A1037

Name.....

Register No.....

NAIPUNNYA INSTITUTE OF MANAGEMENT AND INFORMATION TECHNOLOGY (AUTONOMOUS)

FIRST SEMESTER (FYUG) DEGREE EXAMINATION NOVEMBER 2025

ENGLISH

ENGIFA101(2) - ENGLISH LANGUAGE SKILLS FOR SCIENCES

Time:One Hour and a Half Maximum:50 marks

Section A

Answer the following

2 marks each, 10x2=20 with a ceiling of 16 marks

I. **Read the given passage and respond to the following questions**

Language is a cognition that truly makes us human. Whereas other species do communicate with an innate ability to produce a limited number of meaningful vocalizations (e.g., bonobos) or even with partially learned systems (e.g., bird songs), there is no other species known to date that can express infinite ideas (sentences) with a limited set of symbols (speech sounds and words). This ability is remarkable in itself. What makes it even more remarkable is that researchers are finding evidence for mastery of this complex skill in increasingly younger children. Infants as young as 12 months are reported to have sensitivity to the grammar needed to understand causative sentences (who did what to whom) After more than 60 years of research into child language development, the mechanism that enables children to segment syllables and words out of the strings of sounds they hear and to acquire grammar to understand and produce language is still quite an enigma. One of the earliest scientific explanations of language acquisition was provided by Skinner (1957).

As one of the pioneers of Behaviorism, he accounted for language development using environmental influence, through imitation, reinforcement, and conditioning. In this view, children learn words and grammar primarily by mimicking the speech they hear and receiving positive feedback for correct usage. Skinner argued that children learn language based on behaviorist reinforcement principles by associating words with meanings. Correct utterances are positively reinforced when the child realizes the communicative value of words and phrases. For example, when the child says ‘milk’ and the mother smiles and gives her some. As a result, the child will find this outcome rewarding, enhancing the child’s language development. Over time, through repetition and reinforcement, they refine their linguistic abilities. Critics argue this theory doesn’t fully explain the rapid pace of language acquisition nor the creation of novel sentences. However, Skinner’s account was soon heavily criticized by Noam Chomsky, the world’s most famous linguist to date.

During the cognitive revolution of the 1950s, Chomsky argued that children could not learn to produce an infinite number of sentences if they relied only on the language they hear. He suggested that humans are born with a natural ability for language, called the **Language Acquisition Device (LAD)**, which helps them learn language. According to Chomsky, all human languages share a **universal grammar**, a set of rules and structures that humans understand intuitively.

Chomsky pointed out that the language children hear is often limited or "impoverished," (**Poverty of the Stimulus)** and learning a language only through imitation or reinforcement would not be enough. Despite this, children learn their native language quickly and consistently, which shows that they have built-in cognitive structures for language. He and other linguists also proposed a **critical period** for language learning, a time when the brain is especially ready to absorb language, making learning easier and more effective. Despite extensive research, fundamental questions remain. Scholars continue to investigate how children refine their speech into grammatically accurate sentences, the amount and quality of language exposure required, and how different languages influence acquisition paths. Ultimately, the mechanisms behind language acquisition—whether rooted in biology, environmental input, or cognitive skills—remain a fascinating and open area of study.

Comprehension Questions

1. What makes human language unique compared to other species?
2. At what age do infants show sensitivity to grammar needed for causative sentences?
3. Who was one of the earliest scientists to explain language acquisition using behaviorism?
4. What is the term Chomsky used for the innate ability to learn language?
5. How did Skinner explain how children learn words and grammar?
6. What is "universal grammar" according to Chomsky?
7. Why did Chomsky criticize Skinner's behaviorist account of language acquisition?
8. What does the term "poverty of the stimulus" imply in the context of Chomsky's theory?
9. What is the "critical period" in language acquisition?
10. Despite research, why does language acquisition remain a complex area of study? CO4

Section B

Answer the following
6 marks each, 5x6=30 with a ceiling of 24 marks

11. Describe how does the line "I followed my own trail here" connect with the overall journey described in the poem by Snyder? CO3

12. How does heart transplantation challenge traditional views on life and death? CO1

13. Evaluate the role of Rosalind Franklin's private and 'compartmentalized' nature in shaping her professional and personal relationships. CO3

14. Analyze the importance of C.V. Raman's public outreach initiatives in educating the public and youth about science. CO3

15. Describe how H.G. Wells uses imagery and description to build suspense. CO2

Section C

Answer the following
10 marks each

16. Assess the impact of dogmatic beliefs on contemporary Indian society. CO3

17. Suppose you are applying to a graduate degree in biomedical sciences. Create a personal statement that not only summarises your academic and professional accomplishments, but also includes your favourite scientific influences and how they affected your research interests and approach to biomedical studies. CO2

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