→ R. Dharshini
→ 192111189

5, Solve the Missionaries and Cannibal Problem using following input and output.

C ⇒ Cannibals
M ⇒ missionaries

Solution :-

Place - 1	River	Place - 2

6 → 3C, 3M

$$2C\,2M \xrightarrow{\text{ICIM}} \underline{\quad\quad}$$

$$2C\,2M \xleftarrow{\text{IM}} \text{IC}$$

$$3M \xrightarrow{2C} \text{IC}$$

$$3M \xleftarrow{\text{IC}} 2C$$

$$\text{ICIM} \xrightarrow{2M} 2C,2M$$

$$2C\,2M \xleftarrow{\text{ICIM}} \text{IC,IM}$$

$$2C \xrightarrow{2M} \text{IC,3M}$$

$$3C \xleftarrow{\text{IC}} 3M$$

$$\text{IC} \xrightarrow{2C} 2C,3M$$

$$\text{IC} \xleftarrow{\text{IC}} \text{IC,3M}$$

$$0C \xrightarrow{2C} \boxed{3C,3M}$$