

# 2023 Bi H1 Q1

## Section: DNA and the Genome

### Topic: Structure of DNA

### Question Summary

The question tests understanding of ribosomal RNA (rRNA) and its role within the ribosome structure.

### Worked Solution

rRNA is a type of RNA that combines with proteins to form ribosomes. It is single-stranded, contains ribose sugar (not deoxyribose), and is transcribed from DNA in the nucleus. Therefore, the correct statement is that rRNA is a component of ribosomes along with protein.

### Final Answer

■ Option C — It is a component of ribosomes along with protein

### Revision Tips

- rRNA is made in the nucleolus and forms part of ribosomes.
- Three main RNA types:
  - mRNA: carries genetic code from DNA to ribosome.
  - tRNA: carries amino acids to ribosome.
  - rRNA: combines with protein to form ribosomes.
- RNA vs DNA:

- RNA has ribose sugar and uracil (U).
- DNA has deoxyribose sugar and thymine (T).