

Ibn-Khaldun University –Tiaret-

Faculty of Material Sciences

Physics Department

Medical Physics Master1

English Exam

22/01/2026

Duration 2^H.

i)

- 1) Write the equating balance of the general state of the earth's climate.
- 2) Give details how plants can regulate the global climate.
- 3) Explain what is climate forcing.
- 4) Give the different mechanisms of climate change that alter the amount of energy stored by the climate system.
- 5) Explain how the earth' atmosphere protect us from the impacts of comets and meteorites.
- 6) What are the natural reasons causing climate change.
- 7) Give details how volcanic eruption can influence the global climate.
- 8) Explain the Human reasons causing climate change.
- 9) Explain the procedure used by the Plankton to reduce the carbon dioxide of the atmosphere.

- ii) - Give the different Propositions used in expressing **CAUSE** statement.
- Give the different Propositions used in expressing **CONDITION** statement.
- What does express '**had better**', give example.
- Give the form of the four types of conditionals.

iii) In writing physics research paper or thesis leads to several stages, namely:

1. Choose a topic:
2. Define objectives:
3. Literature review:
4. Create an outline: a) Introduction b) Methods, c) Results, d) Discussion e) Conclusion.

Try to clarify each of these six stages.

iv) Essay

Despite their scarcity, the so called greenhouse gases play an important in the regulation of the earth's energy balance; try to explain the role of such greenhouse gases and their effect on the global climate. Give the different recommendations that you suggest to reduce the effect of these greenhouse gases.

Good luck!

Correction examen Anglais technique Mai 2026 M1 Medical Physics

I)

- 1) Amount of energy the earth receives from the sun in form of light and ultraviolet radiation and the amount of energy the earth releases back to space in the form of infrared heat energy.

Light and ultraviolet radiation=infrared heat energy

- 2) All land plants make food from photosynthesis of CO_2 and H_2O in the presence of sunlight. Through this utilisation of CO_2 in the atmosphere plants have the ability to regulate the global climate.

- 3) Causes of climate change involve any process that can alter this global energy (1). Climate forcing forces the climate to change.

- 4) -Variation in the earth's orbit around the sun
-Changes in the composition of the atmosphere
-Impact of large volcanic eruptions
-Collisions with comets or meteorites

- 5) The earth's atmosphere protects us from the impact of comets and meteorites by vaporising all or most of the incoming materials before reaching the earth surface.

6) Fluctuation in the earth's orbit, variation in ocean circulation, changes in the composition of the earth's atmosphere.

7) The lava flows releases huge quantities of gases including SO_2 and CO_2 causing a longer term global warming.

8) During the last 200 years human pollution of atmosphere with extra greenhouses has enhanced the natural greenhouse effect.

9) Plankton utilise carbon dioxide dissolved in sea water for photosynthesis and the manufacture of their tiny carbonate shell. The oceans replace the utilised carbon dioxide by sucking down the gas from the atmosphere. When the plankton die their carbonate shell sinks to the seafloor effectively locking away the CO_2 from the atmosphere.

II) a) **CAUSE**

- As a result, consequently, as a consequence, so, thus, therefore.
- Because, since, as.

b) **CONDITION**

- Proving that, provided that, as long as, so long as, but only if, only if.

c) HAD BETTER

- expresses advice. You had better work hard to pass your final exam.

Conditionals:

T0: If + Verb in present simple, Verb in present simple.

T1: If + Verb in present simple, Verb in future (will+stem).

T2: If + Verb in past simple, Would + stem.

T3: If + Verb in past perfect, would have + past participle.

III)

- 1) **Choose a Topic:** Select a topic that interests you and aligns with your research goals. Consider its significance and relevance in the field of physics.
- 2) **Define Objectives:** Clearly state the purpose and objectives of your study. What are you trying to achieve? What questions are you addressing?
- 3) **Literature Review:** Analyse existing research and relevant sources. Understand the context and identify gaps in knowledge. This step helps you position your work within the broader scientific landscape.
- 4) **Create an Outline:** Organize your paper logically. A typical structure includes:
 - a) **Introduction:** Provide background information, state the problem, and introduce your research question.
 - b) **Methods:** Describe the experimental setup, data collection, and analysis techniques.
 - c) **Results:** Present your findings, including graphs, tables, and numerical data.
 - d) **Discussion:** Interpret results, discuss implications, and compare with existing literature.
 - e) **Conclusion:** Summarize key points and suggest future directions.

IV) Essay