

Quiz 2

BT 205

Time: 45 min

Total marks: 10

1. How do you purify mRNA from a mixture of other RNA in laboratory?
2. Draw the **schematic** for Blue-White colony screening for cloning a foreign DNA.
3. You wish to map restriction enzyme sites of an unknown DNA along its length. After digestion with EcoR I, you obtain four fragments: 1, 2, 3 and 4. After digestion of each of these fragments with Hind III, you find that fragment 3 yields two sub fragments (3^1 and 3^2) and that fragment 2 yields three (2^1 , 2^2 and 2^3). After digestion of the entire DNA molecule with Hind III, you recover four pieces: A, B, C and D. When these pieces are treated with EcoR I, piece D yields fragments 1 and 3^1 , A yields 3^2 and 2^1 , and B yields 2^3 and 4. The C piece is identical with 2^2 . **Draw a restriction map of this DNA showing all fragments.**
4. The following fragments were found after digestion of a DNA with different restriction enzymes as noted. **Draw a restriction map of the DNA.**
[Xho I: 7.0, BamH I: 7.0, Hind III: 4.0, 2.0, 1.0, Bam HI + Hind III: 2.5, 2.0, 1.5, 1.0, Xho I + Hind III: 4.0, 2.0, 0.6, 0.4. Xho I + BamH I: 2.9, 4.1 kb]

(Marks: 2+2+3+3= 10)