**PARVATIBAI CHOWGULE COLLEGE OF ARTS & SCIENCE, MARGAO-GOA**

**3rd Continuous Assessment (CA) (Semester VI) – March, 2018**

**Class: T.Y.B.Sc. Biotechnology Paper: BIO-VI.E-15 Plant Biotechnology**

**Duration: 45 minutes Max marks: 15**

***Instructions:***

***Figures to the right indicate maximum marks to the question.***

***Problems may have more than one solution.***

**Solve the following problems: (3X5=15)**

1. You have been provided with a piece of leaf tissue as an explant. You are required to generate many complete plantlets (preferably clones) from this tissue. Outline the various methods that may be adopted to achieve this and enhance your solution by adding suitable protocols.
2. Consider a cell suspension culture as your starting material. In order to obtain a viable hybrid plant, what steps would you follow? Detail the various stages involved.
3. With a flower or flower bud as your starting material, how would you proceed to generate a homozygous diploid plant?