Water is a primary human need. Every one person on Earth requires at least 20 to 50 litres of clean, safe and sound water a day for drinking, cooking, and simply keeping themselves clean. Industrial areas are the goal particularly for the environmental auditing. The environmental impact of human activity on the groundwater is considered as one of the major vulnerability in the modern days. Fast urbanization and increased industrial activities has resulted in the poverty of water quality. The effluents are discharged from industries and sewage water is the main contaminants of groundwater.

Water cover more than 70% of earth’s surface 97.3% is oceans and 2.5% is fresh water. The fresh water is held up in glaciers (72.2%). Ground water (22.4%), lakes and swamps (0.35%), atmosphere (0.4%) and stream channels (0.01%) (EI-Hinnawi and Hashmi, 1982).

However, human activities can change the natural composition of ground water through mining activities, the disposal or dissemination of chemicals and microbial matter at the land surface and into soils, or through injection of wastes directly into ground water.

Suitability of groundwater for drinking, irrigation and industrial purposes depends upon its quality. Changes in groundwater quality are due to variation in climatic conditions, residence time of water with aquifer materials and inputs from soil during percolation of water (Mitra et al., 2007).

The movement of pollutants into soil and groundwater through disposals of wastes, discharge of effluent from industries, or releases of chemicals through agricultural activities have led to increased vulnerability of groundwater and soil (Ahmed et al., 2009). Attention on water contamination and its management has
become a need of the hour because of far reaching impact on human health (Mahadevaiah and Sanjeevi, 2006; Sinha and Kumar, 2008).

These surface and groundwater always contains dissolved and suspended substances of organic and mineral origin (Jain et al., 2006). Epidemiological studies carried out in different countries have shown that the socio-economic level of the society may affect the incidence of intestinal parasites; control strategies of local managements involving improved infra-structure for both drinking water and sewage system, education of the society to improve personal hygiene and sanitation have been related to reduced incidence of intestinal parasites (WHO, 2001; Kvalsvig, 2003).

Groundwater quality includes the physical, chemical and biological characteristics of groundwater and depends on natural processes as well as anthropogenic activities. Human activities can alter the natural composition of ground water through the disposal or dissemination of chemical and microbial matter at ground surface and into soil or through the injection of waste directly into the groundwater. During the last few years, it has been observed that groundwater gets drastically polluted because of the increase in human activities. Thus, groundwater pollution is defined as an undesirable change in groundwater quality resulting from human activities (Bhalla et al., 2010; Kale et al., 2010; Bhupinder, 2011).

Study of chemical budget of major ions gains importance since it explains the origin of the ions in groundwater and the level of the contamination by natural as well as anthropogenic sources (SubbaRao, 2006). The global heavy metal pollution of water is a major environmental problem with the advent of agricultural and industrial revolution, most of the water resources are becoming contaminated (Khare and Singh, 2002).
Groundwater is less contaminated than surface water. Pollution of this major water supply has become an increasing concern in industrialized and industrializing nations due to contamination by toxic substances (Guter, 1981; Adeoti et al., 2010). Waste metal dumps and other waste materials which are either surface or buried are known to produce leachates that penetrate the aquifer and contaminate the groundwater (Becker, 2001).

The problem of groundwater quality is acute. The resulting degradation of water quality in water body creates a condition so that water cannot be used for intended beneficial uses including bathing, recreation and as a source of raw water supply (Biswas, 2000; Wesley, 2000; Khan et al., 2004).

Heavy metals are persistent and can easily enter food chain and accumulate until they reach toxic levels. Traces of heavy metals such as Hg, Cd, Pb, Co, Mn, Cu, Fe and Cr above stipulated levels are toxic to aquatic ecosystem and human (Bowen, 1979). The healthy aquatic ecosystem is depended on the biological diversity and Physico-chemical characteristics (Venkatesharaju et al., 2010).

Fresh water is essential for agriculture, industry and human existence; it is a finite resource of earth. Without adequate quantity and quality of fresh water sustainable development will not be possible (Mahananda et al., 2005).

During passage through the ground, water dissolves minerals in rocks, collect suspended particulate matter, particularly those of organic sources as well as pathogenic micro-organisms from faecal matters (Onuh and Isaac, 2009).

Municipal wastewaters can introduce bacteria, viruses, organic and inorganic compounds in ground water. Sewage and garbage are the main source of pollution in city. In India a total of 12,145 million litres of wastewater is generated per day in class
one cities covering 65% of Indian population, out of which only 2633 million litres (22%) collected through sewage system and rest is directly discharged to land of water without treatment (Mishra et al., 1995).

In developing countries, several unregulated landfills exist adjacent to large cities, releasing harmful contaminants to the underlying aquifer (Singh et al., 2009). Though some metals like Cu, Fe, Mn, Ni, Zn are essential for life, many other metals like Cd, Cr, Pb have very detrimental effects if present beyond a certain limit (Jain, 1978; Shrivastav, 2001; Duruibe et al., 2007).

Heavy metals released into the environment by technological activities tend to persist indefinitely circulating and eventually accumulating throughout the food chain, becoming a serious threat to the environment (Vijayaraghavan et al., 2004). Industrial, sewage, municipal wastes are been continuously added to water bodies hence affect the physico-chemical quality of water making them unfit for use of livestock and other organisms (Dwivedi and Pandey, 2002). Effect of toxic metals on human health and their interactions with essential heavy metals may produce serious consequences (Abdulla and Chmielnicka, 1990).

Electrical conductivity of water is a useful and easy indicator of its salinity or total salt content. Wastewater effluents often contain high amounts of dissolved salts from domestic sewage. High salt concentrations in waste effluents however, can increase the salinity of the receiving water, which may result in adverse ecological effects on aquatic biota (Ademoroti, 1996).

Water is the principal need of life on earth, the requirement of water in all lives, from microorganism to man is a serious problem today because all water resource have been reached to a point of crises due to unplanned urbanization and
industrialization (Singh et al., 2002). Fresh water resources are becoming deteriorate day-by-day at the very faster rate. Now water quality is a global problem (Mahananda et al., 2005).

The problem of excessive fluoride in groundwater in India was first reported in 1937 in the State of Andhra Pradesh (Short et al., 1937). In India, approximately 62 million people including 6 million children suffer from fluorosis because of consumption of water with high fluoride concentrations (Susheela, 1999). The lack of safe drinking water and adequate sanitation measures lead to a number of diseases such as cholera, dysentery, salmonellosis and typhoid and every year millions of lives are claimed in the developing countries (Anon, 2000).

Excess concentration of fluoride causes dental fluorosis while a concentration less than 1 mg/l results in dental caries (Saxena and Kaur, 2003). Arsenic is a cancerous heavy metal. Higher value of mercury intake is toxic and causes neurological damage, paralysis and blindness (Alam and Ahmad, 2002). The presence of iron in water may cause decolourisation of clothes washed in such waters (Kesavan & Parameswari, 2005).

Copper, one of the most widely used heavy metals, is mainly employed in electrical and electroplating industries, and in larger amounts is extremely toxic to living organisms. The presence of copper (II) ions, cause serious toxicological concerns, it is usually known to deposit in brain, skin, liver, pancreas and myocardium (Davis et al., 2000). Mercury pollution results from metallurgical industries, chemical manufacturing and metal finishing industries (Igwe and Abia, 2005).

The quality of the ground water is highly influenced with the local environment and ecological condition. Heavy metals today have a great ecological significance due
to their toxicity and accumulation. Many researchers concluded that there is little potential for trace metal mobility via water percolating through the soil profile (Emmerich et al., 1982) but with long-term usage of sewage waste, these metals move too rapidly in a particular soil, and can effect on ground water.

Water is tremendously necessary for survival of all living being. The quality of water is fundamental concern for mankind since it is directly linked with human welfare. In India, most of the population is dependent on groundwater as the only source of drinking water supply.

The World Health Organization estimated that up to 80% of all sicknesses and diseases in the world are caused by inadequate sanitation, polluted water or unavailability of water (WHO, 1997).

When sanitary and hygienic conditions become poor, public health in terms of bacterial infection are of greater risk due to lack of efficient sewage disposal systems and monitoring (Umar et al., 2001). Alternatively, some microbes are harmful to all members of a population, even when present at extremely low levels, as is the case with *E. coli* and *Salmonella* (World Health Organization, 1996).

The burden of diseases associated with intestinal parasitic infections is enormous. About two billion people are affected worldwide, of whom 300 million suffer from associated severe morbidity (WHO, 2001).

Epidemiological studies carried out in different countries have shown that the socio-economic level of the society may affect the incidence of intestinal parasites; control strategies of local managements involving improved infra-structure for both drinking water and sewage system, education of the society to improve personal
hygiene and sanitation have been related to reduced incidence of intestinal parasites (WHO 2001 and Kvalsvig, 2003).

The groundwater quality of North Indore city is continuously degrading due to industrial activities and the soils of the nearby fields are also being affected. Therefore, we have decided to analyze its groundwater so that some remedies for the improvement could be possible.