OVERALL CONCLUSIONS

From the results arrived at the investigations on *Balanites Roxburghii* and some derivatives of naphtho[2,1-b]furo[3,2-d]pyrimidine, regarding antifertility and other biological activities, the following conclusions can be drawn,

1. The fruits of the plant *Balanites Roxburghii* have considerable abortifacient activity.

2. It has no toxic and side effects and the abortifacient activity is reversible.

3. Hence, fruits of this plant can serve as potential abortifacient agent.

4. This plant is commonly grown in many places throughout Karnataka. The fruits can be preserved several days without any deterioration.

5. The fruits can be used, very safely by pregnant woman, even without the consultation of the physician and thus physiological and social inhibition of woman for abortion can be avoided.

6. The active component present in the crude ethanol extract, which could be responsible for abortifacient activity is found to be a flavonone. Generally flavonoids are responsible for antifertility activity.

7. In the present investigation, it was not possible to isolate any other non-steroidal antifertility agent from the fruits of *Balanites Roxburghii*.

8. The various extracts of the fruits of this plant are found to be associated with the following pharmacological activities,

   - Anthelmintic activity
   - Anti-inflammatory activity
   - Analgesic activity
   - Diuretic activity.
Hence, in addition to potent antifertility agent, the fruits of this plant can also be used safely for the treatment of helmenthiasis and rheumatic arthritis. It can also be used as a pain reliever and in urinary disorders.

9. Amongst the heterocyclic compounds synthesized during the present investigation,

- 4-Chloronaphtho[2,1-b]furo[3,2-d]pyrimidines were found to exhibit antibacterial and antifungal activities.
- 4-Alkyl/arylaminonaphtho[2,1-b]furo[3,2-d]pyrimidines were found to possess anthelmintic activity.
- 4-Arylidinonaphtho[2,1-b]furo[3,2-d]pyrimidines were found to show antibacterial activity.
- s-Triazolo[4,3-c]pyrimido[5,4-b]naphtho[2,1-b]furan was found to exhibit considerable antipyretic activity.

10. Further systematic investigation of the newly synthesized pharmacologically potent compounds would lead to the discovery of new agents possessing relatively wide spectrum of activities.