Offering Department: Mathematics Department
Part – III - SEC - III Value Added Course
effective for the students admitted from 2016-2017 onwards

Offered in any semester –from II to V			
16UMAVA01	**VA-I Vedic Mathematics**	**Total Duration 40Hrs**	**1 Credit**

Objectives:-
Upon completion of the course students will be able to
1. Understand and appreciate the history of ancient mathematics methods
2. Understand the sixteen sutras of vedic mathematics
3. Utilize the sutras in order to solve related problems of short calculation.
4. Solve some of the algebraic problems using the vedic sutras.

Unit – 1:   Sutras 1 to 3   (8Hrs)
- Ekadhikina Purvena -By one more than the previous one (Cor: Anurupyena)
- Nikhilam Navatashcaramam Dashatah -All from 9 and the last from 10 (Cor: Sisyate Sesasamjnah)
- Urdhva-Tiryagbyham-Vertically and crosswise (Cor: Adyamadyenantyamantyena)

Unit – 2:   Sutras 4 to 6   (8Hrs)
- Paraavartya Yojayet-Transpose and adjust (Cor: Kevalaih Saptakam Gunyat)
- Shunyam Saamyasamuccaye-When the sum is the same, that sum is zero. (Cor: Vestanam)
- (Anurupye) Shunyamanyat-If one is in ratio, the other is zero (Cor: Yavadunam Tavadunam)

Unit – 3:   Sutras 7 to 9   (8Hrs)
- Sankalana-vyavakalanabhyam-By addition and by subtraction (Cor:Yavadunam Tavadunikritya Varga Yojayet)
- Puranapuranabyham-By the completion or non-completion (Cor: Antyayordashake)

Unit – 3:   Sutras 10 to12   (8Hrs)
- Chalana-Kalanabyham-Differences and Similarities (Cor: Antyayoreva)
- Yaavadunam-Whatever the extent of its deficiency (Cor: Samuccayagunitah)
- Vyashtisamanstih-Part and Whole (Cor: Lopanasthapanabhyam)

Unit – 5:   Sutras 13 to16   (8Hrs)
- Shesanyankena Charamena-The remainders by the last digit (Cor: Vilokanam)
- Sopaantyadvayamantyam-The ultimate and twice the penultimate (Cor: Gunitasamuccayah Samuccayagunitah)
- Ekanyunena Purvena-By one less than the previous one (Cor: Dhvajanka)
- Gunitasamuchyah-The product of the sum is equal to the sum of the product (Cor: Dwandwa Yoga)
- Gunakasamuchyah-The factors of the sum is equal to the sum of the factors

TEXT BOOKS: -
1. Swami Bharati Krishna Tirtha, Vasudeva Sharana Agrawala, V. S. Agrawala, Motilal Banarsidass Publishers Pvt Ltd., 1992
2. Dhaval Bathia, Vedic Mathematics Made Easy Jun 2005

REFERENCE BOOKS:-
1. Vandana Singhal, Vedic Mathematics for all ages: A beginner's Guide, Motilal Banarsidass Publishers Pvt Ltd.