

CHAPTER 7  
CONCLUSION AND SCOPE FOR FURTHER WORK

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7.2 Scope for further work

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#### 7.1 CONCLUSION :

It is concluded from the observations and discussions thereof that the status of a woman from the level of menstrual cycle to the various stages of pregnancy can be studied using various phonetic parameters. From the observations related with peak frequency, the fertile period as well as the changes during menstrual cycle can be assessed which may be of interest for Gynaecological observations.

Further the observations of formant frequencies may lead to assessment of age (level of pregnancy); and weight gain, development of size (length) and shape (width and thickness), sex of foetus. The delivery time can also be assessed noninvasively.

From the recording of amplitude measurement, the assessment of energy status, the movement of foetus till its fixation in the delivery port can be predicted without use of sophisticated instruments like X-ray / C-T scan.

The measurement regarding time duration reflects the behavioural characteristic of lung volume and associated energy changes. It can also be helpful for pregnancy status evaluation.

The observations regarding energy assessment reflects the gross development of pregnancy at different stages and the demand of energy for the growth of foetus till delivery.

Lastly it is concluded that simultaneous use of behavioural characteristic of amplitude, frequency, time duration, energy can pinpoint the status of a pregnant woman as well as the status of foetus including the delivery time and regaining the original condition, i.e. non -pregnant

level. Say for example, if we take down the values of F, A, T, E for any unknown reported woman then the pregnancy level of her can be pinpointed along with other details of foetus such as sex, weight, size and shape noninvasively.

It is concluded that the technique of evaluating the status of pregnant woman utilizing phonetic parameters can be used easily even at the rural mass care centre or by the lady herself.

This noninvasive technique have been successfully tried for the first time in the world for assessment of status of pregnant woman, utilizing phonetic information and development of eletrical model. The proposed phonetic technique is comparable with other medical techniques like pathological testing / C-T scan / X-ray etc. The conventional medical techniques are costlier as well as inconvenient to use and may have adverse effect on the growth of foetus.

## 7.2 SCOPE FOR FURTHER WORK :

Further, this research work can be extended by other scholars to correlate the ailments or specific Gynaecological disorders of menstruation / foetus / mother utilizing phonetic information. The model analysis of proposed network could be tried by other research workers using high level computers for Gynaecological / Bioengineering studies.