Md. Mehedi Hasan Polash
ID: 22-46566-1
Sec: B

Ans no. 1

2	2	-	4	6	5	6	6	-	1
P	Q	-	a	b	c	d	e	-	p

using timer 0.

$OCR0B = 2PQ = 2 \times 2 \times 2 = 8$

$\therefore$ Mod 05 Non-Inverting

TCCR0A = 0b00100001
TCCR0B = 0b00001011

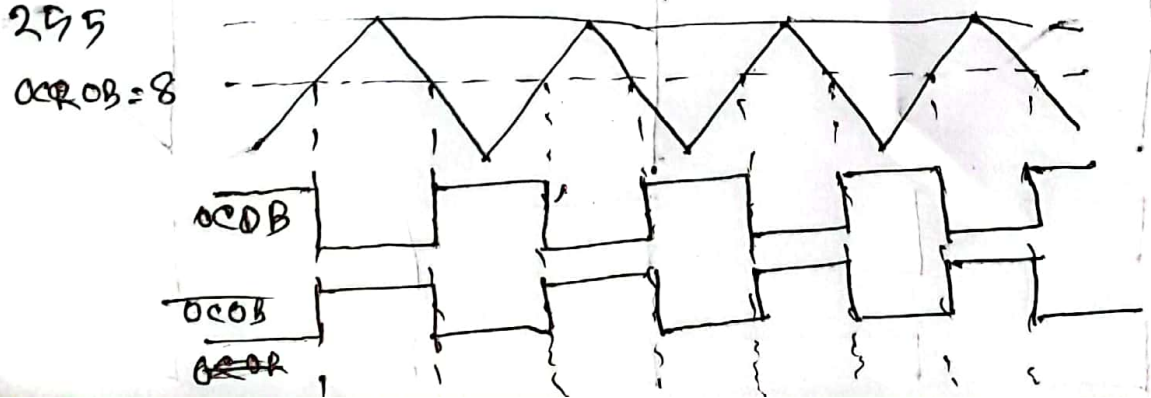
$$OCR0x = \frac{256D}{100} - 1$$

$$OCR0B = \frac{256D}{100} - 1$$

$$\therefore D = 19.48$$

$$f_{OSC} = 1 \times 4\ MHz = 4\ MHz$$

$$f_{OC0BPWM} = \frac{4\ MHz}{64 \times 510} = 122.54\ Hz$$



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Ans no.2

$OCR0A = 2 \times 1 \times 6$

$= 12$

Here timer 0 is selected & first PWM mode 7

$OCR0B = 1$ de

$= 36$

$f_{osc} = 16$

$= 6$ MHz

$$OCR0B = \frac{OCR0A * D}{100} - 1$$

$$36 = \frac{12 \times D}{100} - 1$$

$$= 301$$

$$f_{OC0BFPWM} = \frac{6\ MHz}{(2 \times 64) \times (1 + 12)}$$

$= 3605$ Hz

$= 3.6$ kHz