

CE.04.802 – Construction Engineering and Management

(Answer all questions)

TIME: 3 Hours

Maximum: 100 Marks

(8 x 5 = 40)

- 1 (a) State the difference between the Event and Activity.
- (b) What are the uncertainties involved in construction scheduling?
- (c) Explain with a neat sketch the basic parts of a power shovel.
- (d) What is ready mix Concrete? How it is useful?
- (e) Why is tender floated? What are the types of Tender?
- (f) What are the functions of BIS and ISO?
- (g) Describe briefly about Inventory Control.
- (h) What is the concept of ethics?

- 2 A small project consists of seven activities for the relevant data are given below:

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ACTIVITY	PRECEDING ACTIVITIES	ACTIVITY DURATIONS(DAY)
A	-	4
B	-	7
C	-	6
D	A, B	5
E	A, B	7
F	C,D,E	6
G	C,D, E	5

- (a) Draw the project Network
- (b) Find the critical path
- (c) Present in the Tabular form, Earliest time, Latest time and total float for each activity (i,j)

(OR)

A small projects is composed of seven activities whose time estimates are listed in the table as follows:

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ACTIVITY		ESTIMATED DURATION (DAYS)		
i	j	OPTIMISTIC	MOSTLIKELY	PESSIMISTIC
1	2	1	1	7
1	3	1	4	7
1	4	2	2	8
2	5	1	1	1
3	5	2	5	14
4	6	2	5	8
5	6	3	6	15

- a) Draw the project Network.
b) Find the expected duration and variance of each activity. What is the expected project length?
c) Calculate the variance and standard deviation of project length. What is the probability that the project will be completed:
i) At least 4 weeks earlier than expected?
ii) No more than 4 weeks later than expected?
- 3 a) Describe about pile driving equipments. Draw sketches for the same. 15
(OR)
b) (i) Explain the operation of any one of the excavation equipments. 7
(ii) What are the factors to be considered for selection of pile type. 8
- 4 a) (i) What are the different methods of constructions? Explain. 7
(ii) Give a brief account on general conditions of contract. 8
(OR)
b) (i) Explain the need of quality control? 8
(ii) Write notes on organization and functioning of standardization at National and International level. 7
- 5 a) (i) Describe with a flow diagram the steps for Material Management of a Constructions. 7
(ii) Write notes on EOQ. 8
(OR)
b) (i) Briefly discuss the role of professional bodies. 8
(ii) Comment on Importance of professional responsibilities. 7