

**AGA KHAN UNIVERSITY EXAMINATION BOARD**

**SECONDARY SCHOOL CERTIFICATE**

**CLASS IX**

**ANNUAL EXAMINATIONS (THEORY) 2023**

**General Science Paper II**

**Time: 1 hour 55 minutes    Marks: 40**

**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 TEN questions. Answer ALL questions. Questions 8, 9 & 10 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)

Differentiate between pure science and applied science? Exemplify any ONE field of applied science.

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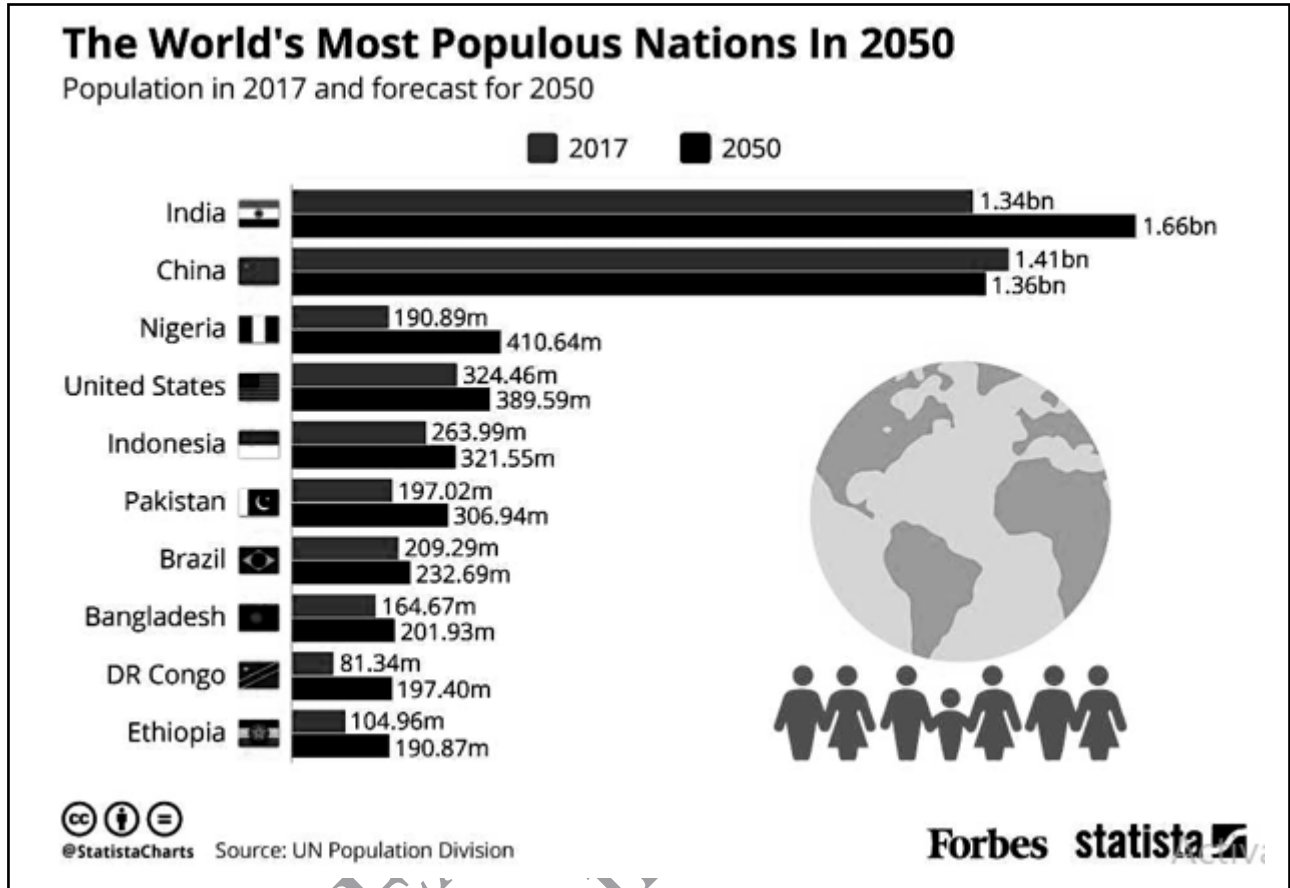
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Q.2.

(Total 3 Marks)

The given statistical chart shows the comparison of the population growth of Pakistan with other countries.



a. Based on the given information, identify the country that would have the highest population growth rate in 2050. (1 Mark)

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b. Describe any TWO ways in which educating women in the identified country might be effective in controlling overpopulation. (2 Marks)

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PLEASE TURN OVER THE PAGE

Q.3. (Total 4 Marks)

a. Describe any TWO functions of iron in the human body. (2 Marks)

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b. Mention any TWO plant-based food sources of iron. (2 Marks)

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Q.4. (Total 4 Marks)

During adolescence, boys require an average of 2,800 calories a day, whereas girls require an average of 2,200 calories a day.

Elaborate the given statement by giving any FOUR reasons for the difference in calories.

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Q.5.

(Total 3 Marks)

Mention any THREE human diseases that can be transmitted by an insect's bite.

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Q.6.

(Total 4 Marks)

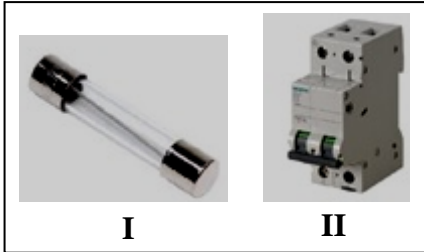
Write the type of energy conversion involved in each of the given scenarios to complete the table.

Scenario	Energy Conversion Involved
Rubbing of both hands together for warmth	
Falling of an object with a speed	
Using a battery-powered torch light	
Photosynthesis in plants	

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Q.7. (Total 4 Marks)

The given diagrams, **I** and **II**, show two electrical instruments which are used in household circuits for safety purposes.



a. Identify the given instruments, **I** and **II**. (2 Marks)

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b. Write any TWO differences between the instruments identified in part a. (2 Marks)

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Q.8.

(Total 5 Marks)

**EITHER**

- a. Write names of any TWO Arab Muslim scientists and describe their contribution in the field of science.

**OR**

- b. Human population growth is a major contributor to global warming.

Describe FIVE reasons to validate the given statement.

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Q.9. (Total 5 Marks)

**EITHER**

a. Waste management is important for the sustainability of environment.

Support the given statement by providing any FIVE reasons.

**OR**

b. Explain in FIVE points how regular exercise prevents heart diseases in humans.

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Q.10.

(Total 5 Marks)

**EITHER**

a. Suggest any FIVE ways in which we can conserve energy at homes and in schools. (5 Marks)

**OR**

- b.
- i. Draw a circuit diagram showing the connection of the following electrical components in series.
    - A battery
    - A resistor
    - A bulb

(2 Marks)
  - ii. Calculate the amount of current passing through a resistor having a resistance of 2 ohms when the voltage across the bulb is 10 volts. (3 Marks)

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