Presentation Title: First Tied-Arch Bridge in Chicago

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10 Multiple-Choice Questions

View and study the attached presentation, then answer the 10 questions below and email the solution to: Soliman.Khudeira@iit.edu. A minimum of 70% correct answers is required in order to receive one (1) hour of PDH/CE units. A certificate will be email you, if you score 70% or more.

Note: You must be a member of AAAEA (any chapter) to be able to participate. Please indicate the Chapter you belong to when you email your answers.

Q1: The scope of this project is to remove inoperable bascule bridge, and replace it with fully movable (operable) bridge

A) True
B) False

Q2: The new tied-arch bridge will accommodate two bike lanes

A) True
B) False

Q3: The new tied-arch bridge will accommodate future river walk under the bridge

A) True
B) False

Q4: The new bridge could have been designed as a truss or multi-girder bridge

A) True
B) False

Q5: A new pier could have been installed in the Canal, since this Canal is a non-navigable waterway
A) True
B) False

Q6: cofferdam was installed in the Canal to facilitate the installation of the abutments

A) True
B) False

Q7: Tie, Hanger, Rib (arch), and Strut are all structural members used for this tied-arch bridge

A) True
B) False

Q8: Parabolic shape was used for the rib (arch). This was mainly to reduce the moment in the arch and expose it to only mainly compression

A) True
B) False

Q9: Which one of the flowing factors affect the selection of a bridge type

I. Aesthetics, Surrounding (Context Sensitive Design), and the need for the infrastructure improvement to act as a focal point for revitalization of the area and to stimulate commerce
II. Structural constraints: span, redundancy, type of loading
III. Geometric constraints (hydraulics, horizontal and vertical required river clearance), Project budget, and Constructability

Answer:

A) I, II, and III
B) I and II
C) II and III
D) III only

Q10. Which one of the following is/are acceptable construction methods used to construct tied-arch bridges

I. Accelerated Bridge Construction (ABC)
II. Conventional method (Build-in-place)

Answer:

A) I and II
B) I only
C) II only