

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS X

ANNUAL EXAMINATIONS (THEORY) 2025

Physics Paper II

Time: 1 hour 50 minutes Marks: 25

INSTRUCTIONS

Please read the following instructions carefully.

1. Check your name and school information. Sign if it is accurate.

I agree that this is my name and school.
Candidate's Signature

RUBRIC

2. There are SEVEN questions. Answer ALL questions. Questions 6 & 7 each offer TWO choices. Attempt any ONE choice from each.
3. When answering the questions:

Read each question carefully.
Use a black pointer to write your answers. DO NOT write your answers in pencil.
Use a black pencil for diagrams. DO NOT use coloured pencils.
DO NOT use staples, paper clips, glue correcting fluid, or ink erasers.
Complete your answer in the allocated space only. DO NOT write outside the answer box.
4. The marks for the questions are shown in brackets ().
5. You may use a simple calculator if you wish.

Q.1. (Total 3 Marks)

If an object is placed at a distance of 2 cm from a convex mirror of focal length of 4 cm, then find the position of the image formed.

Q.2. (Total 3 Marks)

i. Describe a condition under which a single electron can generate a magnetic field. (2 Marks)

ii. Will it be a weak or strong magnetic field? (1 Mark)

Q.3. (Total 2 Marks)

State any TWO uses of logic gates in daily life.

Q.4.

(Total 2 Marks)

Describe, how are light signals transmitted through an optical fibre.

Q.5.

(Total 3 Marks)

Suppose a radioactive element has an initial number of atoms (X) kept in a nuclear power station.

Calculate the number of radioactive atoms left after 10 half-lives.

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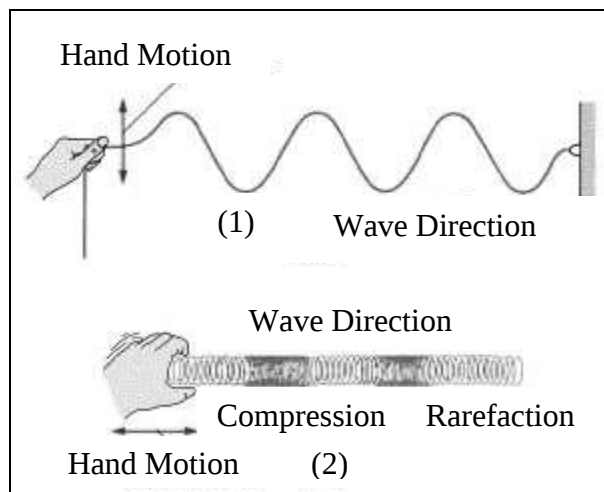
Q.6.

(Total 6 Marks)

EITHER

a.

Two different waves are shown in the given diagrams.

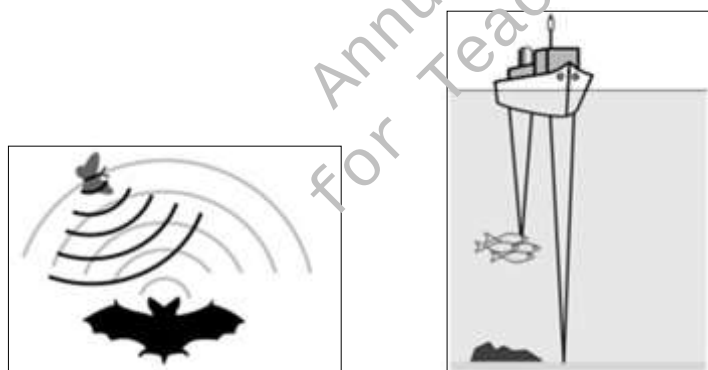


Identify the types of waves and describe any FOUR differences between these waves.

OR

b.

The given diagrams show two different uses of sound waves by two different things.



Identify the sound wave used in the given diagrams and describe any FIVE uses of that other than shown in the above diagrams.

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Q.7.

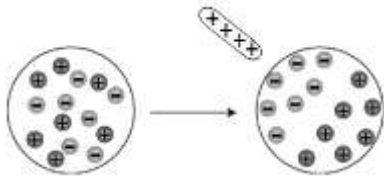
(Total 6 Marks)

EITHER

a.

- i. Identify the phenomenon in the given diagram.

(1 Mark)



- ii. Write any FIVE hazards of the phenomenon identified in part (i).

(5 Marks)

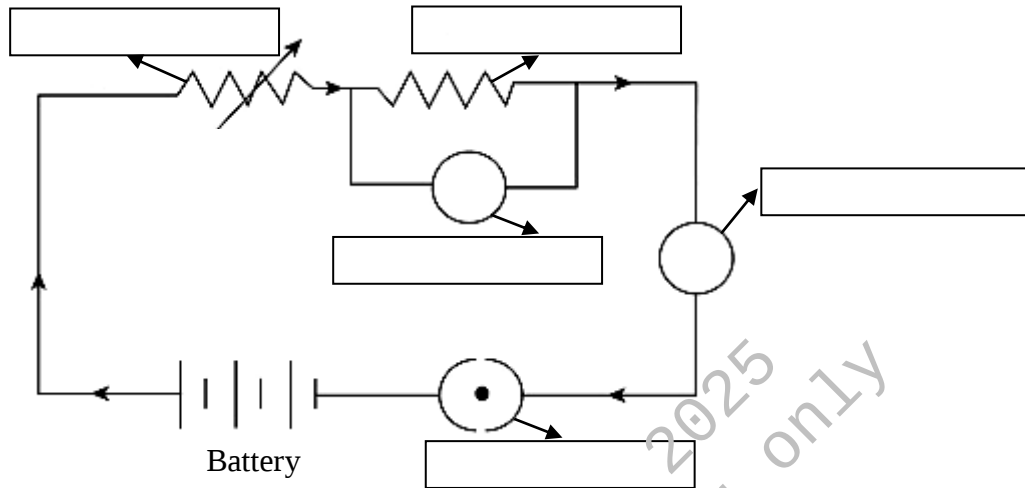
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OR

b.

- i. Label the electrical component in the given circuit diagram.

(2 Marks)



- ii. Describe any ONE use of the each of the identified electrical component in the given circuit diagram. (4 Marks)

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END OF PAPER

Please use this page for rough work

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