To calculate the transmission time of a packet, you can use the following formula:

[\text{Transmission Time} = \frac{\text{Packet Size (in bits)}}{\text{Transmission Rate (in bits per second)}}]

Given:

- Packet Size = 5 Kbytes = 5 * 1024 bytes (1 byte = 8 bits)
- Transmission Rate = 10 Mbps

First, convert the packet size to bits:

[\text{Packet Size (in bits)} = 5 \text{ Kbytes} \times 1024 \text{ bytes/Kbyte} \times 8 \text{ bits/byte}]

[= 5 \times 1024 \times 8 \text{ bits}]

[= 40960 \text{ bits}]

Now, plug these values into the formula:

[\text{Transmission Time} = \frac{40960 \text{ bits}}{10 \text{ Mbps}}]

[= \frac{40960 \text{ bits}}{10 \times 10^6 \text{ bits/second}}]

[= \frac{40960}{10^7} \text{ seconds}]

[= 0.004096 \text{ seconds}]

So, the transmission time of the packet is approximately (0.004096) seconds or (4.096) milliseconds.