Physico-Chemical Characters showed the dominance of Alkalinity, Hardness, Nutrients, Temperature and pH in the studied water bodies.

Temperature in the present study fluctuated between 22.5 to 30.5°C. The maximum temperature was recorded in the month of April in Fort Lake and the minimum was recorded in Gullava tank during December and February months. Significant difference between means values of temperature of Gullava tank to that of Wadral Lake and Gullava tank to that of Fort Lake was observed.

Highest conductivity was recorded from Gullava tank in the month of February and the lowest was found in Fort Lake (November). Present study had shown the significant difference between the mean values of conductivity in all the water bodies.

Significant difference in the mean values of Turbidity for Fort Lake to that of other three lakes was observed. Highest turbidity was recorded in Fort Lake (April) and lowest in Gullava tank and Wadral Lake (April).

Highest pH was recorded in Gullava tank during February, which may be due to the addition of sewage, augmented cattle bathing activity and washing of clothes. The low value of pH was noticed in surface water of Fort Lake.

Highest Total Suspended Solids was recorded in the Fort Lake during the month of October and the lowest was found in December (Gullava, Jainapur and Wadral).
Except Gullava and Wadral lake which showed non-significant difference between the mean values of TSS, all the other water bodies have shown the significant difference.

Peak of Total Dissolved Solids was recorded in Gullava tank during the month of September and the lowest was found in Jainapur lake (January). Gullava tank differed significantly to all the three lakes under investigation in the mean values of TDS.

Maximum alkalinity was recorded in the Gullava tank during the month of April and minimum was found in Fort Lake (Dec/Jan). Significant difference in the mean values of alkalinity of Gullava tank and other lakes as well as between Fort Lake to that of Wadral, Jainapur Lakes was noticed.

Present study recorded highest value Total Hardness in Jainapur Lake during the month of August and the lowest was found in Fort Lake (May). Fort Lake shown significant difference towards all the remaining lakes for the mean values of Total Hardness.

Highest values of DO in Fort Lake during April month and lowest in Gullava tank during June.

High Calcium Hardness was recorded in the Wadral Lake during the month of August and the lowest was found in Jainapur Lake (September). Mean values of Calcium Hardness of Fort Lake shown significant difference towards all the remaining water bodies.

Highest Magnesium Hardness was recorded in the Gullava tank during the month of January and lowest was found in Gullava tank (November). Fort lake shown
significant difference towards all the remaining lakes for the mean values of Magnesium Hardness.

Uppermost value of Sodium was recorded in Gullava tank during May and the lowest was found in Fort, Jainapur and Wadral lakes during February and March months.

Highest Potassium was recorded in the Gullava tank during the month of May and the lowest was found in Wadral (March). Gullava tank shown significant difference towards all the remaining lakes for the mean values of Potassium.

Highest Chloride was recorded in the Gullava tank during August and the lowest was found in Wadral Lake (September). The non-significant difference was found in the mean Chloride values of Jainapur and Fort Lake and remaining water bodies differed significantly.

Highest Sulphate was recorded in the Gullava tank during the month of April and the lowest was found in August (Jainapur/Wadral/Fort). Non-significant difference between the mean values of Sulphate for Gullava tank, Wadral Lake and Fort Lakes was noticed.

Highest Nitrate was recorded in the Jainapur Lake during the month of July which may be the result of the agricultural runoff entering the lake and the lowest was found in all the lakes during October/November/December. Gullava tank shown non-significant difference towards Wadral and Fort lakes for the mean values of Nitrate

Highest Ortho Phosphate was recorded in the Gullava tank during the month of August and the lowest was found in Jainapur and Wadral (December/January/February).
Gullava tank shown significant difference towards all the remaining lakes for the mean values of Ortho Phosphate.

Highest Total Phosphate was recorded in the Jainapur Lake during August which may be due to the agricultural runoff entering the lake. The lowest values of TP was found in Janiapur and Wadral (November). Gullava tank shown significant difference towards all the remaining lakes for the mean values of TP.

Present study noticed highest BOD in the Jainapur lake during the month of August and the lowest in Gullava tank during November. Gullava tank shown non-significant difference towards Wadral and Fort lakes for the mean values of BOD.

Highest COD was recorded in the Gullava tank during the month of February and the lowest was found in Fort Lake during September. Gullava tank shown non-significant difference towards Wadral and Fort lakes for the mean values of COD.

Highest number of Phytoplankton taxa were found in Gullava tank and Wadral Lake followed by Fort and Jainapur Lake.

Chlorocoocales dominated Gullava tank throughout the year, and the other three lakes shown the dominance of Cyanophyceae.

Bacillariophyceae are highest in Jainapur Lake during the month of January. In Gullava tank and Wadral Lake they reached a maximum peak during June and July months while in Fort Lake a similar peak was represented during March month. They were poorly represented in Gullava Lake with a meagre 7% of the total phytoplankton.
Environmental aspect of Algae in aquatic habitats of Beigaum district

Chlorococcales fluctuated to a very great extent in all lakes except Gullava tank, which was dominated by Chlorococcales throughout the year and had a maximum peak during February. Fort Lake and Wadral Lake had one maxima during November. Whereas the Jainapur lake had maximum peak during September.

Cyanophyceae in Wadral Lake reached an elevated value during the month of February, while in Fort Lake and Jainapur Lake they reached a maximum peak during April and October months respectively. In Gullava tank they were constantly low during the entire period of study.

Desmids appeared only occasionally in Gullava, Jainapur and Wadral Lakes. The highest peak was observed in Wadral lake during August and in Jainapur lake the highest peak was found during January and March months.

Euglenaceae members were found occasionally in Gullava and Fort Lake with a very low density.

Dinophyceae were also among the algal groups which were poorly represented during the present study. Only a single species of Ceracium was found in Fort and Wadral lake occasionally.

CCA showed the effect of Conductivity in shaping the diversity of Phytoplankton in Gullava tank whereas in other three lakes Nutrients and temperature played a corresponding role.

During late Monsoon/early winter the diversity was high in all the water bodies under study and found generally low in summer.
According CCME-WQI aquatic habitats under study were rated as of POOR water quality; NSF-WQI rated Gullava, Jainapur and Wadral water as MEDIUM and Fort Lake as BAD quality; according DOE-WQI rating all the four habitats are considered as slightly polluted.

Palmer’s Organic pollution index classified three water bodies as probably organically polluted and Gullava tank as organically polluted.

IDSE/5 index shown the high organic pollution in Jainapur and lofty anthropogenic pollution in Fort Lake.

*Scenedesmus* and *Chlorella* species found in all the studied water bodies and are highly tolerant to pollution and can be potentially used for the remediation of Nutrients effectively to conserve the ecosystem. Removal of sediment and reducing bloom forming algae can greatly contribute to restore and conserve Lakes.

Feeding banks of lake by planting to reduce water temperature. Biomanipulation at nutrient rich zones and maintaining TMDL and the use of nitrate and sulphate reducing bacteria for denitrification of lake water in specially created lagoons are the probable strategies to conserve and restore Lakes.