

First letter of codon (5' end)

Second letter of codon

	U	C	A	G
U	UUU Phe UUC Phe	UCU Ser UCC Ser	UAU Tyr UAC Tyr	UGU Cys UGC Cys
	UUA Leu UUG Leu	UCA Ser UCG Ser	UAA Stop UAG Stop	UGA Stop UGG Trp
C	CUU Leu CUC Leu	CCU Pro CCC Pro	CAU His CAC His	CGU Arg CGC Arg
	CUA Leu CUG Leu	CCA Pro CCG Pro	CAA Gln CAG Gln	CGA Arg CGG Arg
A	AUU Ile AUC Ile	ACU Thr ACC Thr	AAU Asn AAC Asn	AGU Ser AGC Ser
	AUA Ile AUG Met	ACA Thr ACG Thr	AAA Lys AAG Lys	AGA Arg AGG Arg
G	GUU Val GUC Val	GCU Ala GCC Ala	GAU Asp GAC Asp	GGU Gly GGC Gly
	GUA Val GUG Val	GCA Ala GCG Ala	GAA Glu GAG Glu	GGA Gly GGG Gly

- (a) Phe→Leu
- (b) Lys→Ala
- (c) Ala→Thr
- (d) Phe→Lys
- (e) Ile→Leu
- (f) His→Glu

OR

- B) i. Explain in detail the steps involved in the initiation of translation. Enlist key differences in the process of translation in prokaryotes and eukaryotes.
- ii. Both, Glucose and Lactose were added to E. coli culture. Which of the two would be utilized for the production of energy? Explain the reason in detail.

\*\*\*\*\*