

**Indian Institute of Technology, Bombay**  
**Department of Humanities & Social Sciences**  
**Ph. D. Entrance Examination**  
**CISTS**

Note: The question paper consists of TWO parts. While the questions Part-A are compulsory, you may choose to answer any THREE questions from Part-B.

**Part - A**

(2 × 20 = 40 marks)

1. (a) Write an essay (in 20 sentences) in Sanskrit on either मम मातृभाषा or मत्स्वप्ने महेशः।  
(b) Write a detailed note on the topic of research that you would like to pursue for your doctoral dissertation at IIT Bombay.
2. Please read the following verses:  
रामो राजमणिः सदा विजयते रामं रमेशं भजे रामेणाभिहता निशाचरचमूः रामाय तस्मै नमः।  
रामान्नास्ति परायणं परतरं रामस्य दासोऽस्म्यहं रामे चित्तलयः सदा भवतु मे भो राम मामुद्धर ॥ 1 ॥  
अगजाननपद्मार्कं गजाननमहर्निशम् । अनेकदन्तं भक्तानां एकदन्तमुपास्महे ॥ 2 ॥  
(a) In verse 1, having written the individual sentences, and tagging the words in them as either noun, adjective, adverb and verb, etc., (i) justify why specific case ending have been tagged to the word राम. (ii) mention the voice in each sentence, transform the voice and write down the corresponding sentences. (14 marks)  
(b) In verse 2, give the overall meaning, and then present the विग्रहवाक्य for each of the compound word present in the sentence indicating the समास used in the compounds.

**Part - B**

(3 × 10 = 30 marks)

1. What is शाब्दबोध ? What are the causes of it? Explain how it takes place according to न्याय and व्याकरण.
2. (a) Find the square root and the cube root of the numbers 25170289 and 7633736206 respectively. (2 + 4 marks)  
(b) Decode the numbers denoted by the phrases न्यायाधीशोऽयमहंसुः and रामार्कबाणभूधररन्ध्राः according to Kaṭapāyadī and Bhūtasankhyā system respectively. (4 marks)
3. In order to obtain the स्फुटग्रह, the Indian astronomers apply two corrections namely मन्द and शीघ्रसंस्कार. With appropriate diagrams, explain these two corrections, and point out their significance using modern astronomical parlance.
4. "The Aesthetic experience of अभिज्ञानशाकुन्तलम् is dominated by the sentiment of love". Do you concur with this statement? Justify your answer. Also highlight what Bharata has to say on this issue.
5. Explain the different हेत्वाभासs as outlined in Tarkasaṅgraha with specific examples.