**1.** D

[1]

**2.** C

[1]

question(a);**3.**

|  |  |
| --- | --- |
| *RNA* | *DNA* |
| ribose | deoxyribose; |
| (normally) single stranded | double stranded; |
| uracil | thymine; |
| no double helix | helix; |

**NB** *Histone proteins are only in eukaryotic DNA not prokaryotic.*

[3]

**4.** (a)  U  A  G  G  U  C  C  A  G  U  U  C  1

(b) DNA;

RNA polymerase;

(ribose) nucleotides / ribonucleotides / RNA nucleotides;

3 max

[4]

**5.**

(c) RNA polymerase controls transcription / is the enzyme used in transcription;

DNA is unwound by RNA polymerase/DNA is split into two strands;

mRNA is made during transcription;

template strand of DNA is transcribed;

direction of transcription is ;

free RNA nucleotides used;

complementary base pairing between template strand and RNA  
nucleotides / bases;

RNA contains uracil instead of thymine;

mRNA is released / RNA polymerase released; 8 max