## EINSTEIN'S ACADMEY

## 10<sup>TH</sup> SCIENCE

UNIT- 20

MARKS – 50

I Choose the correct a	nswer
	9 x 1 = 9
1. The miracle rice wh	ich saved millions of lives and celebrated its 50th birthday is
wheat that helped Ind	lia to achieve high productivity.
a. IR	b. IR 24
c. Atomita 2	d. Ponni
2. Which method of co	rop improvement can be practised by a farmer if he is inexperienced.
a) clonal selection	b) mass selection
c) pure line selection	d) hybridisation
3. Himgiri developed by variety of	by hybridisation and selection for disease resistance against rust pathogens is a
a. Chilli	b. maize
c. sugarcane	d. wheat
4. Pusa komal is a dise	ease resistant variety of
a) sugarcane	b) rice
c) cow pea	d) maize
5. Which of the follow	ring is used to produce products useful to human by biotechnology techniques.
a) enzyme from organ	ism b) live organism
c) vitamins	d) both (a) and (b)
6. We can cut the DNA	A with the help of
a) scissors	b) restriction endonucleases
c) knife	d) RNAase
7. DNA is a	
a) vector DNA	b) circular DNA
a) Recombinant of vec	ctor DNA and desired DNA d) satellite DNA

8. DNA fingerprinting	is based on the principle of identifying sequences of DNA
a) single stranded	b) mutated
c) polymorphic	d) repetitive
9. In a hexaploidy wh respectively are	eat $(2n = 6x = 42)$ the haploid $(n)$ and the basic $(x)$ number of chromosomes
a) n = 7 and x = 21	b) n = 21 and x = 21
c) n = 7 and x= 7	d) n = 21 and x = 7
Il Fill in the blanks	
	3 x 1=3
1. Economically impo	rtant crop plants with superior quality are raised by
2. Similar DNA finger	printing is obtained for
3. In gene cloning the	e DNA of interest is integrated in a
III State whether true	or false. If false, write the correct statement:
	2 x 1=2
1. Raphanobrassica is	a tetraploid man-made genus produced by colchicine treatment.
2. Bt gene from bacte	eria can kill insects.
IV Match the following	ng
	(2)
1. Sonalika	- Phaseolus mungo
2. IR 8	- Sugarcane
3. Saccharum	- Semi-dwarf wheat
4. Mung No. 1	- Ground nut
5. TMU – 2	- Semi-dwarf Rice
6. Insulin	- Bacillus thuringienesis
7. Bt toxin	- Beta carotene
8. Golden rice	-first hormone produce using rDNA technique
II Answer briefly	
	7 x 2 = 14
1. Define genetic eng	ineering.
2. Give the name of v	wheat variety having higher dietary fibre and protein.

3. Name the types of stem cells.

- 4. Discuss the method of breeding for disease resistance.
- 5. Distinguish between somatic gene therapy and germ line germ line gene therapy.
- 6. State the applications of DNA fingerprinting technique.
- 7. Differentiate between outbreeding and inbreeding.
- Ill Answer in detail.

 $4 \times 5 = 20$ 

- 1. What are the effects of hybrid vigour in animals.
- $2.\ \mbox{Discuss}$  the importance of biotechnology in the field of medicine.
- 3. Describe mutation breeding with an example.
- 4. Biofortification may help in removing hidden hunger. How?