



INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF BIOLOGY
CLASS XII
ENHANCEMENT IN FOOD PRODUCTION
WORKSHEET- 15

- 1 Define inbreeding depression. How the harmful effects of inbreeding depression can be overcome? 1
- 2 a) What is heterosis? 1
- b) Explain biofortification and mutation breeding methods of plant breeding to improve quality and quantity of yield.
- 3 a) Define totipotency. How is this ability useful to the tissue culture method? 1
- b) What are somaclonal variations? Do they have any significance in tissue culture?
- 4 What is out crossing? 1
- 5 List any two economically important products for humans obtained from *Apis indica*. 2
- 6 How are the two following varieties of sugarcane different from each other? 2
- i) *Saccharum barberi* ii) *Saccharum officinarum*
- 7 Mention the strategy used to increase homozygosity in cattle for desired traits. 2
- 8 MOET program has helped in increasing the herd size of the desired variety of cattle. List the steps involved in conducting the program. 2
- 9 How are somaclones cultured from explants in in-vitro conditions? Why are somaclones so called? 2
- 10 Suggest and describe a technique through which a virus-free healthy plant can be obtained from a diseased sugarcane plant. 2
- 11 a) What is micropropagation? 2
- b) Name the technique by which healthy plants can be recovered from the diseased plants.
- 12 Explain the efforts which must be put to improve health, hygiene and milk yield of cattle in a dairy farm. 3
- 13 (a) State the objective of animal breeding. 3
- (b) List the importance and limitations of inbreeding. How can we overcome the limitations?
- (c) Give an example of a new breed each of cattle and poultry.