Question 7

Identify the building. Analyze how innovative elements were used in both the design and construction of the building. (10 minutes)

Background:

The Colosseum was begun in 72 CE by Vespasian, the first emperor of the Flavian family. It was completed under his son, Titus, who dedicated it in 80 CE as the Flavian Amphitheater; however, the stadium was popularly renamed the Colosseum after a now-lost colossal statue of Nero that stood nearby. Despite the Colosseum’s enormous size (615 by 510 feet externally and 159 feet high), it was completed in less than a decade in order to fulfill the purpose of entertaining the masses, thereby generating popularity for the Flavian dynasty. Roman audiences watched a variety of athletic events and spectacles in the Colosseum, including animal hunts and gladiatorial combat. Because it was located over a pond formerly on Nero’s property, it was possible to construct a built-in drainage system for washing away the blood and gore of combat.

Various materials were used: concrete for the 25-foot-deep foundations; travertine (a fine local limestone lighter in weight and less strong than marble, easily cut when first quarried but hardening with exposure to air) for the framework of load-bearing piers; tufa and brick-faced concrete for radial walls between the piers; and marble for facing. The floor was laid over a foundation of service rooms and tunnels that provided a holding area for the athletes, performers, animals, and equipment. This floor was covered in sand, or arena in Latin, hence the English term "arena." Some 55,000 spectators could easily move through the 76 entrance doors to the three levels of seats and the standing area at the top. Each spectator had an uninterrupted view of the spectacle below.

The Colosseum derived its oval shape—the amphitheater—from the idea of two freestanding theaters placed facing each other (from the Greek words amphi, meaning "around," and theatron, meaning "theater"). Ascending tiers of seats were laid over barrel-vaulted access corridors and entrance tunnels connecting the ring corridors to the ramps and seats on each level. The intersection of the barrel-vaulted entrance tunnels and the ring corridors created groin vaults.

The curving outer wall of the Colosseum consisted of three levels of arcades surmounted by a wall-like top story. Engaged columns frame each arch in the arcades, and entablature-like friezes mark the divisions between levels. Each level also used a different architectural order, increasing in complexity from bottom to top: the Tuscan order (a later variation of the Doric) on the ground level, the Ionic on the second level, the Corinthian on the third, and Corinthian pilasters on the fourth. This system, in which the engaged columns and pilasters are arranged in order of visual and structural strength, with the "heaviest" Tuscan type at the bottom, was regularly followed in Roman architecture. The attic story is broken by small, square windows, which originally alternated with gilded bronze shield-shaped ornaments called cartouches. The cartouches were supported on brackets that are still in place. The surface of the outer wall becomes flatter as it rises, which carries the viewer’s eye upward, while the repeated round arches of the circular arcades direct the eye around the building. The projecting cornice at the top serves aesthetically to crown the structure.
The walls on the top level of the arena supported a giant awning, or velarium, to protect spectators from the sun. The awning was supported on wooden poles projecting inward from the top and manipulated by ropes tied to bollards on the pavement surrounding the building. Sailors who had experience in handling ropes, pulleys, and large expanses of canvas worked the apparatus that extended this sun screen.

Students have two tasks:
(1) They must identify the building.
(2) They must analyze how innovative elements were used in both the design and the construction of the building.

Better responses provide a full identification: the Colosseum or the Flavian Amphitheater. Such responses will analyze innovative elements that were used in both the design and construction of the building. Examples of design innovations of the Colosseum include the shape of the amphitheater itself, the ability to seat thousands of audience members quickly, and the use of a removable awning for varying weather conditions, among other things. The construction innovations of the Colosseum include, among other things, the use of concrete and the principles of arch construction and barrel and groin vaulting.

Weaker responses might be vague and merely describe, rather than analyze, the Colosseum’s design and construction. Some responses will substitute a discussion of gladiatorial combat for an analysis of the Colosseum’s design.

Points to remember:
• The Colosseum must be identified.
• Students will at times be unable to distinguish design from construction elements, and there has to be some leeway in the scoring to allow for this. The important thing to look for is that students analyze more than one innovative element of this building type.
• This is a 10-minute question.

Scoring Criteria
Score Scale 0–4

4  Correctly identifies the building. Fully analyzes how innovative elements were used in both the design and the construction of the building. There are no significant errors.

3  Correctly identifies the building. Analyzes how innovative elements were used in both the design and construction of the building, but the discussion is less full.
   OR
   Does not correctly identify the building, but the score is otherwise a 4.

2  Correctly identifies the building. Analyzes how an innovative element was used in either the design or the construction of the building, and/or the discussion is uneven.
   OR
   Does not correctly identify the building but is otherwise a 3.

1  Correctly identifies the building but includes no other discussion of merit.
   OR
   Does not identify the building but is otherwise a 2.
Question 7 (continued)

0 Makes an attempt, but the response is without merit because it fails to identify the building or makes only incorrect or irrelevant statements.

— This is a nonresponse, such as a blank paper, crossed-out words, or personal notes.
7. The slides show two views of the same building.

Identify the building. Analyze how innovative elements were used in both the design and construction of the building. (10 minutes)

This is the Colosseum. The building was built in Rome. The building features four stories of arches and columns. The building was built of the Greek amphitheater, simply creating a half circle instead of a half. The innovative material used by the Romans that made this large building possible was concrete. Romans developed concrete and used it for many building projects. This material was easier to shape. Instead of meticulously carving heavy stones like marble, concrete could be molded and much faster and easier. This allowed the building to be much taller and be erected much faster. The Romans built an elaborate foundation for the building. The Colosseum could be covered in the hot sun with a canvas that was strong through the square holes at the top of the building. The building was covered with marble because the Romans believed marble was much more aesthetically pleasing than concrete. There were many entrances to allow the thousands of viewers to exit the building quickly in the event of an emergency or just for the convenience of the audience. The performers could enter from under the building, as well as the animals. The Romans could even float a whole ship in the

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building to recreate naval battles in their plays.
7. The slides show two views of the same building.

Identify the building. Analyze how innovative elements were used in both the design and construction of the building. (10 minutes)

The building seen before me is the one and only Colosseum. This structure is a massive piece of innovation, incorporating many tools of development through out the years. The first row of arches are decorated with doric columns. Also within the first level is the incorporation of both the barrel and grain vault. The barrel vault is the continuation of an arch to form somewhat of a hallway. A gained vault is the meeting of two barrel vaults, making a cross of arched hallway and an X on the ceiling. The second level of the Colosseum is decorated with Ionic columns, and the third with carrinthen columns. The structure is simply a soup of innovation created by the Roman masterminds. The Colosseum even had a torp which was draped overtop it, but how they did this is unknown. Even to this day the question remains unanswered.
7. The slides show two views of the same building.

Identify the building. Analyze how innovative elements were used in both the design and construction of the building. (10 minutes)

The building is called the Colosseum. It was built in Rome. This building is a great example of something ahead of its time. This building was made of concrete and took many years to build. Unlike many other buildings during its time the Colosseum is designed like a circle so it can fit many thousands of people. The Colosseum is made up of mostly concrete and this is why it's in one piece after so many years. This building is very innovative and influenced many others after its creation. The design includes an underground construction where the gladiators who fought there practiced and got prepared. This is one of the first buildings to sit so many people. Today our stadiums are designed just like the Colosseum.
Overview

This 10-minute question dealt with the Colosseum. Students had to identify the building and to discuss its innovative elements, both in terms of the design and the construction. This question forced students to analyze an architectural work not just in terms of its construction (the use of concrete, for example) but also in terms of its design (its shape, its functional ability to seat large crowds quickly, the use of the awning, etc.).

Sample: 7A  
Score: 4

The building is identified as “the colusseum [sic].” The essay points out that the building was designed as two Greek amphitheaters put together, and the student explains how concrete was used because it was “easier to shape” and mold; thus, the building could be erected more quickly and easily. The student also notes that the Colosseum had a canvas roof for protection from the sun. The use of “many entrences [sic]” for the efficient flow of spectator traffic is emphasized toward the end of the essay. Because this response lists and analyzes various features of Roman architecture as exemplified in this building, it earned a score of 4.

Sample: 7B  
Score: 3

The building is identified as “the one and only Collasseum [sic].” The essay acknowledges the innovations in its construction, discussing the building floor by floor. The student notes the combination of column orders on the facade, the use of barrel and groin vaults in the hallway, and the tarp used as a roof. What is lacking in this response is a statement about the purpose of these innovations. For its lack of sophistication in this regard, the essay earned a score of 3.

Sample: 7C  
Score: 2

The building is identified as “the collesium [sic].” There is little of merit in this weak essay; however a point could be granted for the minimal discussion of concrete, so the response earned a score of 2.