This question paper contains **2** printed pages]

BG—4—2016

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(Revised Course)

INTEGRATED BIOTECHNOLOGY

Paper (BTT-5.1)

(*r*-DNA Technology)

(Friday, 18-11-2016) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—80

N.B. :— (*i*) Attempt *All* questions.

(*ii*) Draw neat well labelled diagrams whenever necessary.

1.	(*a*)	What are restriction enzymes ? Describe in detail different types of restriction enzymes used in *r*-DNA.	10
	(*b*)	Describe in detail production of blood clotting factor VIII.	10
2.	(*a*)	Explain in detail western blotting.	8
	(*b*)	Write a note on BAC Vector.	7
		Or	
	(*a*)	Describe in detail enzymatic method of DNA sequencing.	8
	(*b*)	Explain in brief polymerase chain reaction.	7
3.	(*a*)	Describe in detail construction of genomic library.	8
	(*b*)	Write a note on Bacteriophage vector used in *r*-DNA.	7
		Or	
	(*a*)	Describe in detail construction of *c*-DNA library.	8
	(*b*)	Write a note on indirect methods of screening of library.	7
4.	(*a*)	Describe in detail production of recombinant insulin.	8
	(*b*)	Write a note on BT-Cotton.	7

P.T.O.

Or

(*a*) Explain in brief production of recombinant vaccine. 8

(*b*) Explain in brief Gene therapy. 7

5. Write short notes on (any *three*) : 3×5=15

(*a*) Cosmids

(*b*) Golden rice

(*c*) Plasmid vectors

(*d*) Aagarose Gel Electrophoresis

(*e*) Erythropoitin.