

**CS 302**  
**REMOTE QUIZ 6**

*15 April, 2021*

*Duration : 20 minutes*

**ANSWERS**

**(a)** (4 pts) *See the relevant slide.*

**(b)** (6 pts)

**(i)** *baba* is in  $L_G$  .

*leftmost derivation :  $S \Rightarrow b B S \Rightarrow b a S \Rightarrow b a b B S \Rightarrow b a b a S \Rightarrow b a b a$*

*rightmost derivation :  $S \Rightarrow b B S \Rightarrow b B b B S \Rightarrow b B b B \Rightarrow b B b a \Rightarrow b a b a$*

**(ii)**  $L_G = \{w \in \{a,b\}^* \mid \text{no. of } a\text{'s in } w = \text{no. of } b\text{'s in } w\}$