

2024 Bi H1 Q4

Section: DNA and the Genome

Topic: Gene Expression (Introns)

Question Summary:

The question asks which statement about introns is correct.

Worked Solution:

- Genes in eukaryotes are made up of coding regions (exons) and non-coding regions (introns).
- The full gene is first transcribed to form a primary mRNA transcript that contains both exons and introns.
- Before translation, introns are removed during RNA splicing, leaving only exons joined together in the mature mRNA.
- Therefore, introns are non-coding and removed from the primary transcript.

Final Answer: **D** (They are non-coding and removed from the primary transcript).

Revision Tips:

- Exons = coding sequences retained in mature mRNA.
- Introns = non-coding sequences removed during RNA splicing.
- Splicing occurs in the nucleus before the mRNA leaves for translation.