

Theory Overview - Grade 12

Weighting

(A)	System Technologies & Terminology	45 marks
(B)	Internet & Communication Technologies	55 marks
(C)	Social Implications	20 marks
(D)	Data & Information Management & solution development	60 marks

Therefore ...

180 marks

(A) 25%

(B) 30%

(C) 12%

(D) 33%

100%

Shown below is just an overview of each section

- (A) Hardware (v) software
Input, storage, processing, output, communication
Types of computers
Motherboard
Modular design
CPU, memory, cache, wireless (v) wired
Mobile Technologies - Advantages / constraints
Plug & Play / Hot swapping
BIOS & ROM

(A)

cont.

Cloud computing . Advantages + Disadvantages
Ownership

Virtualisation

Operating systems / utility programs / drivers

Processing techniques

Virtual memory

Computer management + housekeeping

Security

Installation + uninstalling

(B)

Communication Technologies / Terminology

What is a network.

Sharing files + folders, user right, BitTorrent

Online services eg Dropbox, Google drive

Physical aspects of a network / components

Wireless technologies

Protocols

Internet

Web 1.0, Web 2.0, Web 3.0

Searching

Overview of www

Compression

Download vs streaming

VOIP

Searching

(B) cont.

Location based services

Internet protocols + technologies

Storing data

Client side (v) Server side

Cookies

Accuracy + validity of data

Input methods

Verification of data

Validation of data

Threats / failure / Vulnerability / Remedies

(C) Social Implication

Environmental issues

Cyber crime / fraud / scams / malware

Computer Criminals

Privacy

Digital divide

Mobile technology + online services

File sharing

(D) Data + Information Management

Data / information / knowledge

Computer file management

Common file types

What is a database?

Quality data

①

Cont

DBMS software

Protection of data + Security

Data warehousing

Location-based data

Data integrity / independence / redundancy / security
maintenance

Primary keys, composite keys, foreign keys

Anomalies

Normalisation - 1NF, 2NF, 3NF

Scenarios + Case Study Questions
cover all four sections.