**Final Exam Practice: Nonfiction**

*Directions: Read the article below and answer the questions that follow.*

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Jules Verne is credited with anticipating many technological and scientific achievements of the 20th century, but 400 years earlier another prophet foresaw the world of the future with even more uncanny accuracy. Verne embodied his prophecies in a series of enchanting science-fiction novels. Leonardo da Vinci sketched his prophetic visions in great detail. His sketches are so clear and informative that working models have been constructed. A traveling IBM exhibit encourages young people to turn cranks, pull levers, and push buttons to demonstrate mechanically how brilliant were the conceptions of this artist-scientist-inventor.

Leonardo’s notebooks contain the fruits of his fertile imagination. Written in tiny but accurate left-handed mirror writing, the notebooks are filled with sketches of innovations, creative ideas, inventions, and improvements of already existing devices. Designs for air-conditioners, two-level highways for pedestrians and vehicles, parachutes, and rotating hoists poured from his inventive brain.

Leonardo devised an airplane that modern engineers say is technically sound. He defined a key aerodynamic principle 200 years before Newton. He foresaw the helicopter and devised an aerial screw to lift it. His analysis of gears anticipated their use in modern-day machines. He even designed the first mechanical car.

He was a truly scientific mapmaker, devising an instrument for measuring the radius of the earth accurately to within a few miles – all of this while Columbus was making his voyage of discovery to the New World. He invented a printing press that could be run by one man, a vast improvement over the more cumbersome Gutenberg press. He devised a tank for warfare centuries before the British unveiled the first tank on the Western Front in World War I.

What kept all his inventions from revolutionizing world technology? He was too soon. His genius outstripped the facilities of his time. He needed a compact power unit and a metal hard enough for his needs. Though these were far in the future, his free-ranging mind had an impact on progress to come.

His studies in other branches of science were far-ranging and perceptive. He described ring patterns of trees as key to their growth. He systematically and individually pursued scientific studies of anatomy – of plants and the human body. He became interested in the laws of optics. He studied meteorology and geology.

The breadth and depth of Leonardo’s genius are emphasized by his success in non-scientific areas. He was an artist of renown, painter of the “Mona Lisa,” “The Last Supper,” “Virgin and Child with St. Anne,” and other masterpieces. He had a powerful impact on the young Raphael and Michelangelo. Sometimes his paintings suggest the fusion of his scientific and artistic interests.

This restless genius, turning from one field to another and interpreting the world with unimpaired vision, is the prototype of that many-faceted personality sometimes called “Renaissance Man.”

1. Which of the following persons most closely approaches the “Renaissance Man” qualities of Leonardo as outlined in the passage?
2. H.G. Wells, who wrote science fiction dealing with time machines and interplanetary travel.
3. Emily Dickinson, who wrote poems of outstanding sensitivity from her self-imposed isolation.
4. Samuel F.B. Morse, who was a painter of great renown before pioneering work in electric telegraphy.
5. Claude Monet, whose paintings helped to launch the Impressionist movement in art.
6. The word “cumbersome” in line 19 suggests:
7. inefficiency B. speed C. effectiveness D. compactness

1. In the fourth paragraph Columbus is mentioned for which of the following reasons?
2. Columbus probably had worked closely with Leonardo in determining his strategy for exploring the New World.
3. Columbus as an active adventurer, physically exploring, is contrasted favorably with Leonardo as an armchair scientist.
4. Neither Columbus nor Leonardo could possibly anticipate the profound results of the opening up of the New World.
5. Columbus and Leonardo were both Italians, citizens of regions in social and political ferment.

1. All of the following inventions of Leonardo are mentioned in the selection **EXCEPT**:
2. parachute B. mechanical car C. machine gun D. printing press
3. The author’s attitude toward Leonardo is one of:
4. skepticism B. envy C. disbelief D. awe
5. What type of essay is this?
6. narrative
7. cause and effect
8. literary analysis
9. informative
10. From what point of view is the essay written?
11. first person B. second person C. third person D. none of these
12. For which of the following reasons does the writer mention Jules Verne?
13. Jules Verne is the best prophet of the future in all of history.
14. Jules Verne is a more recent example of a scientific “prophet” that the writer uses as an attention grabber to lead into the essay’s main focus, Leonardo da Vinci.
15. Jules Verne and Leonardo had exactly the same personality.
16. Both Jules Verne and Leonardo da Vinci were painters as well as prophets.

1. Which of the following titles best summarizes the content and purpose of the passage?
2. Science in the 15th Century
3. Jules Verne and Leonardo da Vinci: A Study in Contrasts
4. Leonardo da Vinci: Renaissance Man
5. Unrecognized Genius: A Study in Failure

SCROLL DOWN FOR ANSWERS

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4. Samuel F.B. Morse, who was a painter of great renown before pioneering work in electric telegraphy. A Renaissance Man has a VARIETY of interests/talents
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employed 3 times

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3. Jules Verne and Leonardo da Vinci: A Study in Contrasts (not the answer b/c they aren’t contrasted)
4. Leonardo da Vinci: Renaissance Man
5. Unrecognized Genius: A Study in Failure (not the answer b/c “failure” isn’t discussed)