**TRANSCRIPTION QUESTIONS**

**1.** Which substance is a base found in RNA?

A. Ribose

B. Thymine

C. Adenosine

D. Uracil

(Total 1 mark)

**2.** A certain gene in a bacterium codes for a polypeptide that is 120 amino acids long. How many nucleotides are needed in the mRNA to code for this polypeptide?

A. 30

B. 40

C. 360

D. 480

(Total 1 mark)

**3.** Distinguish between the structure of DNA and RNA.

|  |  |
| --- | --- |
| **DNA** | **RNA** |
| .................................................................................................................................................................................................................................................................................................................................................................................................................................................. | .................................................................................................................................................................................................................................................................................................................................................................................................................................................. |

(Total 3 marks)

**4.** (a) Determine the strand of mRNA that is transcribed from the DNA strand below.

 A  T  C  C  A  G  G  T  C  A  A  G

....................................................................................................................................

(1)

(b) List **three** of the other molecules, apart from mRNA, required for transcription.

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

(3)

(Total 4 marks)

**5.**  (c) Explain the process of transcription in eukaryotes.

(8)

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................

....................................................................................................................................