GATE

January 19, 2024

1. The content of the registers are $R_1 = 25H$, $R_2 = 30H$ and $R_3 = 40H$. The following machine instructions are executed.

$$PUSH\{R_2\}$$
$$PUSH\{R_2\}$$
$$PUSH\{R_3\}$$
$$POP\{R_1\}$$
$$POP\{R_2\}$$
$$POP\{R_3\}$$

After execution, the content of registers R_1, R_2, R_3 are   (GATE-EC2021,32)

(a) $R_1 = 40H, R_2 = 30H, R_3 = 25H$

(b) $R_1 = 25H, R_2 = 30H, R_3 = 40H$

(c) $R_1 = 30H, R_2 = 40H, R_3 = 25H$

(d) $R_1 = 40H, R_2 = 25H, R_3 = 30H$