do.

SEO

search engine optimisation, helping a website appear in search results.

Soft skills

personal habits such as clear speaking, teamwork and punctuality.

SSD

solid-state drive, a fast storage device with no moving parts.

Voucher

the record of a single sale, purchase, payment or receipt in accounting software.

Words per minute

a measure of typing speed, where one word usually means five keystrokes.



Gurukul Technicals Institute

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