**Assignment 1: Plagiarism Review**

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**Part 1:**

3. The act of plagiarism is when the thoughts, words, or content of another individual is used without acknowledging their source.

Paraphrasing involves using own words to demonstrate an understanding of ideas and information and to convey it efficiently while also recognizing their sources.

The paraphrase in Step 2 is plagiarism of the literature source text in Step 1 because of the following reasons:

* The author of the paraphrase has altered only some words and phrases or rearranged the original sentences
* There is no source citation for any of the ideas presented in the paraphrase

My paraphrase of the literature source text:

A typical northeastern industrial city of the nineteenth century was the Fall River, Massachusetts, where the Borden family lived. Immigrants found work in new factories due to the shift of labor from agriculture to manufacturing due to the steam-powered factories. Consequently, the growing population led to the emergence of large urban areas, including Fall River, a manufacturing and commercial hub. (Joyce William)

**Part 2:**

In this paper, the author discusses a method to differentiate molecules and their interactions which was achieved by looking at each biological feature and other contributing factors to understand the cellular network. Molecular interactions webs (such as ‘protein-protein interaction, metabolic, signalling, and transcription-regulatory networks’) are a result of combining these interactions, which are major factors influencing the behavior of the cell at the system level. The cell behavior can be determined as a coordinated action between multiple connected features which can be simplified using different connected nodes to determine the links to form a ‘graph’. Connections can be in the form of directed or undirected graphs to determine the type of interaction. It was found that in most cases, the networks within a cell are scale-free based on the analysis of metabolism. By studying the different architectural characteristics, it was also found that not only the complex network can be connected to each node using a short path but also the evolutionary network may also share the same characteristic. Since each cellular function resembles the pattern of motifs and modules, it can be either accessed from the bottom up or top to the bottom approach which allows it to ‘either move from the molecules to motifs and modules’ or ‘starting from the network’s scale-free and hierarchical nature and moving to the organism-specific modules and molecules’. The relationships between structure, topology, network functionality, robustness, etc. must be acknowledged regardless of the case as it is required to understand the functionality of the cell. The author also mentioned that most of the studies were performed in a controlled environment but it is recommended to perform integrated studies as it may present new breakthroughs to help develop a framework for the required function. (NETWORK BIOLOGY: UNDERSTANDING THE CELL’S FUNCTIONAL ORGANIZATION)