



University Of Technology  
Building and Construction Eng. Dept.  
Final Exam – First Attempt – 2013 / 2014



Subject: Principals of construction management  
Branch: Building and construction management Eng.  
Examiner: Dr. Tareq A. Khaleel

Class: 1<sup>st</sup>  
Time: 3 Hours  
Date: /06/2014

Note: Answer four questions only

- Q1) Classify construction projects according to its specialization and function (list your classification as a table).
- Q2) A- what are the methods of awarding and implementing projects  
B- What are the basic function of management? List with details.
- Q3) what are the major components of the general conditions of contract for civil engineering works in Iraq.
- Q4) An operation is performed by mixing team, truck to transport the concrete mix, and team of skilled labor to finish the concrete. The following table indicate the measured time for each activity.

Activity name	Activity description	Activity duration (minute)
A	Mixing the concrete	10
B	Loading concrete on truck	5
C	Transporting concrete to the site	20
D	Unloading concrete, casting, finishing concrete surface	10
E	Going back of empty truck to the concrete mixer	15

Draw the multiple activity chart and determine the utility factor for mixing, transporting, and casting operations.

- Q5) what is the payment system of public authorities for the implementation of their contracts in Iraq.

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Item	Project function	Building projects	Civil engineering projects
a	Agricultural projects	Stores, Market, Farms	Rural roads, Irrigation networks
b	Educational projects	Schools, Laboratories	
c	Power generation		Electrical power stations
d	Services projects	Hospitals, Health centers	Camps, Air bases
e	Commercial and Industrial projects	Stores, Ware houses, Industrial plants	
f	Communication and Transportation	Communication and Broadcasting buildings	Ports, Highways, Airports
g	Water resources projects	Administration buildings, Warehouses	Dams, Water treatment plants
h	Cultural projects	Theaters, Amusement Parks, Restaurants	
i	Mining projects		Mines, Row material facilities

Ans 2 A

#### 7-Method of awarding and implementing projects

There are several methods followed by the concerned authorities in Iraq:

- a- The general contract method where all interested and qualified contractors asked to submit their bids through one or two stages, and also through inviting one specialized or the only qualified contractor.
- b- Departmental or direct implementation by the owner staff and personnel.

Ans 2 B

#### 1- Organizing

The general management function that involves organizing can be described as:

- a-Defining and selection of the proper organization structure
- b-Determining what project management team positions must be created
- c-Defining the responsibilities of each position
- d-Establishing the relationship of one position with another
- e-Specifying the authority of each position

#### 2-Planning

Planning has as its broad and overall objective the prescribing, and field attainment of an orderly progression within budget and time, toward the completion of the project facilities through establishing the sequence, time, and cost frameworks of the works .

#### 3-Directing

Are the day to day managerial functions associated with influencing, guiding, and supervising sub ordinates in the accomplishment of the organizational activities that are identified through planning. This requires continuing awareness on the part of the manager on the specifics of the performed activities and whether the results are fulfilling the program objective in an effective manner

#### 4- Controlling

The controlling function involves the following:

- a-Monitoring program activities to insure that the end objectives are being met
- b-Initiation of corrective action as required to overcome deficiencies of the objectives are not being met

It is essential that program activities and their results be accomplished in compliance with the established plans and specifications.

- 1- Instruction to tenderers : Explain what should be considered, what should be taken in account, how to be prepared, and how tenderers submit their tenders to the employer. The instructions include the required documents that should be attached to the tenders, specify the required preliminary deposit, and the deadline for acceptance of tenders.
- 2- Tender form: Is a form signed by the contractor identifying the name address of the tender, the name and address of the tenderer, the name of the employer, tender amount, and contract period. This form should be signed by the contractor.
- 3- Part one of the general conditions: This part includes 72 clauses explaining the obligations and responsibility of both the employer and the contractor toward each other during the implementation period of the contract.
- 4- Part two of the general conditions: This part includes 9 clauses explaining the conditions of particular application such as program of work, third party insurance, penalty amount, and minimum amount of monthly payment, over head charges, and other related conditions.
- 5- Form of contract: This form is the document of agreement between the ~~two~~ <sup>two</sup> parties of the contract and bear their signatures and indicating the contract amount, contract period, and the contract documents.



The payments system of public authorities for the implementation of their contracts in Iraq is:

- 1- The contractor shall be paid monthly on account the full value of work completed in a satisfactory manner in accordance with the approved drawings on the basis of the rates set out in the priced bill of quantities. Provided that 10% of such

payments shall be withheld as retention money and such withholdings shall continue until they total 5% of the contract price.

- 2- The contractor shall submit to the Engineer representative once every month a detailed statement containing the full value of completed work and materials on site, and the Engineer shall examine such statement and approve the said value or the value adjusted by him subject to the deduction of all previous payments, the retention money, the delay penalty and any other amounts due from the contractor. All payments shall be based on the measurements of work and the rates set out in the priced bill of quantities and the Engineer shall approve the payment due to the contractor in accordance with the contract within a period not exceeding 30 days from the date of receipt of the statement by the Engineers representative.
- 3- Half of the retention money referred to in point 1 hereof shall be released upon the issuance of the taking-over certificate provided that :
  - a-the final measurement shall have been carried out.
  - b-there shall be no debts due from or claims officially registered with the employer against the contractor by sub-contractors or when such debts shall have been discharged.
- 4- The reminder of the retention money shall be released upon the issuance of the final acceptance certificate for the whole works or the latest such certificate in the event more than one certificate shall be issued after the contractor shall have submitted clearance certificates issued by the general commission for customs, the general commission for taxes, the directorate for pension, and social security for labor and the concerned labor court.
- 5- Down payment can be paid to the contractor according to special conditions stated in the contract .The stated conditions specify the amount of the down payment, and how to be paid back. There is no interest be imposed on such payment.