Road Accident Scenario in Cyberabad and Hyderabad

P. Ramya Sree[1]
M.Tech, Transportation Engineering,
Malla Reddy Engineering College (Autonomous)
Secunderabad-500100

K. Jaya Sundar[2]
Assistant Professor,
Malla Reddy Engineering College (Autonoous)
Secunderabad-500100

Abstracts---Accidents have been a major social problem in the developed countries of world for over fifty years. It is only in the past decade that developing countries like India have began to experience large increase in the number of road accidents. Road accidents in Hyderabad with in the city as well as outside of the citycan are identifying that facing alarming rate andProper countermeasures ane not taken .The road accidents study can be done in one area of Cyberabad and one area of Hyderabad. This paper presents variour aspects of traffic accidents in Hayathnagar and Saifabad. Data on accidents were collected from the police stations for three years (i.e.2012-2014). It was fount that total accidents in hayathnaga is 654 and Saifabad is 477.Pedestrians are worst victims in road accidents.The analysis results are shoun the cause of accidents and hourly distribution of accidents occurred most frequently,monthly variation and victim and accused vehicles profile.

Keywords----Alarming, pedestrians, countermeasures

1. INTRODUCTION

.India is said to be heart of south asia.India is undergoing major economic and demographic transition coupled with increasing urbanization and motorization.There are seven metropolitan cities in India namely Ahmadabad, Vangalor, Mumbai, Kolkata, Delhi, Chennai and Hyderabad.In India, 11% of deaths due to non communicable diseases are due to injuries 78% of injuries death are due to road traffic accidents (NCRB 2011)

1.1 Indian Accident Scenario

Indian traffic is of Heterogeneous with heavy presence of two wheelers.The mixed traffic conditions make the safety situation worse**.** The magnitude of road accidents at an alarming rate.accident rate increased from the year 2001 no. of accidents occurred 405637 to in year 2014 About 490,383 accidents occurred and 138,258 were killed. In India, 60% of total accidents take place during night through the night traffic is hardly 15% of 24hours volume which means that the accident in India during night is eight times greate than the day traffic.

1.2 Study Area

Hyderabad is the capital city of the state of "Telangana" in South India.Hyderabad occupies 650square kilometers (250sqmi).The population has crossed 12 million as per 2014 Census.The Hyderabad Metropolitan Development Authority (HMDA) is positioning it self as a greate hub for Administrative,Financial,Industrial,Educational,Medical,Cultural activities resulting high growth rate.There are three National Highways and five State Highways.

1.3 Objective of the Study

The majour objectives of this study are-

- To study the distribution of fatal, non-fata and vehicle damaged accidents took plce during 2012-2014.
- To analyse the causes of accidents during 2012-2014.
- To apprise hourly incidents of total accidents.
- To provide safety measures to reduce pedestrians accidents.

2. REVIEW OF LITERATURE

Amith Ghosh and Suman Paul (2013) has studied road accidents scenario in Kolkata by using police station data.Liyamol Isen, Shibu Aand Saran M.S (2013) has studied identification and analysis of accident black spots using GIS in Kerala for two districts.

Dr.M.Kumar and A.Ramesh (2014) has developed logits model for type of collision in Cyberabad and Hyderabad.Guler Yalcia (2013) has studied Road Accident data analysis with co-ordinate values from GPS and GIS in Turkey.

3. METHODOLOGY

The study includes reviews of available literature on road accidents,safety and prevention analysis.This process has helped for better conceptualization of the study for Cyberabad and Hyderabad.The preliminary survey are performed for identification of suitable study areas namely Hayathnagar and Saifabad .These include selected areas police station accident data.

4. RESULTS AND DISCUSSION
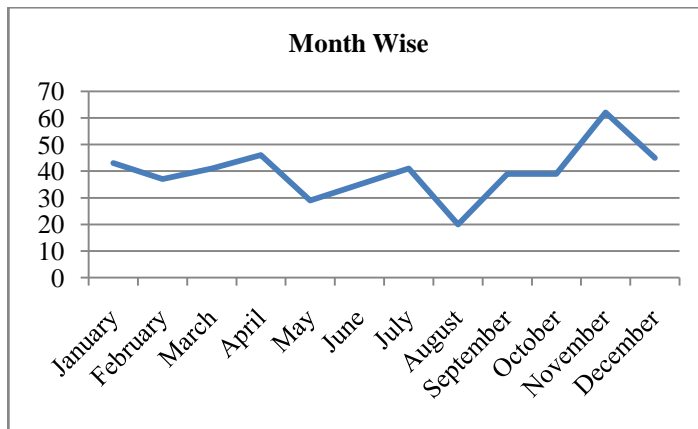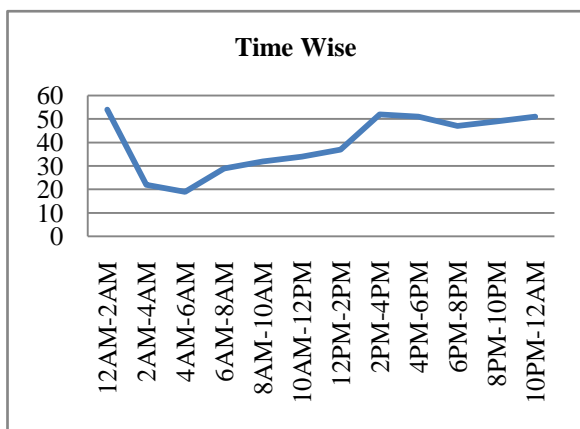
The results are given for three i.e. 2012-2014 for Hayathnagar and Saifabad area.
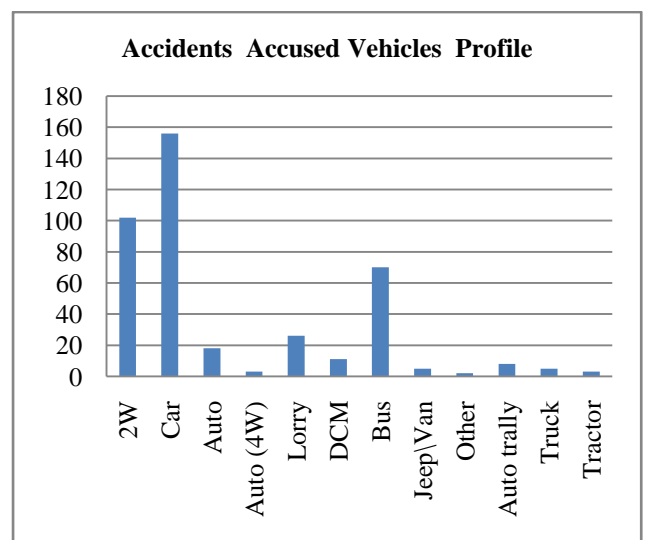
4.1 Hayathnagar – Cyberabad

Accidents Victim Vehicles profile
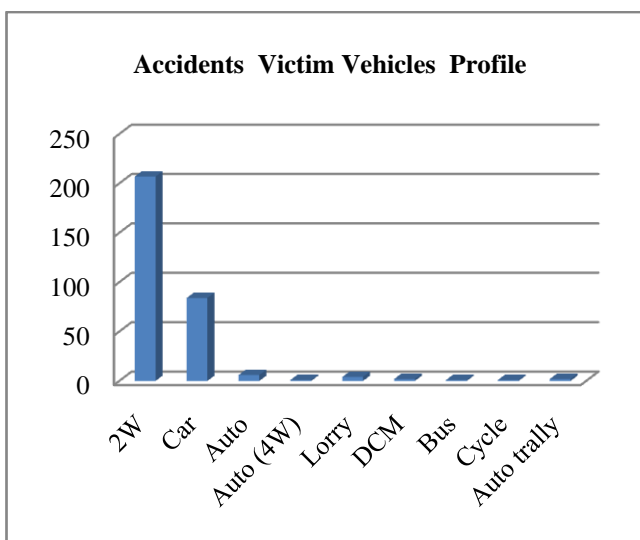

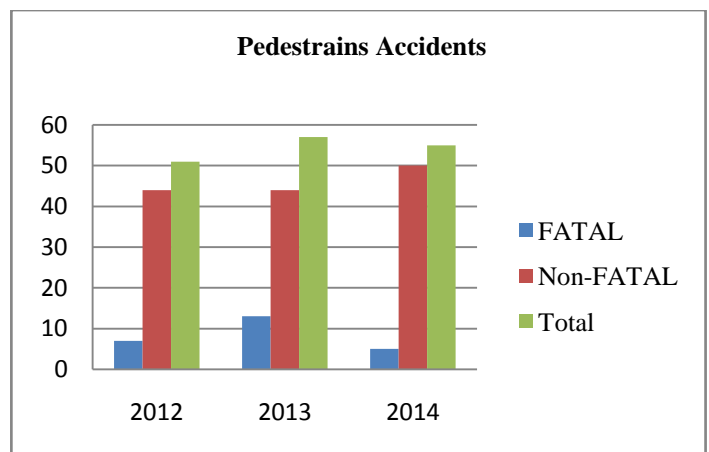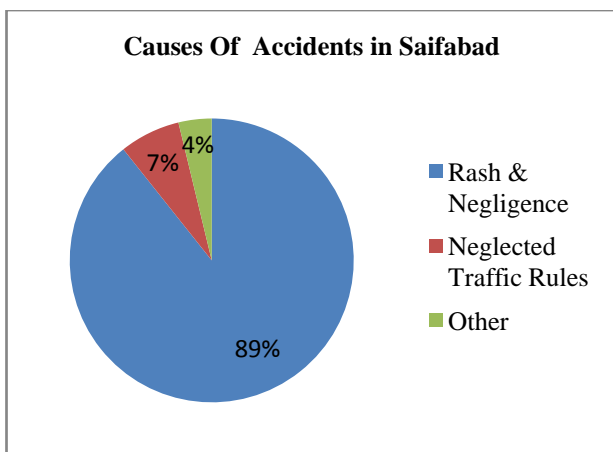**Accidents Accused Vehicles Profile**
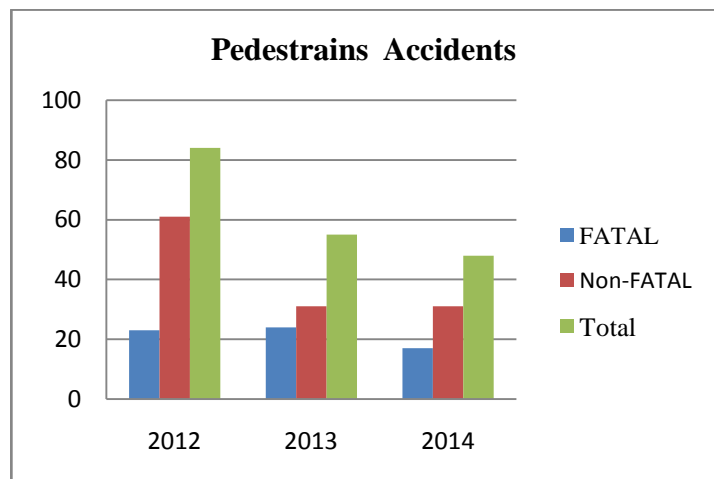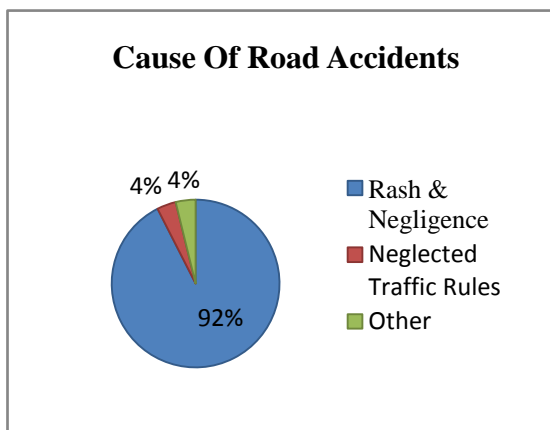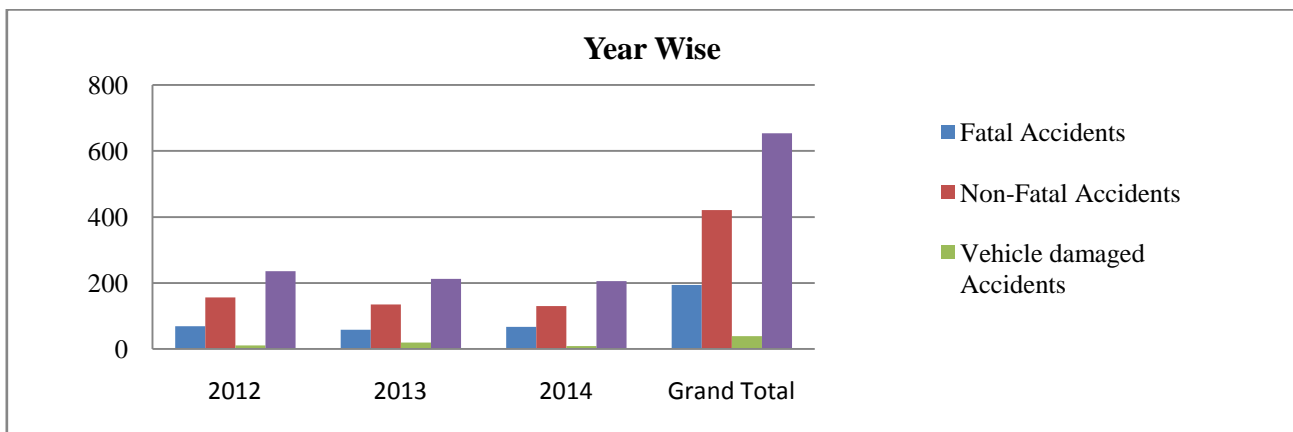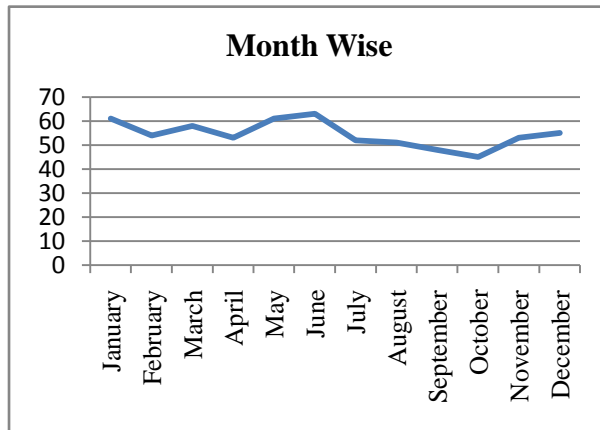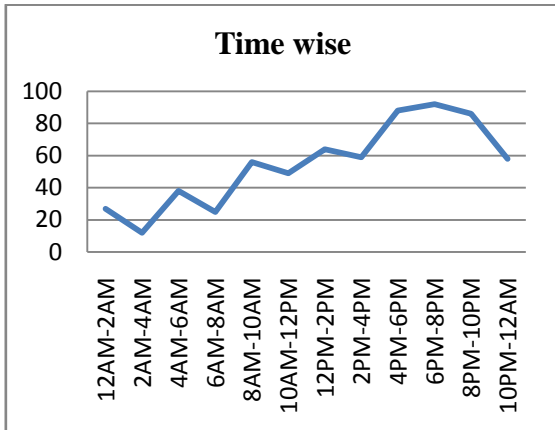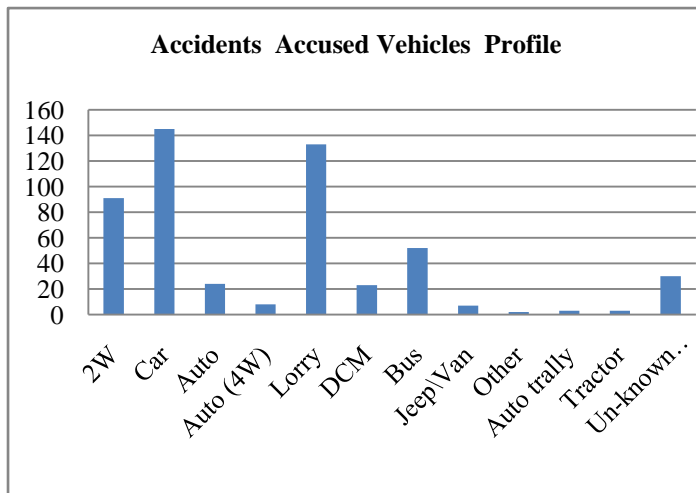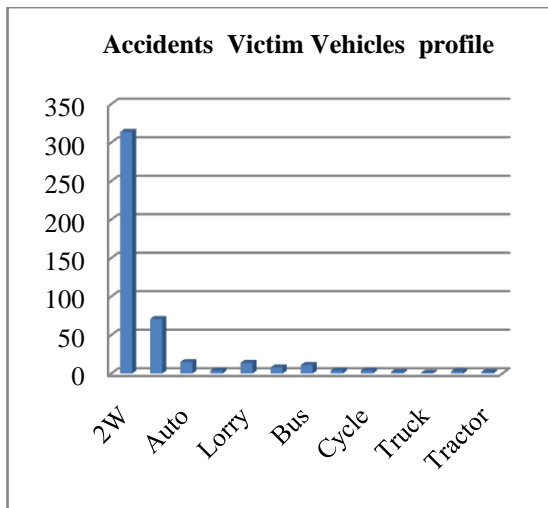
More number of accidents occurred in the month of June. Were as not only in the month of June even in the month of January and May with little variations.High number of accidents occurred during 6PM-8PM duration. But if we observe clearly are can notice that during 4PM-6PM, 6PM-8PM and 8PM-10PM duration time accidents rate is increased gradually.Total accidents rate is compared with three years data. From that fatal and non-fatal accidents are increased and vehicle damaged accidents are de-creased.The causes of accidents are rash and negligence manner is 92.5%, neglecting traffic rules is 3.6% and other causes id 3.8% are occurred.In victim vehicles profile 2Wheelers takes first position and cars takes second position.In accused vehicles profile Lorries and Cars are highly involved in accidents.2Wheelers takes second position, Buses and DCMs takes third posi-tion.The pedestrians involvement in accidents is reduced well compared to 2012-2014.But not much variation between 2013 and 2014.Fatal accidents is reduced.

4.2 Saifabad - Hyderabad

Time Wise

Month Wise

Year Wise

Causes Of Accidents in Saifabad

Pedestrains Accidents

Accidents Victim Vehicles Profile

Accidents Accused Vehicles Profile
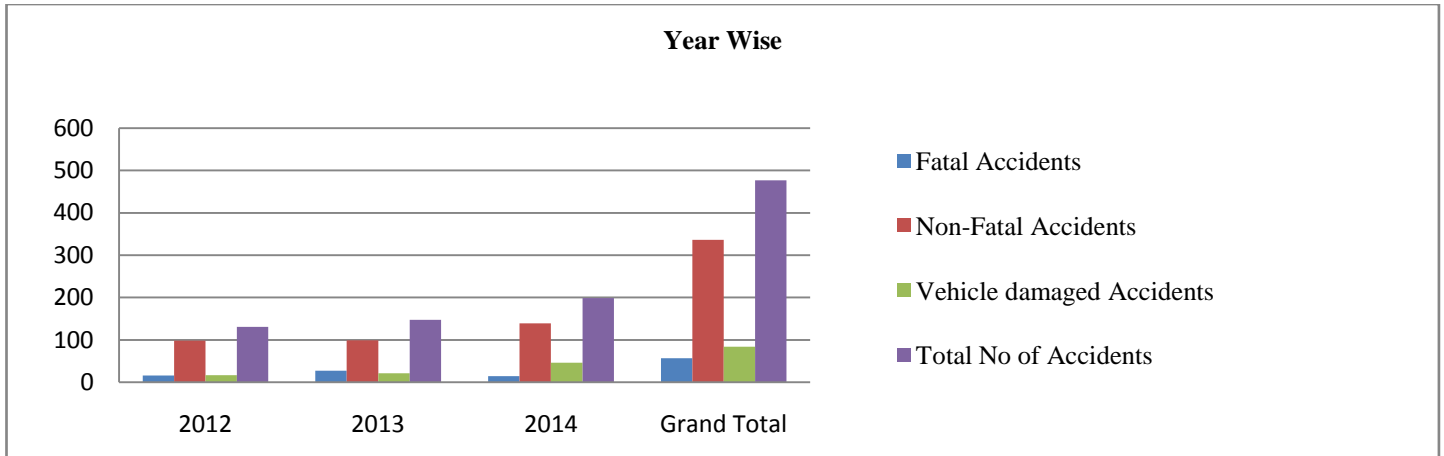
High numbers of accidents are occurred in the month of November it comes under winter season. Were as in the month of January, April, July and December we can observe little variations.More number of accidents are occurred during 12AM-2AM duration time. In the same manner duration 2PM-4PM, 4PM-6PM and 10PM-12AM duration time we don't find much variation.Total accidents rate is compared with three years data. From that fatal accidents rate got decreased but non-fatal and vehicle damaged accidents rate is increased.The causes of accidents are rash and negligence manner is 89.3%, neglecting traffic rules is 6.9% and other causes is 3.7% are occurred.In victim vehicles profile 2Wheelers takes first position. Cars takes second position and other remaining vehicles don't reach half of Cars count.In accused vehicles profile Cars, 2Wheelers, Buses and Lorries are highly involved in accidents. Among those Cars, 2Wheelers and Lorries are majorly involved.The pedestrians involvement in accidents is increasing well compared for past three years. Fatal and non-fatal accidents are increased.

5. RECOMMENDATIONS

5.1 Recommendations for Hayathnagar - Cyberabad

- According to the favorable weather and climatic conditions speed limits are need to maintain.
- Every year after rainy season road conditions are need to check because of rainfalls roads may get damaged. So road repairs are need to done.
- Periodic maintenance and inspection of surface drainage system carried out and stretches where water stagnates either in side drains or on pavement surface should be identified for immediate corrective measures.
- ITS technology system is to be introduced in city outskirts also.
- Need to check traffic signal system is under working condition are not.
- Proper street lights and traffic indicators are needed to provide in city outskirts.
- Avoid drinking alcohol before driving.
- At peak period duration extra traffic controls should be provided.
- Need to install good signal system.
- Our Government need to strengthen the system of issuing driving licenses.
- Proper road marking and awareness is required.
- Geometric pavement modification is needed to do according to its road   traffic conditions.
- Strictly traffic rules are to be follow.
- Proper traffic signs and markings are needed to provide.
- Raised humps are needed to provide with marking to slowdown the fast moving vehicles.
- Speed radars are to be fixed to monitor speed limits of moving vehicles.
- Ensure that your vehicle is regularly checked and maintained.

- 2Wheelers vehicles are increasing day by day due to this traffic volume is also increasing. So need to provide private buses for offices to reduce 2Wheelers count on roads.
- Proper training is needed for buses and Lorry drivers.
- Proper pedestrians cross walks points are needed marked.
- Pedestrians signals are to be introduced in city outskirts also.
- Sidewalks tracks are provided for both sides of the road (urban or rural).
- Need to introduce raised hump with vertical post.
- Pedestrians crossing road markings are located where there are street lights at night time.
- Separate lane is provided for 2Wheelers and Cars.

5.2 Recommendations for Saifabad - Hyderabad

- Proper road markings are need to give and it should be visible in all times.
- Make sure that vehicle headlights and taillights are working properly are not.
- Control speeds are to be maintained according to the present traffic conditions.
- Limit self night driving.
- Proper awareness is required.
- Need to avoid improper dividers.
- At peak periods duration extra traffic observers are required.
- Need to follow traffic rules very strictly.
- Raised humps are provided to slowdown the fast moving vehicles.
- Speed radars are provided to monitor speed limits of moving vehicles.
- Irregular stopping of auto-rickshaws are to be eliminated.
- Road side parking is to be controlled.
- Need to provide proper free lift.
- 2Wheelers vehicles are increasing day by day due to this traffic volume is also increasing. So need to provide private buses for offices to reduce 2Wheelers count on roads.
- Driving licenses should only be issued to those who have passed through a series of driving test.
- Need to provide raised pedestrians (cross walks) marking is given for visibility.
- Sidewalks tracks are provided for both sides of the road (urban or rural).
- Raised speed humps and cross walks are need to design together and marking is given to slow fast moving vehicles.

6. REFERENCES

1. Amith Gosh and Suman Paul (2013), "Road accident scenario in Kolkata: A spatio-temporal study", European journal of applied Engineering and science research.
2. B.Ramakrishnan (1985), "How much safe are our Indian Roads?" journal of transportation Management.
3. Dr.M.Kumar and A.Ramesh (2014), "Estimation of influence on type of collection for Road accidents using Logit models in Cyberabad – Hederabad - India", Institute of research Engineers and doctor.
4. Guler yalcin (2013), "Non-spatial analysis for the road traffic accidents", Lumen international conference Logos University Mentality education Novelty (LUMEN).
5. "Hyderabad Wikipedia"
6. "Highway Engineering" by S.K.Khanna and C.E.G.Justo, Nem Chand & Bros (2011).
7. Kadiyali, L.R., T.V.Gopalaswami, P.R.Lakshmikantham, U.N.Pathak and A.K.Sood (1983), "Effect of road characteristics on accident rates on rural highways in India", Highway Research Bulletin.
8. Liyamal Isen, Shibu A, Saran M.S (2013), "Identification and analysis of accidents black spots using Geographic information system", International journal of innovation research in science Engineering and technology.
9. Murat Karacasu,Arzu Er, Safak Bilgic, Hasan B.Barut (2011), "Variations in traffic accidents on Seasonal, Monthly, Daily and Hourly Basis: Eskisehir case", Procedia social and behavioral science.
10. Pillai B.B and Joseph.K (2011), "Cause and consequences of road accidents in Kerala", International Journal of Research in IT and management.
11. "Traffic Engineering and Transport Planning" by Dr.L.R.Kadiyali, Khanna publishers (2012).

P. RAMYA SREE
Research Schloar (M.Tech),
Transportation Engineering,
Malla Reddy Engineering College
(Autonomous)
Secunderabad ,
Telangana, India- 500100