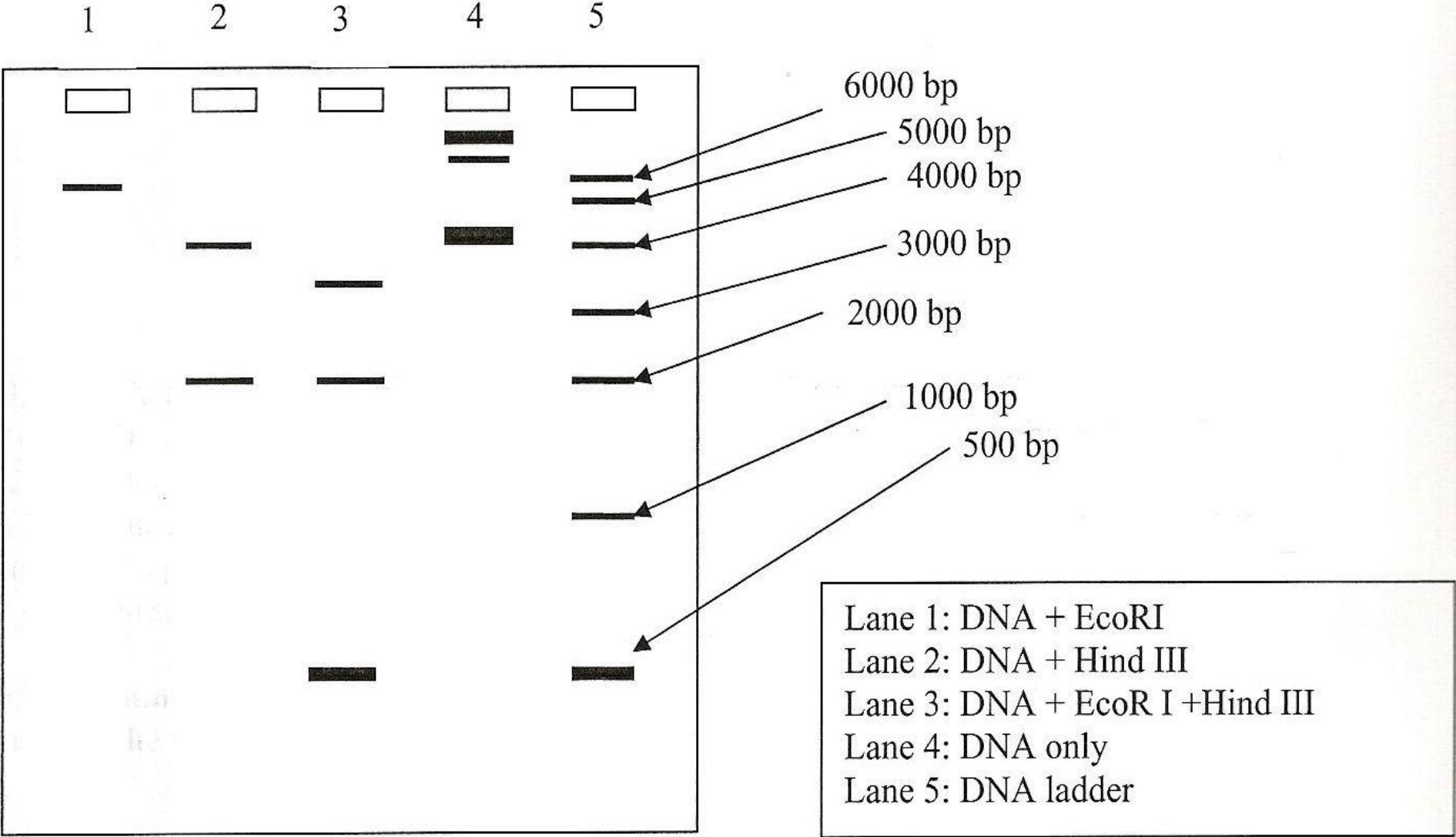
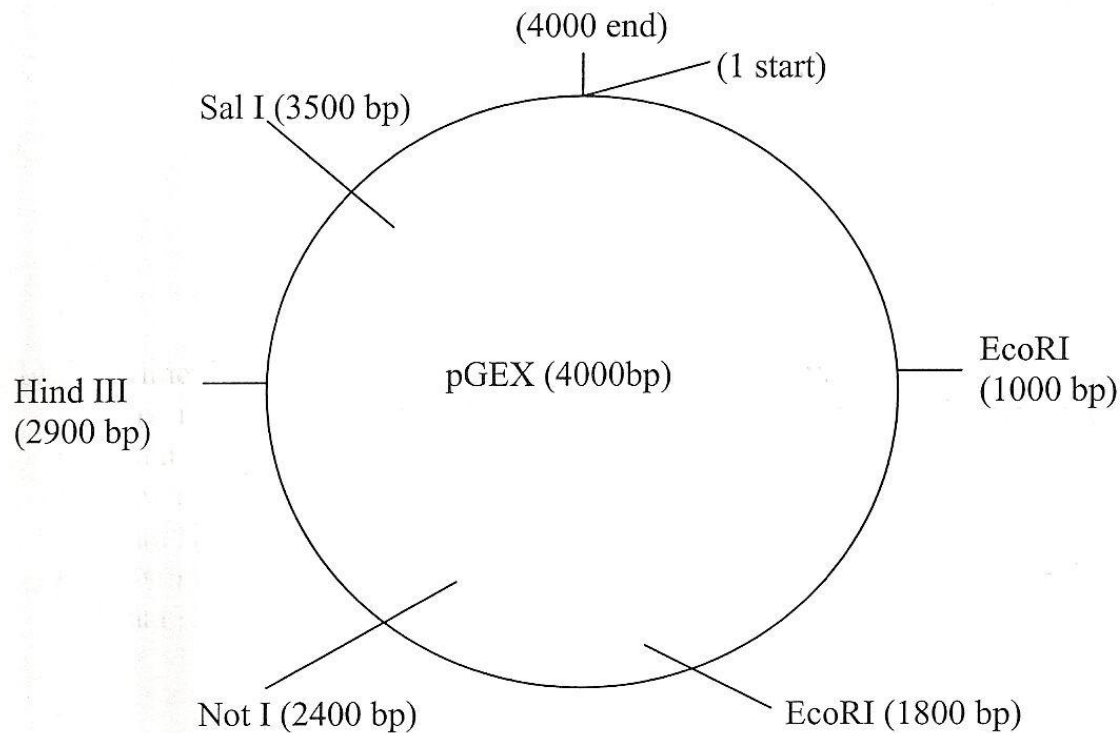


13. Examine the following pattern of an electrophoresis gel and Draw a restriction map of the DNA. Is this DNA circular or linear?

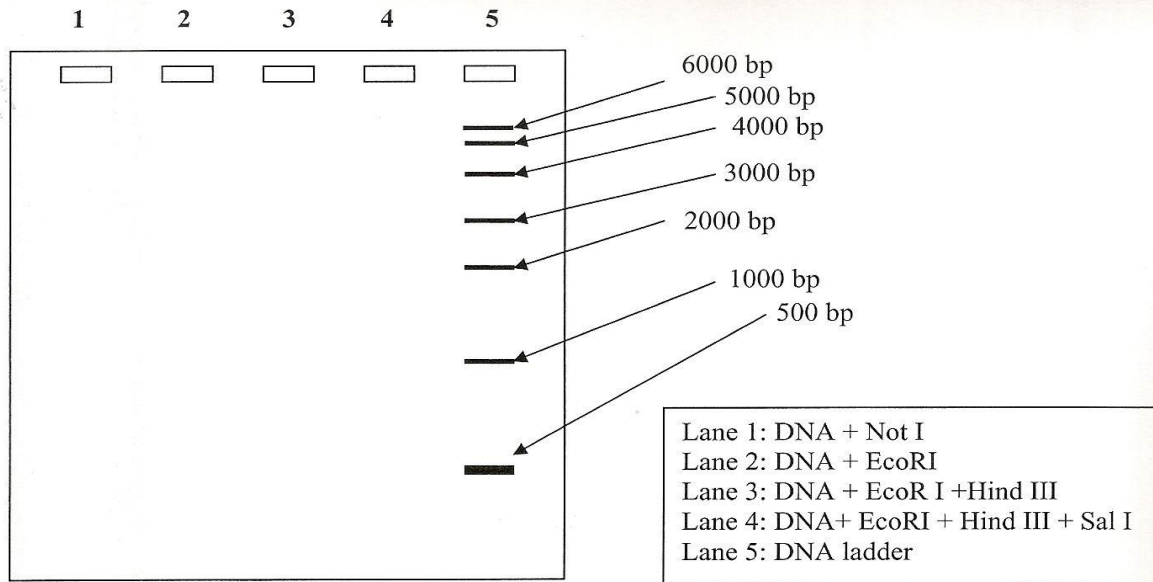


14. Examine the restriction map of plasmid pGEX below.

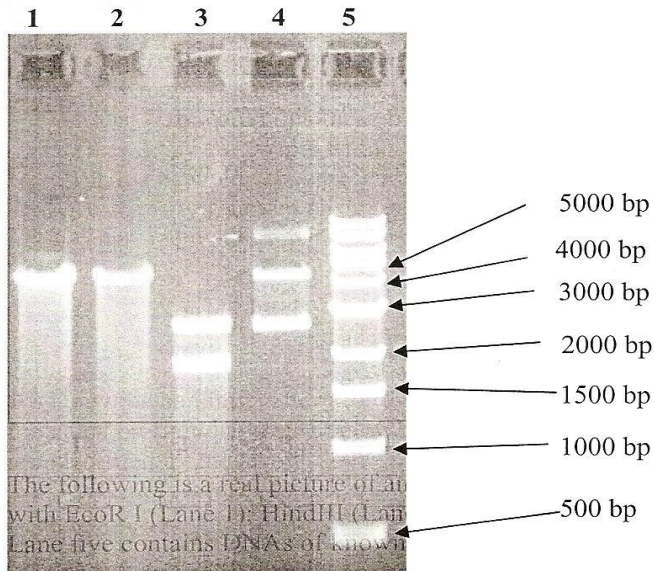
- A. How many fragments would be produced if the plasmid is digested with Sal I?  
What size would this/these fragment(s) be?
- B. How many fragments would be produced using EcoRI?  
What size would this/these fragment(s) be?
- C. How many fragments would be produced using EcoR I + Hind III + Sal I?  
What size would this/these fragment(s) be?



15. Draw the banding pattern for the restriction digestion of the above plasmid as indicated on right hand side below. The migration of a DNA ladder and its fragment-sizes are identified by the arrows. .

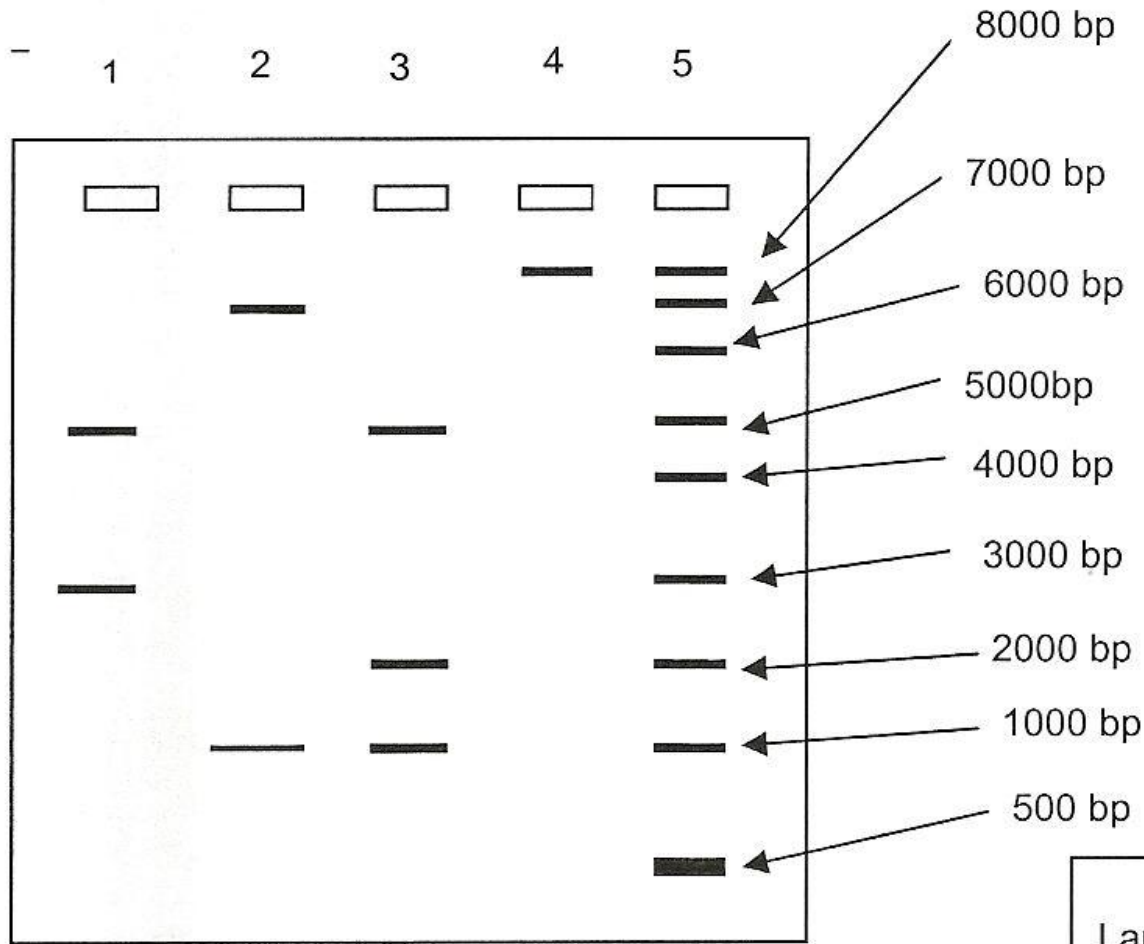


The following is a real picture of an electrophoresis gel with a particular DNA digested with EcoR I (Lane 1); HindIII (Lane 2); EcoRI & HindIII (Lane 3); No enzyme (Lane 4). Lane five contains DNAs of known sizes.



Estimate the size of the DNA molecule. Is this DNA molecule circular or linear? Draw a restriction map of the DNA at the right hand side of the picture.

16. Examine the following gel. Determine whether the DNA is prokaryotic or eukaryotic. Draw a restriction map of the DNA.



Lane 1: DNA + EcoRI  
Lane 2: DNA + Hind III  
Lane 3: DNA + EcoR I +Hind III  
Lane 4: DNA only  
Lane 5: DNA ladder