3.

PRESENT ATTEMPT
Review of literature furnishes some information that there are some plants in nature may have potential to act on central nervous system (CNS) or possess psychoactive property. In India psychotropic drugs of plant origin of commercially importance are *Papaver sominifera, Caffia arabica, Datura stramonium, Opium poppy, Nicotina tobacum, Cannabis indica* and some more.

There are also reports of some potential psychoactive plants occur in nature. Schultes (1984) has done a survey of natural hallucinogens all over world. More than 200 plant species of higher plants, are scored by him; among them there were 45 species belonging 21 dicot and five monocot families possessing psychoactive principles. Shukla and Jain (1997) have identified 41 dicot plant species known to possess psychoactive property; this information is based on the survey of published literature and referring various books and Granthas. This list comprises herbs, shrubs and trees occurring in different parts of India. Out of them 15 to 20 plants, are found to be growing in our area. Some of them are forest plants of Melghat tiger project and others occur in the planes of Amravati District. When selection was done of the plants there was thought in mind that plant material could be easily made available for work. The observation of the candidate was that the people in general of this area had little information of these plants having psychoactive property. Among 10 plants selected *Thevetia peruviana* is largely grown as garden plant; fruits of *Buchanania lanzan* and *Capparis zeylanica* are edible; tuber of * Dioscorea* used as food or as a tribal medicine; *Vigna trilobata* is vegetable plant. Rest of the plant species such as *Biophyton sensitivum, Butea superba, Caesalpinia decapetala, Cuscuta chinensis, Desmodium polycarpum* and *Vigna trilobata* are known for their sedative property.

In view of the above it is thought most essential to go for ethnobotanical and pharmacognostical studies of plants mentioned above. It was seen from literature that alkaloids, glycosides and saponins present in plant sometime possess a definite principle/s which could act upon CNS and individual experiences sedation, excitation and hypnosis. Such plants are generally known as hallucinogens, sedative narcotics, intoxicant, CNS active etc.
Keeping in view this fact, the attempt is made to undertake qualitative identification of alkaloids, glycosides, saponins in all the ten plants mentioned above. Candidate would feel that this kind of study is complete and more informative if plants possessing psychoactive properties are tested on animal system. Water is essential solvent of the plants for various physiological functions hence plant extract can be easily tested with fish as it lives in water. Naturally preference is given to fish dwelling in water as experimental system. Hence attempt is made to undertake study of the effect of different doses of plant extract on behaviour of fish. Some specific behavioural characters of fish are given in literature. On the basis of which one can verify whether the chemical or plant material possesses psychoactive property. Fish *Labeo rohita* is selected for this work, as fish can be made available in laboratory from breeding centre Baslapur near Amravati. In real sense this whole Thesis can become a valuable piece of work because aspects like ethnobotany and pharmacognosy will provide factual information on medicinal significance of the plants and experimentation on fish system will determine their psychoactive nature. No doubt over all information that compiled in this Thesis will be the source of practical information and guide line for future researcher in this field of study.