University of Asia Pacific
Department of Computer Science & Engineering
Program: B.Sc. in Computer Science & Engineering

Mid-Semester Examination **Spring-2023** **3rd year 1st semester**

Course Code: HSS (CSE) 301 Course Title: English II: English for Communications

Credit Hour: 2.0 Time: 1 hour Total Marks: 20

1. Read the passage carefully and use the reading techniques *scanning and skimming* to find out answers to the following questions:

The Secret Lives of Trees: Unveiling Nature's Hidden Wonders

(1) In the heart of lush forests and sprawling woodlands, a quiet drama unfolds daily, hidden from the casual observer. Trees, often seen as static and unchanging, possess a world of secrets and mysteries that intrigue scientists and nature enthusiasts alike. Beneath their serene exterior lies a complex ecosystem, a network of communication, and a remarkable display of survival strategies that have evolved over millions of years. Recent research has revealed that trees communicate with one another through a vast underground network of fungi known as mycorrhizal networks. These networks facilitate the exchange of nutrients, water, and even chemical signals between trees. When a tree is in distress due to disease, insect attacks, or other environmental stressors, it releases volatile organic compounds. Nearby trees, through their roots, pick up these chemical cues, prompting them to produce defensive chemicals to fend off potential threats. This intricate network demonstrates a form of cooperation among trees that transcends the boundaries of species.

(2) Trees have evolved to thrive in a multitude of environments, from arid deserts to icy tundras. The bristlecone pine, one of the world's oldest living organisms, can survive in the harsh conditions of high-altitude mountain ranges. Its incredibly slow growth and resinous wood make it highly resistant to pests, while its twisted and gnarled appearance helps it shed heavy snows with ease. The enchanting transformation of leaves in autumn is not just a visual spectacle but also a survival mechanism. As daylight wanes and temperatures drop, deciduous trees cease their food production process and create a protective layer of cells, called the abscission layer, between the leaf stem and branch. This seals off the flow of nutrients and water, causing the vibrant green chlorophyll to break down and other pigments to emerge, revealing the breathtaking hues of red, orange, and gold. Studying the growth rings of trees, dendrochronologists have uncovered a wealth of information about past climates and historical events. Each growth ring represents a year in a tree's life, with wider rings indicating favorable growing conditions and narrower ones reflecting times of stress, such as droughts or volcanic eruptions. Ancient trees thus become historical archives, offering insight into the ebb and flow of the Earth's past. (365 words)

a. **Summarize the above text using not more than 70 words.** **5x1 = 5**

b. **Find out synonymous words from the above passage for the following words.** **5x1 = 5**

i. Fascinate (Para-I)
ii. Extraordinary (Para-I)
iii. Dry (Para-II)
iv. Decrease (Para- II)
v. Lively (Para- II)