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CEL 767		CONSTRUCTION AND CONTRACT MANAGEMENT	MAJOR	
Time allowed 13.00-15.00	2 hours		Maximum Marks	40
Venue	WS 204		Date	05.05.2007

ANSWER ALL QUESTIONS. ASSUME MISSING DETAILS SUITABLY. ALSO MENTION THE ASSUMPTIONS WHEREVER MADE.

Q 1. The table shown below lists the man-hour position of a part of a project at a particular point of time. (3 x 3 =9 marks)

Activity	Budget (man-hour)	% complete	Actual (man-hour)
A	120	75	103
B	200	80	190
C	100	50	60
D	300	90	260

- What is the earned value of this part of the project at this point in time?
- What is the overall percent complete?
- What are the estimated final man hours?

Q 2. You are running a company where you have bid for a contract and you won the same. The following are the terms and conditions for payment. The contract is cost plus 20% profit margin. The duration of the project is 9 weeks. You will be given an advance of Rs 20,000 at the start of the contract in the first week itself. The payment of your cost plus 20% profit will be made on week 5, 10, and 15. In the week of 5, you will be paid till week 4. In the week of 10, you will be paid till 8, and in the week 15, you will be given the payment for the 9. The payment in weeks 5 and 10 will be made after deducting 50% of the advance received earlier. (4 x 2.5=10 marks)

- Draw the cash flow table for the above contract assuming that:
 - Your salary expenditure is Rs. 10,000 per week.
 - Your management overheads are 25% of the salary and material cost
 - You need to buy materials costing Rs. 10,000 each time in the weeks 4 and 8.
- For how many weeks, you need to borrow money?
- What is your net profit?
- If the advance payment is deducted only in the last payment in the week of 15th then for how many weeks do we need to borrow money?

Q 3 In a construction project awarded to M/s ABC Construction Company, there are seven construction activities: A, B, C, D, E, F and G. The company maintains the following cost code: 10, 20, 30, 40, 50, 60, 70, and 80. The schedule and budgeted cost

for this project is given in the following table.
(10 Marks)

Table 1 Schedule and budgeted cost for construction activities

Activity	week starting	Finish (week ending)	Total Budgeted cost	Break up of budgeted cost in different cost codes							
				10	20	30	40	50	60	70	80
A	1	15	141	112							29
B	5	19	171		30		72		34		35
C	16	33	195		48		79		28		40
D	20	41	98		20		42		30		6
E	20	42	161		30		54		43		34
F	10	34	122	30		32		20		20	20
G	10	42	66	10		10		20		16	10

The company reviewed the progress of the project at the end of week 37. The revised schedule and actual cost incurred at this point of time is given in the following table.

Table 2 Updated schedule and actual cost incurred at the end of week 37

Activity	week starting	Finish (week ending)
A	1	15
B	5	22
C	16	36
D	23	46
E	24	48
F	13	36
G	13	48

Actual costs up to end of week 37	
10	155
20	100
30	40
40	210
50	31
60	104
70	33
80	157

Assume that the planned total expenditure on each construction activity is uniform with time.

- Plot the budget curve for the project, and the value and cost curves to the end of week 37.
- Draw up table of variances and make recommendations to the site manager for future actions.

Q 4.

- Discuss the study conducted on finding the impact of accuracy in estimates on the profitability and chances of winning the bid.
- The hierarchy of a typical construction organisation
- Write short notes on escalation clause
- Write short notes on 'Markup influencing factors' (4x 2.5= 10 marks)