2.2 Contexts and Paper 2 source skills

Name: _____ Class: _____ Date: _____ **Total: 30 marks**

KEY WORDS context • source • perspective • data centre • electronic waste

Objective

Apply the content to the **contexts** of the course (cultural, economic, environmental, health, human knowledge, political, social) and build the **Paper 2** skills: read sources, compare them and use them with your own knowledge.

You must be able to:

- place a digital issue in one or more contexts
- identify the claim and perspective of a source
- compare two sources
- evaluate the origin and purpose of a source
- combine sources and own knowledge in an argument

1 Key knowledge and worked examples

■ Contexts with examples

context	example issue
economic	gig work through apps; online shopping and local shops
environmental	energy use of data centres; electronic waste
health	fitness trackers; online medical records; screen time
political	election advertising; internet shutdowns
social	online communities; cyberbullying

■ Source A: an energy agency report (adapted)

Data centres used about 1–1.5 % of the world's electricity in 2022. Demand is expected to grow quickly because of artificial intelligence, but efficiency gains have so far kept the share fairly low.

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■ **Source B: a statement by a climate campaign group (written for practice)**

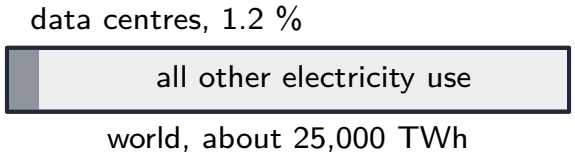
> Every AI query burns energy and water. Tech companies promise "net zero", but their emissions are rising. Governments must force them to publish the full energy cost of AI.

Worked comparison. Both sources say data centres use energy and that AI increases demand. A gives a figure and a balanced view (efficiency); B uses emotional language and calls for action. A comes from an expert body; B from a campaign whose purpose is to persuade.

2 Practice

2.1 State the **claim** of Source B, and **one** word or phrase that shows its perspective. [2]

2.2 If world electricity use is about 25,000 TWh a year and data centres use 1.2 % of it, calculate their use in TWh, and explain why a small percentage can still matter. [3]



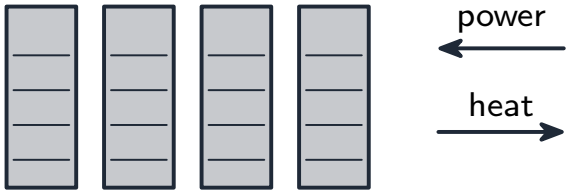
2.3 Compare and contrast Sources A and B. [4]

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2.4 Evaluate the **origin** and **purpose** of Source B for a student investigating the environmental impact of AI. [6]

3 Exam-style questions

3.1 *(Paper 2 style.)* Using Sources A and B and your own knowledge, discuss whether governments should regulate the environmental impact of data centres. [15]



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Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

Each answer shows the steps, then the **result**.

2.1

claim: AI uses a lot of energy and water, and governments must force companies to publish its full cost; perspective shown by, e.g. “burns energy”, “promise”, “must force”

2.2

$25\,000 \times 0.012 =$ **300** TWh; 300 TWh is about as much as a medium-sized country uses in a year; the share may grow quickly with AI, and data centres are concentrated in some places, where they strain local grids and water

2.3

similarity: both say data centres use energy; similarity: both say AI increases demand; difference: A gives a figure and mentions efficiency gains; B gives no figures; difference: A is neutral; B is emotional and calls for government action

2.4

origin: a campaign group; value: shows the concerns of environmental groups and the public debate; limitation: it may select facts that support its campaign; no data or sources given; purpose: to persuade governments and the public; value: makes a clear policy proposal; limitation: it ignores efficiency gains and the benefits of AI

3.1

Mark with the markbands: [top] a clear answer, both the sources and own knowledge used as evidence, different perspectives weighed, a reasoned judgement; [middle] sources and own knowledge used, some analysis, judgement not fully supported; [bottom] description of the sources only, little analysis. Points that may be included: uses Source A: data centres use about 1–1.5 % of world electricity, growing with AI; uses Source B: emissions rising despite promises; call for disclosure; for regulation: markets do not price emissions fully; disclosure lets users and investors compare companies; local impacts on grids and water in some regions; against: efficiency gains have limited growth (Source A); companies invest in renewable energy; rules may push data centres to countries with weaker rules; own knowledge, e.g. the EU’s energy efficiency rules requiring data centres to report energy use; a reasoned judgement

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