STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 86

SUBJECT CODE: ZL/MC/GE54
PAPER GENETIC ENGINEERING
SCHEME OF VALUATION

SECTION A (10X3=30)

1. A hybrid DNA formed by joining a desired DNA and a vector.
2. A segment of DNA that codes for a protein to inherit the triat.
3. A fragment of E. coli DNA polymerase I that has 3- polymerase activity and 3 exonuclease activity.
4. A small sequence of DNA that can change its location within the chromosomal DNA.
5. Plasmid Pbr 322 is a popular vector for gene cloning in E.coli. Artificial plasmid, has origin of replication, has ampicilin and tetracycline resistance.
6. A Cos-site containing plasmid being used to transfer a foreign DNA to a bacterium by transduction.
7. Making transient pores in the cell wall to uptake DNA by the cells by electrical treatment.
8. The immature cell of brown marrow that gives rise to a specific cell type.
9. A preparation containing killed or inactivated pathogenic microbe that is used to immunise man or animal.
10. Removal of introns from the primary transcript of eukaryotic m RNA.

SECTION B (5X6=30)

11. Restriction endonucleases –endonucleases cuts DNA at unique sequences. 3 Types-I, II, III.
12. DNA can be transformed by Transformation, Transduction, Transfection, Microinjection and Electroporation.
13. Isolation of DNA-acted on restriction enzymes-passed over gel electrophoresis-selection of DNA probe-hybridization-autoradiography-analysis of DNA pattern.
14. Western blotting-isolation of protein-principle of antigen and antibodyreaction-does not need radiolabelled probe.
15. Blood plasma-blood serum-embryo extract.
16. PCR-denaturation-primer anneling-extention.
17. Diagnosis of genetic diseases-Gene therapy methods.

SECTION C (2X20=40)

18. Isolation of desired DNA-formation of cDNA –insertion of cDNA in to vector-introduction of DNA in to host cell-identification of recombinants-expression of cloned genes.
19. Methods-physical adsorption-enzyme entrapment-encapsulation-liposomal entrapment-covalent bonding-copolymerisation.
20. Transgenic animals and plants, GEMO's, Gene therapy.
21. Production of hybridoma by isolation of B-lymphocytes and myeloma cells-fusion of both cells-selection and screening of Hybridomas-invivo methods of production of monoclonal antibodies from Hybridoma cell line.