## Task A

A. Based on your understanding of the purpose and intended audience of research papers and textbooks examine the following excerpts and state which ones are from research papers (introduction or discussion sections) and which from textbooks.

   - Two are from Introduction sections, two from Discussion sections and two from textbooks.

1. In this work, the composite materials of Y-type zeolites/$SnO_2$ for chemiresistive-type gas sensors were synthesized by coating the Y-zeolite (H–Y) and the modified Y-zeolite (Al–Y, Na–Y, Ca–Y) by Al, Na and Ca ions exchanged on the $SnO_2$ surface, respectively.

2. Analyses of the thin section of sand from rock was carried out at the Institute of Geological and Mining Research of Cameroon (IRGM) (Table 6). These studies revealed that: SG sand originating from the crushing of gneiss is composed of garnet (10% to 15%), quartz (10% to 15%), biotite (15% to 20%), disthene (5%), alkaline feldspar (30% to 40%) and clinopyroxene (8%).

3. Changes in human compatibility relationships due to the interaction with a robot were exemplarily demonstrated when participants remote-controlled the robot, when the participant supervised the actions of the robot, and when the human and robot performed different tasks. In all tested scenarios, the robot was located in the same spatial proximity to the participants, which made it possible to investigate the changes in behavior solely through different forms of interaction with the robot.

4. The well-known kinetic theory of gases provides us with an atomistic picture of the state of affairs in a confined rarefied gas. A fundamental assumption is that the large number of atoms or molecules making up the gas are in a continuous state of random motion that is intimately dependent on their temperature. As they move, the gas particles collide with each other as well as with the walls of the confining vessel. Just how many molecule-molecule or molecule- wall impacts occur depends on the concentration or pressure of the gas. In the perfect or ideal gas approximation there are no attractive or repulsive forces between molecules.

5. According to the WHO, in each year 3.5 million deaths happen due to the accidents in the workplace. According to the ILO (International Labor Organization) in each year about 50 million job related injuries happen in the whole world. And in every 15 seconds, a worker dies due to the work-related accidents.

6. A fluid is defined as a substance that deforms continuously under the action of a shear stress. An important consequence of this definition is that when a fluid is at rest, there can be no shear stresses. Both liquids and gases are fluids. Some substances such as glass are technically classified as fluids. However, the rate of deformation in glass at normal temperatures is so small as to make its consideration as a fluid impractical.

## Task B

B. Briefly state the general topic of each article based on the following sentence.

1. Epidemiological studies indicate increases in human mortality and morbidity due to exposure to airborne fi ne particulate matter [1].
2. The literature on human-robot interaction is expanding rapidly [2].
3. The implementation of software frameworks to support common geospatially related tasks is a major endeavor [3].
4. The measurement methods currently used for the determination of the hazard concerning dust harmful to health (in case of dust concentration measurements) are based on the results of measurements averaged over time [4].