## Paper / Subject Code: 31602 / Genetic Engineering

	Time: 3 Hours	Total Marks: 80	
1) Question 1 is <b>compulsory</b> .			
2) Attempt any three question	is from the rest.		
3) Draw diagrams wherever ap	oplicable.		
			\$ 60 GY
1. (a) Describe the following:			10
i) Blue white selection			VE CE
ii) Sanger's sequencing me	ethod		00 PV
(b) Write a note on Watson and	d Crick model of DNA double	e helix	10
2. (a) Agarobacterium tumefaci	ens is a natural genetic engine	eer. Justify.	10
(b) What are different ways of	of plasmid purification? Expla	in rationale behind each.	10
3. (a) Give an account of different	ent promoters used in express	ion vectors. How does cho	oice of
promoters affect the effic	iency of these vectors?		10
(b) Discuss the general proble	ems associated with the produc	ction of recombinant prote	in in E.
coli.			10
4. (a) Describe with diagrams m	naking of phagemids and its u	se in cloning to achieve sir	ngle
stranded DNA.			10
(b) Write features and classif	ication of restriction endonucl	leases.	10
5. (a) How does PCR result in			10
0°0, CA 60 VA CA 60°0	ology? Explain with an examp	ple its usefulness in plant	
genetic engineering.		200 E	10
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6. Write short note on following	igi e a la companya di santa d		20
(a) c-DNA library			
(b) Fusion proteins			
(c) Recombinant insulin			
(d) Gene gun			
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