

M.A.SANSKRIT SPECIAL NYAYA (PGCSS)
SEMESTER - III
Core Course
Course Code -SA020305
NAVYA NYAYA AND NATURAL LANGUAGE PROCESSING

Credit: 4

Instructional Hours: 90

Outcome of the Course

The course is meant to introduce the Navya Nyaya style of presenting the subject it deals with and the terms used for it. Also it gives an introduction to the Natural language processing – an upcoming subject of worldwide interest.

Aim and Objectives of the Course

- To familiarize NavyaNyaya language and Graphical representation of Navya Nyaya concepts.
- To understand the different technical terms used by the Neo logicians (Navya Naiyayikas) to express the ideas.
- To familiarize the student with the difference of ideas put forth by the Navya nyaya and the Vaiyakaranas (Grammarians)
- To understand the core tasks in NLP.
- Understand and analyze natural languages and be familiar with the theoretical frameworks.
- Appreciate the relationship between linguistic representations and their computational applications.
- To Identify NLP tools and Know how to use the different NLP applications.

Course outline

Module I – The different systems of Indian Philosophy, The Nyaya system of Philosophy, Pracina Nyaya, Navyaya Nyaya,

Module II - Avacchedaka and Avacchedakatva, Sambandha (p.17-75)

Module III – Pratiyogitvam or Pratiyogita, Visayata and Visayita (p.76-135)

Module IV – Prakarata and Prakarita, Visesyata, (p.136-161)

A comparison of the ideas of Navya Nyaya and the school of Grammarians. (p.241-254)

Module V - Introduction to NLP (p.1-14), Language Structure and And Language Analyzer (p.15-32), Words and their Their Analyzer (p.36-52), Local Word Grouping (p.54-64), Paniniyan Grammar (p.65-88)

Recommended Text Book

1. Navya Nyaya System of Logic

(Basic Theories and Techniques)

(Part I – Chapter 1 – 6 (Pages 17 – 166 & 241 – 254)

D.C Guha,

Motilal Banarasi Dass Pub.Pvt.Ltd

41 U.A Bunglalow Road, Jawahar Nagar, New Delhi.110007. 2016.



2. Natural language processing: A Paninian perspective.

Akshar Bharati., Vineet Chaitanya., Rajeev and K.V. Ramakrishnamacharyulu

PHI Learning Pvt.Ltd. New Delhi- 110092, 2016.

Recommended References

1. History of Indian Philosophy,
Das Gupta,
Chaowkhamba Sanskrit Series, Varanasi
2. *Understanding morphology* .
Haspelmath, M. and Sims, A., Routledge.2013..
3. *Speech and language processing* (Vol. 3)
Jurafsky, D. and Martin, J.H.,. London, Pearson. 2014.
4. *Sanskrit Compound Generation: With a Focus on the Order of Operations*,
Thesis, University of Hyderabad.PavankumarSatuluri, 2015.
5. *An Automatic Sanskrit Compound Processing*,Thesis,
University of Hyderabad.Anil Kumar, 2012.

MODEL QUESTION PAPER
MA SANSKRIT SPECIAL NYAYA(PGCSS)

SEMESTER- III

Course -xv Elective -II

Course Code- SA020305

NAVYA NYAYA AND NATURAL LANGUAGE PROCESSING

(2021 Admission onwards)

Time : Three Hrs.

Maximum weight

Part A (Short Answer Questions)

Answer any eight .

Weight 1 each

- 1 Explain the basic elements of Buddhist Philosophy
- 2 Describe about the Meemamsa Philosophy.
- 3 What is meant by Paryaptyavacchedaka ?
- 4 What is Vyapyatva sambandha and Vyapakatva Sambandha.?
- 5 What is meant by Visheshabhava ?
- 6 What is Vishayita ?
- 7 Explain Vidheyatha.
- 8 Explain the openions Naiyayika and Vaiyakarana about the root ' pac '.
- 9 Computer and NLP.
- 10 What do you mean by Artificial Intelligence. 8x1=8 wt.

PartB (Short Essay)

Answer any six questions

Weight 1 each

- 11 Explain the basics of Vaisesika Philosoph
- 12 Describe the importance of Yoga Philosophy.
- 13 Samavaya or Inheritance.
- 14 Viseshanatha - Sambandha .
- 15 Abhaveeya Pratiyogi.
- 16 Vishayata.
- 17 Prakarata.
- 18 The major goal of NLP 6x2=12Wt.

Part C (Essay type Questions)

Answer any two .

Weight 5 each

- 19 Write an essay about the Navya Nyaya Philosophy.
- 20 Explain the impotance of Avacchedaka and avacchedakatva.
- 21 Dicuss about the conception of the entity called Pratiyogitva or Pratiyogit
- 22 Explain the need and scope of NLP in various aspects 5x5=10 Wt.