

Section-3

Q2.
Answer 2.

$G = (\{S, X\}, \{a, b\}, (P, S))$ where \emptyset production are:-

$S \rightarrow XS \mid \epsilon, A \rightarrow aXb \mid Ab \mid ab$

$G = (\{S, X\}, \{a, b\}, P, S)$

where the production are

$S \rightarrow XS \mid \epsilon, A \rightarrow aXb \mid Ab \mid ab$

lets the equivalent PDA

$P = (\{q\}, \{a, b\}, \{a, b, X, S, \epsilon, q, s\})$

where $\delta \rightarrow$

$$\delta(q_1, \epsilon, s) = \{ (q_1, xs), (q_0, \epsilon) \}$$

$$\delta(q, \epsilon, x) = \{ (q, axb), (q, xb), (q, ab) \}$$

$$\delta(q_1, a, a_1) = \{ (q_1, \epsilon) \}$$

$$\delta(q_1, l, l) = \{ (q_1, \epsilon) \}$$