Lac-Operon assignment

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1-Absence of lactose

-No transcription of the lac operon because the lac repressor is still connected to the operator

2-Presence of lactose

-The operator lets go of the lac repressor and the allolacotse is there

3-Absence of glucose

-Then there is no transcription of the operon. The CAMP levels are high since glucose is not there allowing the CAP to be active and bind to the CAP site

Finally, describe where in the process of gene expression (transcription, post-transcription, translation, post-translation) this regulation takes place.

-The regulatory gene produces repressors that bind to the operators and stop transcription in the presence of lactose. The repressors can not bind to the operator freeing the promoter site for the polymerase to act.