Grade 7 Computing

# Unit 11 · Computers and People

**WORKSHEET**

Full marks 30

Name _____ Class _____ Roll no. ____ Date _____ Marks _____ / 30

## 1 Key words [4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **abstraction** | **automation** | **data center** | **decomposition** | **digital divide** | **e-waste** | **era** | |
| **mainframe** | **screen reader** | **unintended** | | | | | |

A stretch of time when one kind of computer was the usual kind, and people used it in one main way, is an _____. A big computer that many people shared from terminals is a _____. What a technology was made to do is its intended effect; something it does that nobody planned is an _____ effect. Old phones, chargers and batteries that are thrown away become _____. Keeping only the details that matter for a problem, and leaving out the rest, is called _____. A machine doing by itself work that people used to do is _____. The gap between people who have access to computers and the internet and people who don't is the _____. A program that reads the screen aloud, for people who are blind, is a _____.

## 2 Label the diagram [2]

The diagram shows the eras of computing. Write the name of each era in place of 1 to 4. Each carries 0.5 mark.

| **Gears and punched cards** 1640s–1930s | (1) | (2) | (3) | **Mobile** 2000s onward | (4) |
|---|---|---|---|---|---|
| machines that add and count | a room-sized computer, shared | one computer on each desk | computers joined together | a computer in every pocket | far-off data centers, used by phone |
| shaped by inventors; governments | shaped by governments, armies, big companies | shaped by hobby clubs, new companies | shaped by governments, universities, communities | shaped by phone and big tech companies | shaped by a few giant companies |
| **In Nepal** | | | | | not to scale |
| | 1971: census computer<br>1981: 64 terminals | offices, then schools and homes | 1993–95: email and internet<br>2000s: Nangi | 1999: first mobile network | banks, shops, government on the phone |

1. _____ 2. _____

3. _____ 4. _____

## 3 Multiple choice [5]

Choose the correct option for each of the following questions.

**i.** Put these eras in order, oldest first. [1]

**a.** personal computers, mainframes, mobile, the web
**b.** mainframes, personal computers, the web, mobile
**c.** the web, mainframes, mobile, personal computers
**d.** mobile, the web, personal computers, mainframes

**ii.** Which of these is an **unintended** effect of the mobile phone in Nepal? [1]

**a.** making calls without a telephone line
**b.** families receiving money from relatives abroad through phone apps
**c.** talking to someone in another town
**d.** hearing a phone ring when a call comes

**iii.** A trekking guide plans a 10-day route by dividing it into one day at a time: where to walk, where to sleep, where to buy food. Which habit is this? [1]

**a.** decomposition **b.** abstraction
**c.** patterns **d.** an algorithm

**iv.** A bank opens three ATMs in a town and needs fewer staff to count cash, but more to help customers with loans and phone banking. What has automation done to the bank teller's job? [1]

**a.** created it **b.** changed it
**c.** nothing **d.** replaced every bank job

**v.** A government app shows whether an office is open with only a green or red dot. Who does this fail most? [1]

**a.** people with a new phone
**b.** people who can't tell red from green, and people using a screen reader
**c.** people who read English
**d.** nobody: colors are clear to everyone

## 4 Computational thinking [2]

A flood forecaster uses all four habits of computational thinking. Match each habit in Column A with what the forecaster does in Column B. One item in Column B is not needed. Each carries 0.5 mark.

| Column A | | Column B |
|---|---|---|
| **1.** decomposition | ☐ | **a.** turning a whole river into the height of the water at each station |
| **2.** patterns | ☐ | **b.** if the water passes the warning level, sending a message to phones downstream |
| **3.** abstraction | ☐ | **c.** knowing from past floods how fast the river rises after heavy rain upstream |
| **4.** algorithm | ☐ | **d.** buying a faster computer for the office |
| | | **e.** splitting "warn people about floods" into measuring the rivers, measuring the rain, and sending the message |

## 5 True or false [3]

Write True or False after each sentence.

i. The eras of computing overlap, because old machines stay in use long after new ones arrive. ☐

ii. In the era of the electronic giants, clubs of hobbyists and small new companies led. ☐

iii. Nepal's first computer was brought in by a private company. ☐

iv. Automation usually takes over tasks, the parts of a job that repeat, before whole jobs. ☐

v. A ramp cut into a footpath for wheelchairs also helps parents with prams and porters with loads. ☐

vi. As of MICS 2024–25, the gap in internet use between women and men was larger than the gap between the poorest and richest families. ☐

## 6 Short answers [8]

Write short answers to the following questions.

**a.** Paying by scanning a QR code was made so that customers could pay a shop from their phone, without cash. Give one unintended effect that helped and one that harmed. [2]

**b.** What is automation? Explain, with one example of each, how automation can replace, change and create jobs. [3]

**c.** Mahabir Pun brought the internet to Nangi. Was he acting as an individual, an organization, a government or a community? Explain why no company had done it first. [3]

## 7 Long answer [4]

Write a long answer to the following question.

Bishnu says: "Almost every household in Nepal has a mobile phone, so everyone has access to the internet." Explain what is wrong with this, using the five things access needs.

## 8 Think [2]

Think, then answer.

"Design for the people who need it most, and you help everyone." Do you agree? Give two examples.

## 9 Activity: Check an app for everyone (not marked)

Choose an app or website your family uses: a bank or wallet app, a news site, the school's website. Check it, then write two things its designers did well and two things you would change.

| Check | Yes or no? | What you saw |
|---|---|---|
| With the phone's text size at the largest, can you still read and use everything? | | |
| Is everything in Nepali as well as English? | | |
| Does anything rely on color alone? | | |
| Does it work on a weak signal? | | |