MCQs on Plasmid

Plasmids are extrachromosomal DNA, mostly present in bacteria. They replicate autonomously. The size varies from a few base pairs to thousands bp. Many antibiotic resistance genes are present in plasmids. They are widely used in genetic engineering for manipulating and transferring genes.

1. Which of the following gene helps in identifying transformed cells?

(a) plasmid

(b) selectable marker

(c) structural gene

(d) vector

2. If the plasmid and the foreign DNA are cut by the same restriction endonuclease, recombinant DNA can be formed by joining both by

(a) Polymerase III

(b) EcoRI

(c) Ligase

(d) Taq polymerase

3. Find the incorrect statement about plasmids

(a) they are circular

(b) they replicate independently

(c) they are transferrable

(d) they are single stranded

4. The DNA molecule used for integrating foreign gene for cloning is called

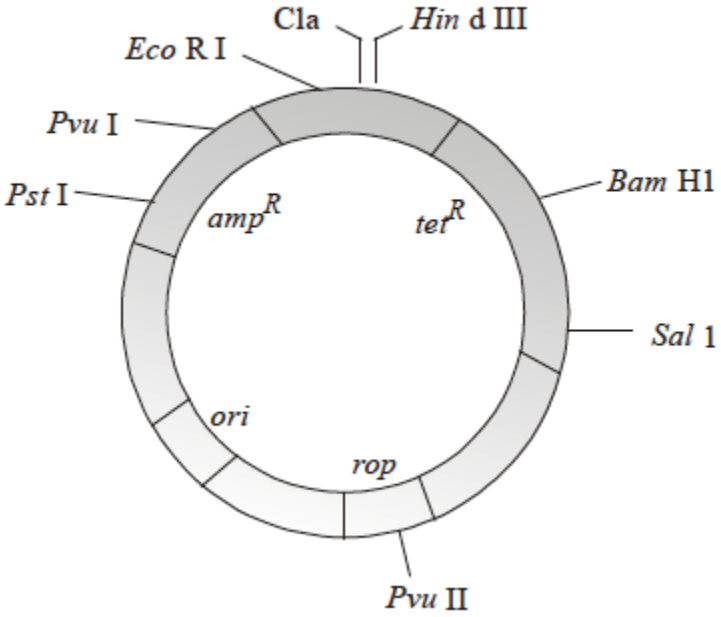
(a) vector

(b) carrier

(c) template

(d) transformer

5. Which one of the following is correct for the plasmid pBR322 of E.coli.?



(a) amp^R and tet^R – antibiotic resistance genes

(b) Hind III and EcoRI – selectable markers

(c) rop – reduced osmotic pressure

(d) ori – original restriction enzyme

6. The Ti plasmid is found in

(a) *Agrobacterium*

(b) Yeast as a 2mm plasmid

(c) *Rhizobium* of the roots of leguminous plants

(d) *Azotobacter*

7. Replication of plasmid DNA other than initiation is controlled by

(a) bacterial gene

(b) mitochondrial gene

(c) plasmid DNA

(d) none of these

8. Antibiotics are used in genetic engineering. They are useful

(a) to keep culture free of microbial infections

(b) to select healthy vectors

(c) to identify replication start sites

(d) as selectable markers

9. A single-stranded, radiolabelled molecule of nucleic acids is called

(a) plasmid

(b) vector

(c) probe

(d) selectable marker

10. A vector that can clone only a small DNA fragment is

(a) cosmid

(b) plasmid

(c) Yeast artificial chromosome

(d) Bacterial artificial chromosome

Answer

1. (b)	**2. (c)**	**3. (d)**	**4. (a)**	**5. (a)**
6. (a)	**7. (a)**	**8. (d)**	**9. (c)**	**10. (b)**