Taken from Hurley, *A Concise Introduction to Logic, 13e*

**Directions.** Translate the following arguments into symbolic notation and then interpret them in light of the eight argument forms presented in this section. In some cases a symbolized argument must be rewritten using commutativity or double negation before it becomes an instance of one of these forms. Those not having a named form are invalid. The letters to be used in translating the statements are given in parentheses.

1. A Boeing 757 crashed into the Pentagon on 9/11 only if two giant engines were found outside the building. It is not the case that two giant engines were found outside the building. Therefore, a Boeing 757 did not crash into the Pentagon on 9/11. (*B, G*)
2. If Michelangelo painted the ceiling of the Sistine Chapel, then he was familiar with stories from the Old Testament. Michelangelo was familiar with stories from the Old Testament. Therefore, Michelangelo painted the ceiling of the Sistine Chapel. (*M, F*)
3. If you enter the teaching profession, you will have no money for vacations; and if you do not enter the teaching profession, you will have no time for vacations. Since you must either enter or not enter the teaching profession, it follows that either you will have no money or no time for vacations. (*E, M, T*)
4. Either the wealthiest people are the happiest, or it is not the case that money can buy everything. The wealthiest people are not the happiest. Therefore, money cannot buy everything. (*W, M*)
5. Either drivers are forbidden to send text messages, or the highways will not become safer. Drivers are forbidden to send text messages. Therefore, the highways will become safer. (*D, H*)
6. If the sun is a variable star, then its energy will drop drastically at some point in the future. If the sun’s energy drops drastically at some point in the future, then the earth will become a giant ice ball. Therefore, if the sun is a variable star, then the earth will become a giant ice ball. (*S, E, G*)
7. Nano-thermite is present in the debris from the World Trade Center. But if that is so, then the buildings were brought down by controlled demolition. Therefore, the buildings were brought down by controlled demolition. (*N, B*)
8. If TV viewing provides genuine relaxation, then TV enhances the quality of life. But TV viewing does not provide genuine relaxation. Therefore, TV does not enhance the quality of life. (*G, E*)
9. If high school clinics are to stem the tide of teenage pregnancy, then they must dispense birth-control devices; but if they want to discourage illicit sex, then they must not dispense these devices. Since high school clinics must either dispense or not dispense birth-control devices, either they will not stem the tide of teenage pregnancy, or they will not discourage illicit sex. (*S, D, I*)
10. If limits are imposed on medical-malpractice suits, then patients will not be adequately compensated for their injuries; but if the cost of malpractice insurance continues to rise, then physicians will be forced out of business. Limits will not be imposed, and the cost of malpractice insurance will not continue to rise. Therefore, patients will be adequately compensated and physicians will not be forced out of business. (*L, A, C, F*)
11. If Prohibition succeeded in the 1920s, then the war on drugs will succeed today. But Prohibition did not succeed in the 1920s. Therefore, the war on drugs will not succeed today. (P, W)
12. If life is always better than death, then people do not commit suicide. People do commit suicide. Therefore, life is not always better than death. (L, C)
13. If we want to arrest criminals, then police must engage in high-speed chases; but if we want to protect motorists, then police must not engage in high-speed chases. Since police must either engage or not engage in high-speed chases, either we will not arrest criminals or not protect motorists. (A, E, P)
14. Either industrial pollutants will be more stringently controlled, or air quality will continue to fall. Industrial pollutants will be more stringently controlled. Therefore, air quality will not continue to fall. (I, A)
15. Insurance companies contribute millions of dollars to political campaigns. But if that is so, then meaningful insurance reform is impossible. Therefore, meaningful insurance reform is impossible. (I, M)