

--- MCQs Questions (1) ---

Here is a single MCQ question generated based on the provided text:

****MCQ Question****

What was the frequency range used by airborne radar systems, according to Fig 5.3?

- A) 400 MHz to 94 GHz
- B) 1-10 GHz
- C) 100 MHz to 30 GHz
- D) 2-50 GHz

****Correct Answer****: A) 400 MHz to 94 GHz

--- Fill in the Blanks Questions (2) ---

Here are two fill-in-the-blank questions based on the provided text:

1. The term RADAR stands for _____ to Detection and Ranging.

(Answer: Radio Aid)

2. The first application of radar was to airborne interception (AI) radars fitted to _____ aircraft to improve air defence.

(Answer: fighter)

--- True/False Questions (2) ---

Here are two True/False questions based on the provided text:

****Question 1:**** The term RADAR stands for "Radio Aid to Detection and Ranging". (True or False)

Answer: ****TRUE****

****Question 2:**** The US AH-64 Apache attack helicopter with Longbow radar operates at a frequency of 400 MHz. (True or False)

Answer: ****FALSE**** (According to the text, the AH-64 Apache operates at 35 GHz.)

--- Long Answer Questions (2) ---

Here are two long answer questions based on the provided text:

****Question 1****

Discuss the evolution of radar technology from its inception to its widespread adoption in airborne systems. How did the invention of the magnetron in 1940 contribute to this development? (Answer should be around 250-300 words)

****Question 2****

Explain how the frequency range of airborne radar affects its performance and application. Provide examples of different airborne platforms and their corresponding frequency ranges, highlighting the significance of these frequencies in various military avionics systems. (Answer should be around 250-300 words)

--- Short Answer Questions (2) ---

Here are two short answer questions based on the provided text:

****Question 1****

What was the original concept of radar demonstrated by Heinrich Hertz in the 1880s, and what were its key properties?

****Answer**** (approx. 50-75 words)

****Question 2****

How did the invention of the magnetron in 1940 impact the development of airborne radar systems, and what was the first application of airborne interception (AI) radars fitted to fighter aircraft?

****Answer**** (approx. 50-75 words)

