

AMERICAN UNIVERSITY OF BEIRUT
FACULTY OF ENGINEERING AND
ARCHITECTURE

CIVE 580 / ENMG 502
CONSTRUCTION MANAGEMENT
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Additional Exam Questions - 3

Organizational Structures

1. It is correct to say that:
 - a) The Client shall opt for the multiple-prime contractors approach when the project is LARGE.
 - b) The Client shall opt for the design-build approach when the project is COMPLEX.
 - c) The Client shall opt for the CM approach when the issue of TIME is of paramount importance to him/her.

Timing of PM Engagement

2. It is correct to say that:
- a) The Client may engage the PM soon before the design phase is completed in preparation for finalizing the tender documents and launching the bidding phase.
 - b) The Client may engage the PM from the onset of the project life-cycle (i.e., during the pre-project planning).
 - c) Engaging the PM any earlier than the start of construction will yield marginal benefits to the Client.

The Design-Builder

3. It is correct to say that:
 - a) Phasing the D-C process is the major determinant for selecting the design-build approach.
 - b) Phasing the D-C process is a by-product of having opted for the design-build approach.
 - c) The dominance of the "D"esigner (A/E) is not normally undermined by the "C"onstructor under the design-build approach.

Planning

4. It is correct to say that:
- a) Planning for the undertaking of a construction project by the Client will include deciding on a project organizational structure prior to the project go-ahead milestone.
 - b) Planning for the provisioning of construction logistics by the general contractor to support the works implemented by subcontractors is undertaken by the general contractor prior to the start of construction.
 - c) Architects are known for being good planners because they have a profound understanding of what scheduling entails.

Construction Contract Administration

5. The role of administering the construction contract:
- a) Remains to be the responsibility of the A/E when a PM is appointed, but not when a CM is appointed.
 - b) Entails dealing only with the issues of time and cost.
 - c) Entails dealing primarily with the issues of time and cost.

Control

6. It is correct to say that:
- a) Control is exercised by the CM over trade contractors.
 - b) Control is exercised by the CM over the A/E.
 - c) Coordination is exercised between the CM and the A/E.

The Common Applied Resource

7. The tower crane:
- a) May represent a financial investment difficulty for the GC on large-scale projects, depending on the number of cranes that will have to be installed.
 - b) Can be the source of major scheduling problems on site.
 - c) Is supposed to serve every spot of the construction site.

The Human Element

8. It is correct to say that:
- a) Labor resources of various levels of experience and skills, when available in abundance, will lessen the burden of construction financing on the part of the contractor.
 - b) The contractor's construction supervision team is less critical to the construction process compared to the A/E's construction supervision team.
 - c) The involvement of the human element in the construction process makes room for subjectivity-related issues that can be detrimental to the project's chances of success.

Heavy Construction

9. The word “heavy”, in the title, can be used in reference to:
- a) The heavy reliance on money to keep the construction wheel moving.
 - b) The size of such rock-eaters (boring machines) as those used in tunneling operations.
 - c) The size of the foundation raft for a building tower project.

The LS Contract

10. Having selected a contractor on a LS basis normally indicates that:
- a) The Client wanted to set a firm budget for construction.
 - b) The Client had insufficient confidence in the A/E's capabilities.
 - c) The Client will have no use of the bill of quantities during the construction phase.

The UP Contract

11. When opting for a unit-price type contract:
- a) The selection of the successful contractor will basically be done in a way similar to that under a LS type contract.
 - b) The PM, in examining submitted bids, shall give more attention to “unbalancing by front-loading” than to “unbalancing by speculation on quantities”.
 - c) Competition is not viewed as a critical issue from the Client’s perspective.

The C+ Contract

12. Under a cost-plus type contract, rank the level of difficulty, from 1 (least) to 3 (most), the Client will have in selecting the successful contractor:
- a) On the basis of the offered fee percentages only (1).
 - b) On the basis of the offered fee percentages and offered guaranteed maximum figures (3).
 - c) On the basis of the offered fee percentages, offered guaranteed maximum figures, and offered savings split percentages (2).

A/E's Role

13. Draft three Client-A/E Agreement's requirements describing the A/E's role in helping the Client defining the scope of such studies and selecting the professionals with appropriate qualifications:

- 1) The Architect/Engineer shall pinpoint the studies and investigations to be undertaken by the Owner, which are believed to be necessary for properly designing and/or constructing the Works.
- 2) The Architect/Engineer shall define the scope of such studies and investigations, highlighting the tasks required and the deliverables to be made.
- 3) The Architect/Engineer shall advise the Owner of the names of qualified potential individuals or entities and shall assist the Owner, if so requested, in selecting the preferred participants.

(please confine your answer to the space provided above)

The Financial Feasibility

14. This study:
- a) Is independent from the design related effort invested during the pre-project planning phase.
 - b) Is highly dependent on how well the A/E ends up satisfying the building's program functions within the total built-up area allowed.
 - c) Is more important than the economic feasibility to a consortium bidding on a public project under the BOT approach.

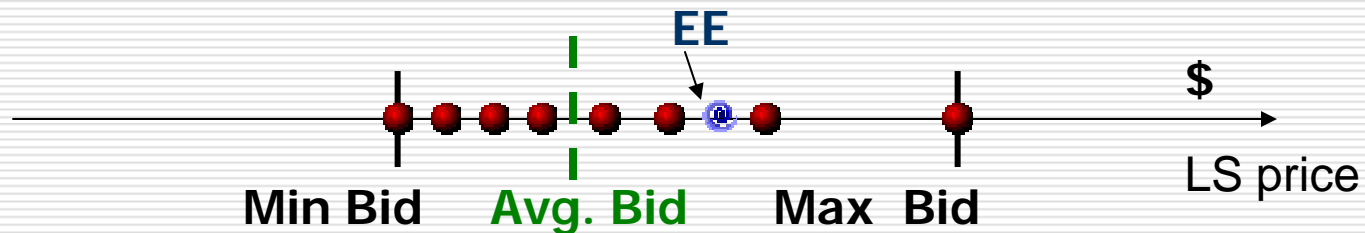
The Built Environment

15. In the case of an airport project to be constructed in a cold region, the environmental impact assessment shall tackle the issues of:
- a) Runoff of de-icing chemicals used on airplanes fuselage.
 - b) Disposal of waste including solid waste as well as used oil, resulting from facility operation and maintenance.
 - c) Noise pollution as it may affect endangered bird species in the area.

The Q&A Period

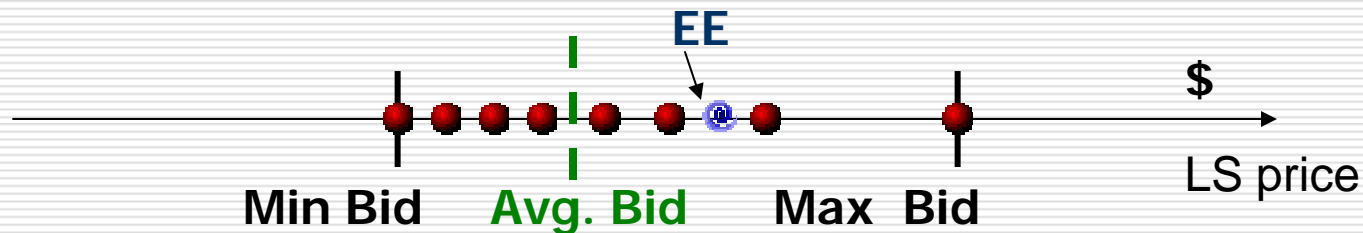
16. It is correct to say that:
- a) Contractors, during the Q&A period, are given more than one venue through which to inquire about ambiguities in the design documents.
 - b) Contractors, during the Q&A period, may decide not to inquire about ambiguous design requirements, in order to serve the purpose of their hidden agenda, which the PM or the A/E will likely to discover during the construction process.
 - c) Contractors, during the Q&A period, may decide not to inquire about ambiguous design requirements, in order to serve the purpose of their hidden agenda, which the PM or the A/E may get to discover during the bids evaluation period.

Bid Prices Distribution



17. Consider the distribution above:
- a) The maximum bid may be an indication of a contractor with not so much work on hand.
 - b) The A/E may have been conservative in deriving to the Engineer's Estimate.
 - c) The A/E has definitely given the Client a project that is inferior to what the Client had sought.

Lowest Bidder



18. Consider the same distribution above. The owner opted to accept the price of the lowest bidder, who in turn declined the offer. The bid guarantee:
- a) Prevents the lowest bidder from accepting other jobs.
 - b) Will always allow the Client to bridge the full difference between the lowest and second lowest prices.
 - c) Is a percentage of the Engineer's estimate and is disclosed by the Client in the bidding documents.