Subject: Computer Science

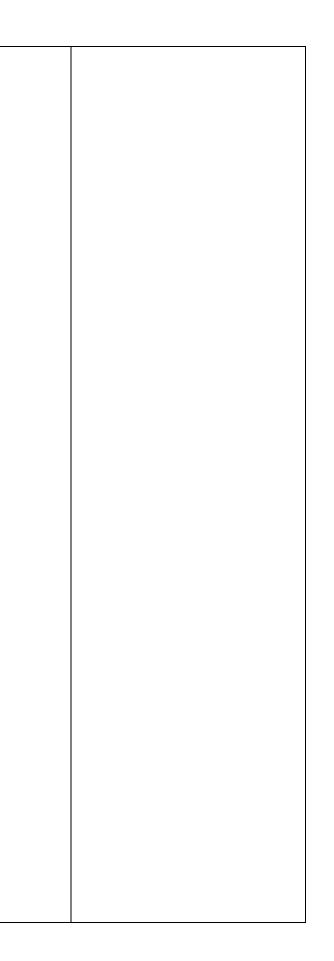
Year: 10					
Paper 1 Topic 1	Paper 1 Topic –	Paper 1 Topic 3	Paper 1 Topics	Paper 1 Topic 5	Paper 1 Topic 6
– Systems	2	– Networks,	4 – Threats to	- System	– Ethical, legal,
Architecture	Memory and	connections and	computer	Software	cultural and
	Storage	protocols	systems and		environmental
	(continued)		networks	Paper 2 Topic 2	impact
<u> Paper 1 Topic –</u>		Paper 2 Topic 2		– Programming	• Ethical, Legal,
<u>2</u>	Paper 2 Topic 2	- Programming	Paper 2 Topic 1	Fundamentals	Cultural and
Memory and	- Programming	Fundamentals	- Algorithms		Environmenta
Storage	Fundamentals		Forms of	<u> Paper 2 – Topic</u>	l Issues in
 The purpose 	 Secondary 	 Types of 	attack	<u>5 –</u>	Computing
of the CPU -	Storage	networks	Malware	Programming	 Legislation
the fetch—	 Types of 	• LAN	Social	languages and	• Ethics,
execute cycle	storage such	• WAN	engineering	IDEs	Culture and
 Common CPU 	as Optical,	 Factors which 	Brute-force	 Purpose and 	Privacy
components	Magnetic and	impact the	 DoS attacks 	functionality	 Environmenta
and their	Solid State	performance of	• Data	of operating	l Issues
function:	 Advantages/d 	networks	Interception	systems	• Data
• ALU	isadvantages	Client-Server	SQL Injection	Memory	Protection Act
• CU	such as	and P2P	•	management	2018
Cache	capacity,	networks	Common	User interface	Computer
Registers	speed,	Hardware	prevention	Peripheral	Misuse Act
Von Neumann	. ,,	needed to	methods	management	1990
Architecture	durability,	create a	Penetration	• User	Copyright
MAR MDB	reliability,	network	testing	management	Designs and
MDR	and cost	Wireless access	Anti-malware	• File	Patents Act
Program Countor	Suitable storage for	points	software	management	1988
Counter	storage for	Routers Switches	Firewalls	Utility	Software
 Accumulator 	different	SwitchesNICs	User Access levels	software	licences (i.e., open source

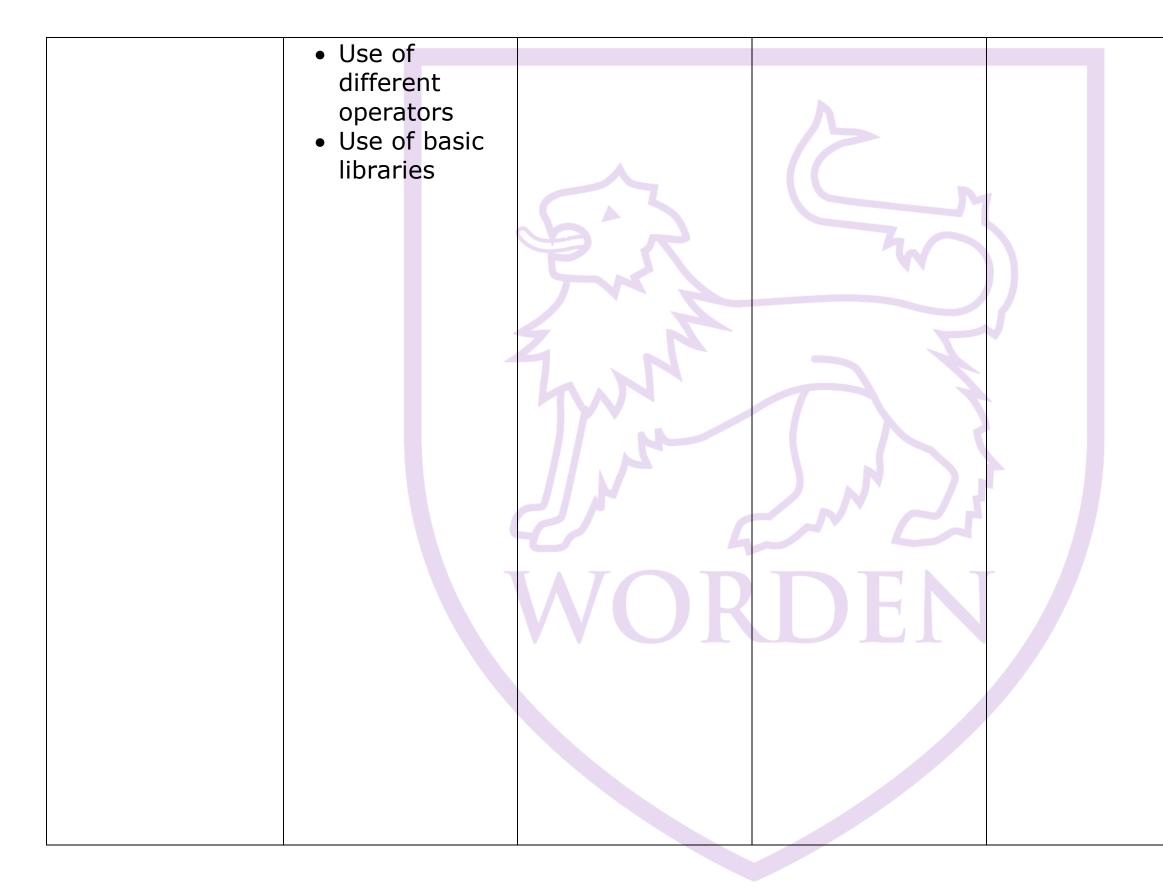
CPU	applications	Transmission	Passwords	Uses of utility	and
Performance	(essay)	Media	Encryption	software	proprietary)
 Clock speed 	•	The Internet	Physical	 Encryption 	F F / /
Cache size	 Data Storage 	and WWW	Security	Defragmentat	
Number of	How data	• DNS	•	ion	
cores	needs to be	 Hosting 	• Paper Two –	• Data	
 Embedded 	converted to	• The Cloud	Algorithms	compression	
Systems	binary	 Web servers 	Using	•	
 Purpose 	 Converting 	and clients	abstraction,	• Paper 2 Topic	
Examples	between	 Topologies 	decompositio	2	
•	denary and 8	• Star	n and	• Use all the	
•	bit binary	Mesh	algorithmic	skills learnt to	
• Paper 1 –	 Adding to 8- 	 Modes of 	thinking	produce	
Topic 2	bit binary	connection such	Creating	various	
•	values	as wired, and	pseudocode,	programming	
 Primary 	together	wireless	flowcharts	solutions to	
Storage	 Knowledge of 	networks	Common	given	
 Difference 	overflow	 Encryption 	errors	problems	
between RAM	errors	 IP Addressing 	 Trace tables 	 Develop skills 	
and ROM	 Converting 	and MAC	Searching	further and	
 Purpose of 	between	addressing	and sorting	consider the	
ROM in a	denary and	 Standards 	algorithms	user of	
computer	hexadecimal	Common	Binary search	different	
system	 Converting 	Protocols	Linear search	programming	
 Purpose of 	between	• TCP/IP	 Bubble sort 	languages –	
RAM in a	binary and	• HTTP	 Merge sort 	as required.	
computer	hexadecimal	HTTPS	 Insertion sort 	Paper 2 Topic	
system	 Binary shifts 	• FTP		5	
 Virtual 	 Characters 	• POP		Characteristic	
Memory	 The use of 	• IMAP		s of high and	
 Units of 	binary codes	• SMTP	minan	low level	
measurement	LU	nns nn	I I I I I I I I I I I I I I I I I I I	ius	

 Bit to represent to represent of the concept of the characters Nibble characters network layers Byte What is a to represent of the concept of the character set? Paper 2 Topic 2 	
• Byte • What is a • Purpose of	
, , , , , , , , , , , , , , , , , , ,	
O KIIODVLE CHAFACLEF SEL? PADEF Z TODIC Z	
• Megabyte • Bits per • Continue with • Characteristic	
 Gigabyte character and programming s of a 	
 Terabyte the number techniques complier and 	
 Petabyte of characters File handling interpreter 	
Converting which can be Use of IDEs and	
data/capacity represented. records their features	
requirements E.g., ASCII • SQL • Editors	
and Unicode • Arrays • Error	
Sub programs diagnostics	
Images Generating Run-time	
How an random environment	
image is numbers • Translators	
represented	
as pixels	
which is	
made up of	
binary	
 Metadata 	
Colour depth	
and	
resolution	
and how it	
impacts	
quality and	
file size	
Sound	
How can	
sound be	

sampled and	
stored	
digitally	
Sample rate	
Duration	
Bit depth	
Quality and	
file size	
Programming	
Techniques	
Data Types	
• Integer	
Real	
Boolean	
Character and	
string	
Casting	
Creating basic	
programs	
using various	
functions	
such as	
INPUT and	
PRINT	
Use of	
assignments	
Using	
Sequencing,	
selection and	
iteration	
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Ludus Admirandus





Ludus Admirandus

