TRIBHUVAN UNIVERSITY INSTITUTE OF ENGINEERING **Examination Control Division** **2082 Chaitra**	**Exam.**	**Regular (New Course)**		
	Level	BE	**Full Marks**	60
	Programme	BEL	**Pass Marks**	24
	Year / Part	III / I	**Time**	3 hrs.

Subject: - Project Engineering and management *(ENEE 301)*

- ✓ *Candidates are required to give their answers in their own words as far as practicable.*
- ✓ *Attempt **All** questions.*
- ✓ *The figures in the margin indicate **Full Marks**.*
- ✓ *Assume suitable data if necessary.*

1. a) Define the term project management. Compare the traditional vs. agile project management methods. Explain on triple constraints in a project. [2+2+2]

   b) Starting from the process of project closure, explain how is it archived, either success or failure, for the future reference. [6]

2. a) What do you understand by the feasibility analysis of a project? Elaborate how feasibility analysis of an engineering project is carried out. [6]

   b) Define NPV and payback period of project and discuss its significance in project appraisal. Calculate simple payback period for the following cash flow: [3+3]

Year	Cash flow(Rs.)
0	-10,00,000
1	1,20,000
2	1,50,000
3	3,00,000
4	5,00,000
5	5,00,000

3. a) Explain the application of bar chart in project management. [4]

   b) Draw the CPM network diagram and calculate all the components (EST, EFT, LST, LFT, TF, FF, IF1 and IF2) of CPM from the following information. [8]

Activity	Duration (days)	Predecessor	Successor
A	1	-	D, E
B	6	-	F, J
C	2	-	G
D	2	A	H
E	4	A	H
F	3	B	I
G	4	C	J
H	2	D, E	K
I	5	F	L
J	3	B, G	-
K	3	H	L
L	4	I, K	-

4. a) Explain the stage of project procurement. Include the stages such as notice of expression of interest, request of proposal, and bid evaluation, in your analysis. [6]

   b) Starting from the concept of project procurement, explain how dispute resolution is settled in contract administration. [6]

5. a) What do you understand by project evaluation and how project evaluation is carried out during the execution phase of project? Explain with an aid of hydropower project. [6]

   b) A project is undertaken where the work has to be completed within 60 days with a budget of Rs. 20,00,000. According to the progress reports, at the end of the first month, only 25% of the total work has been completed and 50% of the total budget has been spent. Also, for the completion of 25% work, the actual cost incurred is 50% of the total budgeted cost. Perform EVA and comment on performance. [6]

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