B. Tech Degree V Semester Examination, November 2009

CE 506 A/B CONSTRUCTION ENGINEERING AND MANAGEMENT
(2006 Scheme)

Time : 3 Hours

Maximum Marks : 100

PART A
(Answer *ALL* questions)

(8 x 5 = 40)

I. (a) What are the advantages of crawler tractor compared to wheel tractor?
    (b) What are the uses of bulldozers?
    (c) What are the factors that affect the section of equipments for a particular job?
    (d) What are the advantages of purchased equipment over hired equipment?
    (e) What are the resources in construction industry?
    (f) What is scheduling? Prepare a format for material scheduling.
    (g) What are the differences between CPM and PERT?
    (h) Define the three time estimates in PERT.

PART B

(4 x 15 = 60)

II. With a neat sketch, explain the parts of a scraper. Also explain the operations that can be performed using a scraper. (15)

OR

III. With a neat labeled sketch, explain the components of a belt conveyor system. (15)

IV. List the different types of drilling equipment. Explain any two. (15)

OR

V.   A machine was purchased for Rs.65,000 on Ist January 1950. The erection and installation work costs Rs.15,000/- . This was replaced by a new one on 31st December 1969. If the scrap value was estimated as Rs.20,000/-
    (i) What should be the rate of depreciation. Calculate the depreciation fund on 15th June 1959.
    (ii) If after 12 years of running, some assemblies are replaced and the replacement cost is Rs.15,000/-. What will be the new rate of depreciation? (15)

VI. What are the objects of planning in construction industry? Briefly explain the different stages of construction. (15)

OR

VII. Write notes on :
    (i)   Limitations of bar charts
    (ii) Objects of management in construction
    (iii) Advantages of milestone charts over bar charts. (15)

VIII. A project consists of the following activities.

Activity	A	B	C	D	E	F	G
Immediate Predecessor	-	-	A	B,C	B,C	D	E,F
Time in weeks	6	9	9	3	12	6	3
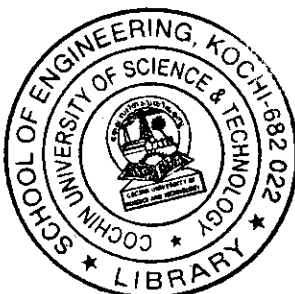
Draw a network diagram, number the events, compute project completion time and isolate the critical path. (15)

OR

IX. Calculate the expected time and variance for each activity in the network shown below. The three time estimates for activities are indicated in the network. (15)

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