Computing Revision Worksheet (Grade 7) Unit 3: Networks & Digital Communication Unit 1: Computational Thinking & Programming		Name:	
Date:		Section:	

1. **Match the protocol, path and domain name for each of the following websites with the correct word:**

PATH	PROTOCOL	DOMAIN NAME	TOP-LEVEL DOMAIN
http://	www.sns.edu.pk	.edu.pk	www.example.tld
/resources/grade7	/index.php	https://	
www.bankofamerica.com	.org	.gov.pk	

Solution:

PATH	**/resource/grade7**
	/index.php
PROTOCOL	**http://**
	https://
DOMAIN NAME	**www.sns.edu.pk**
	www.example.tld
	www.bankofamerica.com
TOP-LEVEL DOMAIN	**.edu.pk**
	.org
	.gov.pk

2. **Which of the following is required when you need to identify a secure website which can handle financial transaction etc?**

- ☐ Path
- ☐ Https://
- ☐ Domain
- ☐ Http://
- ☐ Padlock sign

3. **Answer the following questions:**

   a. What is the difference between a domain name and a top level domain?

Domain Name:

The main name of a website that you type into the browser to visit it, for example www.sns.edu.pk.

Top-Level Domain (TLD):

The ending part of a website address, such as .com, .org, or .edu.pk, which usually shows the type of website or the country it belongs to.

b. Explain how a DNS (Domain Name Server) is also like a phone contact list.

The DNS works in a similar way to a phone contact list. Instead of remembering long and difficult IP addresses, we simply type the name of a website. The DNS then finds and provides the correct IP address linked to that name.
Without DNS, users would have to remember numerical IP addresses, such as 192.168.1.1, for every website they want to visit, which would be very difficult and confusing.

c. What is the **main advantage** of Encryption?

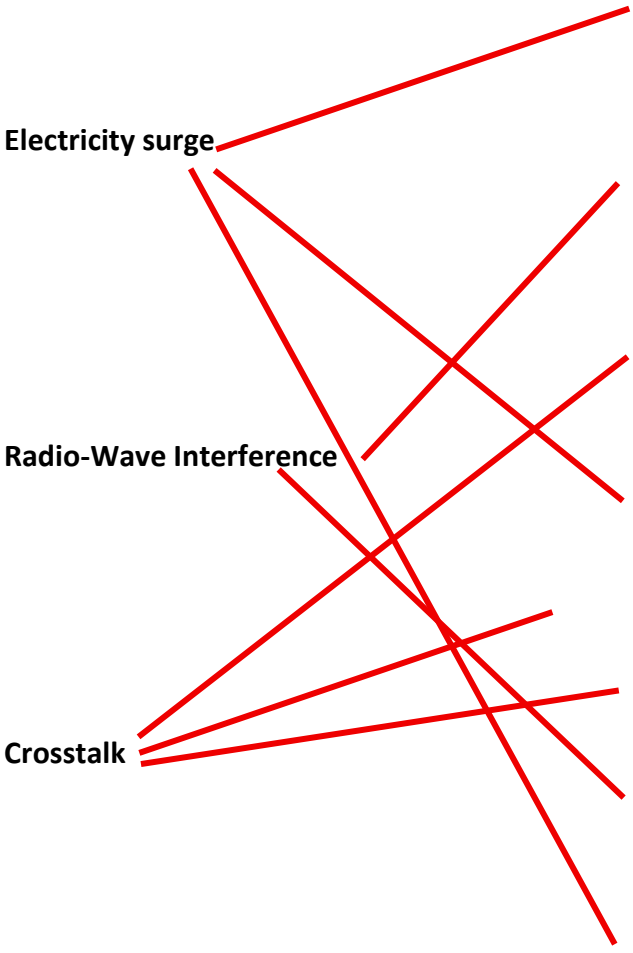
Encryption has several important advantages. It keeps sensitive information such as passwords, bank details, and personal messages safe from unauthorized access.
Even if someone intercepts the data, they will not be able to understand it without the correct key. Encryption also helps protect people's privacy and makes online activities like shopping and banking much more secure. (Any one is acceptable)

d. Name the following:

i. Text BEFORE it is encrypted is called: Plain Text

ii. Text AFTER it is encrypted is called: Cipher Text

4. Match the cause of data corruption to the correct situation in each of the following:



A lightning strike hits a building, causing a sudden spike in electricity that damages files on computers.
A cellphone placed near a Wi-Fi router causes temporary glitches in a video call.
Two phone lines running close together in an office cause a faint overlapping of each other's audio.
A power outage with unstable voltage fries the memory of a server, corrupting stored data.
Network cables bundled tightly together pick up signals from each other, creating errors in transmitted files.
Using a walkie-talkie near an active radio tower causes some email transmissions to fail.
A surge from faulty wiring causes a home PC to crash, resulting in corrupted documents.

5. **Draw the correct flowchart symbol for the following actions:**

- Displaying "Game Over" on the screen: Output (Parallelogram)
- Calculating Final Price = Price - Discount: Process (Rectangle)
- Deciding whether the number is even or odd: Decision (Diamond)

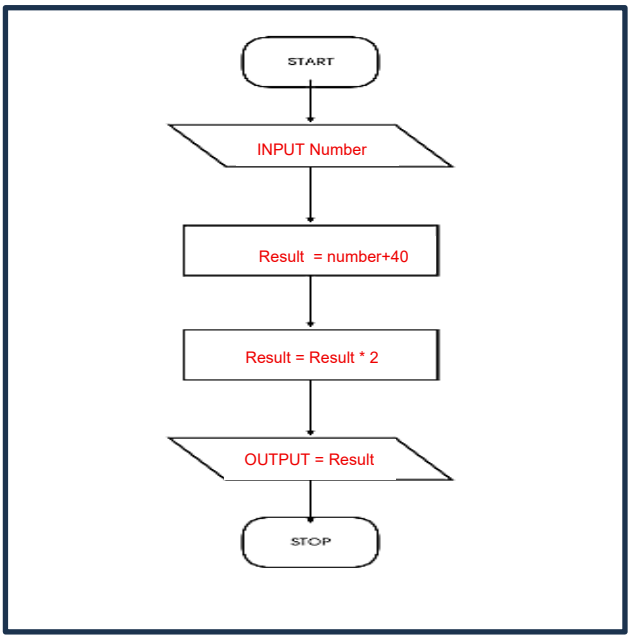
6.

A. Follow these steps and provide the output:

i. START
ii. INPUT number (Assume input is 10)
iii. Add 40 to the number.
iv. Multiply the result by 2.
v. OUTPUT result.

What is the final Output: 100

B. Also draw the flowchart in the box on the right →



5. **True or False:**

a. URL stands for Unique Resource Locator. (True / False)

b. The "s" in https stands for "secure," meaning data is encrypted. (True / False)

c. An IP address is like a home address for your computer on the internet. (True / False)

6. **Tick which of the following statements about variables are true:**

☐ A variable stores information that can change.
☐ A variable is like a container that holds data.
☐ The value of a variable can change while a program is running.
☐ A variable can only be assigned a value once and cannot be changed afterward.
☐ Variables can store different types of data, such as text, integers, decimals, or characters.

7. **Identify the following:**

I request a website: **User**
I look up the matching IP address for a particular domain name: **DNS**
I host the website: **Web Server**

8. Use the following substitution cipher to decode the two given sentences:

Quick brown fox jumps over the lazy dog

becomes:

JXOEA WKGVF YGB PXDHL GCTK ZIT SQMN RGU

This sentence and its code has been placed in the following table for easy reference:

Q	U	I	C	K	B	R	O	W	N	F	O	X	J	U	M	P	S	O	V	E	R	T	H	E	L	A	Z	Y	D	O	G
J	X	O	E	A	W	K	G	V	F	Y	G	B	P	X	D	H	L	G	C	T	K	Z	I	T	S	Q	M	N	R	G	U

Sentence 1: **Incorrect:** **ZIT LGYZVQKT XLT~~G XGDTFZL DTLLQUTL LTEXKT~~**

correct: **ZIT LGYZVQKT XLTL EGDDTFZL ZG TBSLQOF EGRE**

Decrypted Text:

The software uses comments to explain code

Sentence 2: **ZTQEIOFU EGDHXZTKL ZG ZIOFA DQATL DT LIQKHTK**

Decrypted Text:

Teaching computers to think makes me sharper

9. **A.** The following message has been encrypted following the rule that the letter U is actually R when decoded. Decode the full message to see what is actually means:

Incorrect: UR~~U~~RWV~~W~~ HDW GXULQJ PDWK FODVV

Correct: URERWV HDW GXULQJ PDWK FODVV

Decrypted Text:

Robots eat pizza during class

B. Now encrypt the following sentence using the same rule for encryption. Now R will become U, T will become W and so on.

Actual Text: **I will prepare well for my computing assessment**

Encrypted Text:

L zloo suhsduh zhOO iru pb frpsxwlqj dvvhvvphqw

10. If your Browser shows a message that reads “This Site cannot be reached”, state what you think could be the reason.

This happens when the Domain Name Server is unable to translate the website name into its correct IP address, so the browser cannot connect to the website.