

Virology – Biology W3310/4310 Spring 2016

Prof. V. Racaniello

Study Questions for lecture 7 – Transcription and RNA processing

1. What is the first biosynthetic event that must take place after viral DNA enters the cell? Why must this be the first event? Where does this event take place in the cell?

2. Describe the individual steps that take place during the production and processing of mRNAs.

3. How is RNA pol II recruited to the DNA template, and how is transcription regulated? How do viral proteins regulate transcription?

4. What is the purpose of splicing? Provide an example.

5. It is known that splicing marks cellular mRNAs for nuclear export. How are unspliced viral mRNAs exported from the nucleus?

6. Distinguish positive vs negative autoregulatory loops, and provide an example of each.

7. How does a transcriptional cascade work? Why is it necessary?