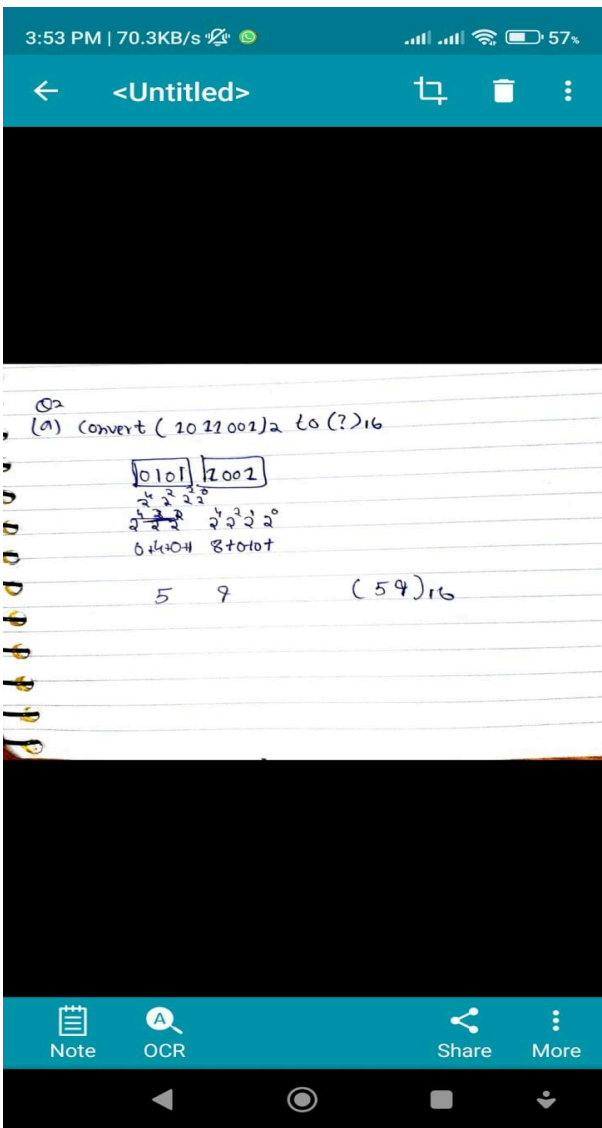


**Q1. Name any two ICT technologies and write their brief description.**

1. AI (Artificial Intelligence): AI involves creating computer systems that mimic human intelligence for tasks like problem-solving and image recognition.
2. IoT (Internet of Things) is a network of connected devices with sensors that collect and share data for automation and monitoring in various applications.

**Q2. Give step by step solution**

**a) Convert  $(1011001)_2$  to  $(?)_{16}$**



The image shows a handwritten solution for converting the binary number  $(1011001)_2$  to hexadecimal. The solution is written on a piece of paper with a blue header and a blue footer. The header contains the text "<Untitled>" and the footer contains icons for "Note", "OCR", "Share", and "More". The handwritten text is as follows:

Q2  
(a) Convert  $(1011001)_2$  to  $(?)_{16}$

The binary number  $1011001$  is written and grouped into two parts:  $1011$  and  $001$ . Below each group, the powers of 2 are written:  $2^3, 2^2, 2^1, 2^0$  for  $1011$  and  $2^2, 2^1, 2^0$  for  $001$ . The values are then calculated:  $1 \times 2^3 + 0 \times 2^2 + 1 \times 2^1 + 1 \times 2^0 = 8 + 0 + 2 + 1 = 11$  and  $0 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 = 0 + 0 + 1 = 1$ . The decimal values 11 and 1 are written below the groups. The final result is  $(B1)_{16}$ .

b)  $(101.670)_8$  to  $(?)_2$

3:53 PM | 22.4KB/s

57%



<Untitled>



(b)  $(101.670)_8$  to  $(7)_2$

$1 = 001$ ,  $0 = 000$ ,  $6 = 110$ ,  $7 = 111$

$\Rightarrow (101.670)_8$

$= 001000001.11011000$

binary

$\Rightarrow 100,0001.11011000$

Ans

