Unit 8 · Technology, Policy and You

WORKSHEET

Full marks 31

Name _____ Class _____ Roll no. ____ Date _____ Marks _____ / 31

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.

functionalism	**impact assessment**	**moral agent**	**moral patient**	**Moravec's paradox**
narrow AI	**public register**	**responsibility gap**	**steelman**	**whistleblower**

Someone who can be held responsible for what they do is a _____; someone who can be wronged, whose suffering counts, is a _____. The view that the right organization of information could be conscious, whatever it is made of, is _____. Chess is easy for computers but folding laundry is hard: this is _____. A system good at one kind of task, such as translating, is _____. The questions a public body must answer before it uses a system, whose answers set the safeguards it needs, are an _____; a list of every algorithm it uses, open to anyone, is a _____. Someone who reports danger inside an organization to a regulator, when the people inside won't act, is a _____.

2 Which principle? [2]

Match each case, in Column A, with the principle of the ACM Code it goes against most directly, in Column B. Two items in Column B are not needed. Each carries 0.5 mark.

	Column A		Column B
1.	A wallpaper app copies every contact in the phone, though it needs none of them.	☐	a. 1.3 Be honest and trustworthy
2.	A company says its health chatbot is "never wrong".	☐	b. 1.4 Be fair and don't discriminate
3.	A web developer agrees to write a hospital's medicine dose calculator, a field she has never studied.	☐	c. 1.6 Respect privacy
4.	A loan model refuses most applicants from one district, and nobody has checked why.	☐	d. 1.5 Respect creative work
			e. 1.7 Honor confidentiality
			f. 2.6 Work only in areas of competence

3 True or false [4]

Tick (✓) the true sentences and cross (✗) the false ones. Each carries 1 mark.

i. A chatbot that says it is afraid has shown that it feels fear. ☐

ii. A government policy on AI binds nobody until laws or rules put it into practice. ☐

iii. Breaking a professional code of ethics is a crime. ☐

iv. However clever an AI system is, the law today holds the people who build and use it responsible for what it does. ☐

4 Multiple choice [5]

Choose the correct option for each of the following questions.

i. Which is an example of Moravec's paradox? [1]

a. A chatbot makes up a fact.

b. A program beats every human at chess, but a robot still struggles to fold laundry.

c. A model trained in English does worse in Nepali.

d. Computers use more energy than brains.

ii. Which tool is an impact assessment? [1]

a. a ban on AI systems that score people's social behavior

b. a grant for an AI research center

c. questions a body must answer before using a system, whose answers set the safeguards it needs

d. a label on AI-made videos

iii. What is the "hard problem of consciousness"? [1]

a. building a computer as fast as a brain

b. explaining why any brain process is felt, why it is like something to see red

c. measuring how many neurons a brain has

d. making a chatbot pass the Turing test

iv. In the Tempe crash of 2018, why do some researchers call the safety driver a "moral crumple zone"? [1]

a. She designed the software.

b. She was the one punished, though others had more control over how the system was designed and tested.

c. She was not at the scene.

d. The car had no driver.

v. An engineer is told to hide a known safety risk in a system before release. Which part of the ACM Code speaks most directly to what she should do? [1]

a. 1.5, respect creative work

b. 1.7, honor confidentiality

c. 1.2, avoid harm: report signs of risk, and blow the whistle if leaders won't act

d. 2.6, work only in areas of competence

5 What does it print? [3]

Write exactly what the program prints, in the box under it. The documentation of `round` and `int` explains every line.

```
print(round(0.5), round(1.5), round(4.5))
print(round(7.25, 1), round(2.675, 2))
print(int("३") + 1)
```

OUTPUT

6 Short answer [3]

Answer the following question.

Is each statement about intelligence, consciousness or responsibility? For each, say how the question could be settled. a. “The model passed the law exam better than most students.” b. “The robot dog yelps when it is kicked, so kicking it is cruel.” c. “When the model’s advice harms a patient, the hospital must answer for it.”

7 Long answer [8]

Write a long answer to the following question.

a. Use the Tempe crash of 2018 to explain why responsibility for an automated system is hard to place. Using control and knowledge, say who should have answered for it, and why. [4]

b. A student group proposes: "AI should be banned in all schools in Nepal." Use the policy tools and the five questions to criticize it, and write a better proposal in a few sentences. **[4]**

8 Think [2]

Think, then answer.

You build a lending app. Your manager asks you to make it read every contact in the borrower's phone, so the company can call them if the borrower doesn't pay. The borrower is asked for permission, so it is legal. Is it right? What would you say?

9 Activity: Who gains, who loses? (not marked)

A district wants drones to fly medicines from the district hospital to five health posts that are a day's walk away. Work in fours. For each person or group, write one benefit and one harm, now or in ten years, and one design choice that would reduce the harm. Add one more stakeholder of your own in the last row.

Stakeholder	Benefit	Harm	A design choice that helps
Patients in the villages			
Health post staff			
Porters who carry medicine now			
People under the flight path			