

CENTRAL PUBLIC WORK DEPARTMENT

DEPARTMENTAL EXAMS FOR AEE'S

July 2018

Civil Engineering Paper-I

(Without Books)

Time: 3 Hours

Maximum Marks: 100

Attempt all questions

1. Briefly explain the rules of network construction in CPM.

(5)

2. The interdependence of a job consisting of seven activities A to G is given as:

(20)

Activity	A	B	C	D	E	F	G
Predecessor activity	-	-	A	B	A	B	C,D
Succeeding activity	C,E	D,F	G	G	-	-	-

Time estimate in days for each activity are:

Activity	Time estimate
A	6-9-18
B	5-8-17
C	4-7-22
D	4-7-16
E	4-7-10
F	2-5-8
G	4-10-22

Z(+)	% Probability
0.8	78.81
0.9	81.59
1.0	84.13
1.1	86.43
1.2	88.49

Draw the network and determine the probability of completing the job in 35 days.

3. Describe Green Building Norms in detail. (10)
4. State the components involved for analysis of rates for the following items- (5+5+5+5)
 - (a) Supplying and filling in plinth with Jamuna sand under floor, including watering, ramming consolidating and dressing complete.
 - (b) Brick work with F.P.S. brick of class designation 75 in foundation and plinth in cement mortar 1:4 (1 cement: 4 coarse sand)
 - (c) 12 mm Cement plaster of mix 1:6 (1Cement:6 Fine sand)
 - (d) Cement Mortar 1:2(1 cement: 2 fine sand)
5. What is cost index and how it is calculated? (5)
6. Write short notes on following- (5+5)
 - (a) Test for silt content
 - (b) Test for workability
7. Write specifications for the Damp Proof Course with suitable sketches whenever necessary. (10)
8. Explain detailed or item wise method of valuation of cost of construction of a building. (10)
9. Write detailed specification for cement plaster. (10)