

所別：營建管理研究所碩士班 不分組 科目：營建工程與管理

1. Quality Control (QC) is an important factor contributing to the success of a construction project. There are 7 QC tools that have been widely used by the industry. Please name 4 of them and explain their purpose of usage? (8 points)
2. What are the 4 major strategies to reduce project risk? Please use a construction example to explain each of the strategy. (10 points)
3. Please explain the advantages and disadvantages of a Turnkey construction project from the perspectives of owner, as well as the design and construction firms of the turnkey contractor. (12 points)
4. What is Value Engineering (VE)? Please describe the procedures for a VE job plan. (10 points)
5. According to Article 18 of Government Procurement Act, there are 3 different tendering procedures, please name them and briefly compare the differences. (10 points)
6. Please explain the following terms: (30 points, 5 points each)
 - (a) PDCA
 - (b) BOT
 - (c) PERT
 - (d) BCWP
 - (e) Arbitration
 - (f) Sustainable construction
7. For the following activities which represent a construction project,
 - (a) What is the project duration? (5 points)
 - (b) Which activities are on the critical path? (5 points)
 - (c) Which activity has the maximum free float? (5 points)
 - (d) Which activity has the maximum interference float? (5 points)

Activity	Duration	Follower
A	5	D,E
B	10	E
C	3	E,F
D	6	G
E	7	G,H,I
F	13	I
G	3	J
H	2	J
I	3	J
J	2	-