

IST Impact of IST Notes

Environmental Effects

- There is a large effect on the environment when **manufacturing** technology, especially **small objects** such as microchips and circuit boards.
- When **using** technology, the environment is affected through the use of **electricity and paper**.
- When **disposing** technology, the issues can include **dumping computers**, especially with toxic **lead** from solder.
 - o **Recycling** paper, ink and cartridges help reduce the impact when disposing technology.

Legal and Security Issues

- Software is **intellectual property**, as it is not a physical object.
 - o Software and data have the **same copyright protection** as physical objects.
 - o Illegal copying or distribution of software is called **software piracy**.
- **Two main pieces of legislation** affect employment in the IT industry and the use of IST.
 - o EEO, **equal employment opportunity**, prevents discrimination and disadvantages of workers.
 - o OH&S, **occupational health and safety**, enforces health and safety of workers.
- **Viruses and worms** are threats to data.
 - o They **copy** themselves and **spread** throughout a network, causing damage.
 - o Viruses hide **inside a file**, while worms are a **separate program**.
 - o Antivirus can help block viruses and worms.

Ethical Issues

- Ethics means a **standard of moral behaviour**, and doing what is right.
- Ethical issues can include:
 - o **Privacy** and security concerns, with privacy policies
 - o **Inappropriate use** of data, with personal data removed
 - o **Accuracy, validity** and **bias** of data

Social Issues

- Equity means **equal access and equal opportunity for all**.
- A **digital divide** of people **who has access** the internet or a computer, especially in developing countries.

Industrial Issues

- **Email and internet abuse**, including offensive emails, can occur.
- **Ergonomics**, the study of **how people interact with machines**, such as placement of the keyboard, etc.

Careers in IT

- Computer Engineer – install, repair and service computers
- Data entry operator – transfer data to a computer for storage, processing, etc.
- Multimedia specialists – creating and editing graphics
- Programmer – writes, tests and maintains programs and applications
- Project manager – manages projects, including time and budget
- Sales representative – promotes sale of computer services
- Software engineer – creates and maintains software
- Support staff, technician, training specialists and web designers