

K.E.Society's
Rajarambapu Institute of Technology, Rajaramnagar
(An Autonomous Institute, affiliated to SUK)
Unit Test-02
First Year M. Tech. Civil Construction Management
SEMESTER- II
Project Economics & Financial Management (CCM1274)

Enroll No

Q.P.Code
UT4184

Day & Date : Friday, 15/07/2022

Time : 11.45 to 12.45 pm

Max Marks- 25

- Instructions: 1) All questions are compulsory
2) Figures to the right indicate marks
3) Assume suitable data whenever necessary.

- Q.1 a) Discuss various means of finance available for construction industry in India. 08 CO4
b) Do you think promoting digital payment by the government is a very effective way to stop the illegal transactions in India? Justify 05 CO1
- Q.2 Attempt any **TWO**
- a) By using Benefit-Cost Ratio method and identify whether the following project be accepted or not? 06 CO3
Initial investment: - Rs. 3,00,000
Rate of interest: - 10%
Benefit at the end of first year: - Rs. 50,000
Benefit at the end of second year: - Rs. 80,000
Benefit at the end of third year: - Rs. 1,00,000
Benefit at the end of fourth year: - Rs. 1,50,000
Justify your answer.
- b) A company purchased small equipment for Rs. 50,000. Annual maintenance costs are expected to be Rs. 1,500, but income will be Rs. 10,000 per year. How long it take for the company to recover its investment at an interest rate of 10 % per year? 06 CO3
- c) An industry is selling a product for Rs. 10 per unit. The fixed cost for assets is Rs. 40000 with variable cost of Rs. 6 per unit. How many units should be produced to break even? 06 CO3
- d) Use payback method and identify economical project for the following data. 06 CO3
(Assume interest rate as 13 % per annum)

	Project A	Project B
First Cost (Rs.)	1800	2350
Economic Life (Years)	15	15
Annual benefits (Rs.)	645	900



K.E.Society's
Rajarambapu Institute of Technology, Rajaramnagar
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Unit Test-02
First Year M. Tech. Civil Construction Management
SEMESTER- II
Construction Contracts (CCM1284)

Enroll No

Q.P.Code
UT4196

Day & Date : Friday, 15/07/2022
Time : 3.45 to 4.45 pm.

Max Marks- 25

- Instructions: 1) All questions are compulsory
2) Figures to the right indicate marks
3) Assume suitable data whenever necessary.

Q.1 SOLVE 'a & b' OR 'c'

Co

- a) List the documents incorporated in contract document. Explain any two in detail. 08 3
- b) Justify the conditions under which contractor can claim the time extension. 07 3
- OR**
- c) Discuss the actions you will recommend in the following circumstances: 3
1. Contractor fails to pay SD within the specified time limit, 15
 2. Progress of work is slow and likely to cause delay,
 3. During the progress of the work contractor becomes seriously ill and suspends the work,
 4. The material brought on site by the contractor are not according to the specifications
 5. Certain defects in the work are noted after completion, but before the maintenance period is over.

Q.2 SOLVE 'a & b' OR 'c'

- a) Differentiate among "Contract of Indemnity and Guaranty" 05 3
- b) Explain the essentials of contract of Guaranty. 05 3
- OR**
- c) Discuss in depth the circumstances under which surety will be discharged from his liabilities. 10 3



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Unit Test-02

F. Y. M. Tech Construction Management, SEMESTER- II

Course:- **Health and Safety Management (PE-I)**

Course Code: **CCM1304**

Enroll No

Q.P. Code

UT4220

Day & Date: Sat., 16/7/2022
Time : 3.45 to 4.45 pm.

Max Marks- 25

- Instructions: 1) All questions are compulsory
2) Figure to right indicates full marks

- | | Marks |
|--|-------|
| Q.1 Solve any two | |
| (a) Point out which safety precautions will you take during mass concreting work as Safety Officer? | 05 |
| (b) Enlist the methods of demolition used in construction industry? Justify any one in detail? | 05 |
| (c) Compare your understanding from elimination and substitution of safety hazard? | 05 |
| Q.2 Solve any three | |
| (a) Enlist the method of demolition used in construction industry? Identify the correct method to demolition for RCC framed structure in densely populated area? | 05 |
| (b) Discuss the limitations of using ladder over the scaffolding? | 05 |
| (c) Point out which safety precautions will you take during mass concreting work as Safety Officer? | 05 |
| (d) Prepare a checklist to check the site before and during the excavation? | 05 |



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UNIT TEST-2
F.Y.M.Tech. Civil (CM) - Sem- II

Q.P.Code
UT4206

Course Code: CCM1354

Course Name: PE-IV (Building Materials)

Day & Date: 16/7/2022

Time : 10:30 to 11:30 am.

Max Marks: 25

- Instructions:** 1) All questions are compulsory
2) Figures to the right indicate maximum marks
3) Assume suitable data if not given

Q.N.	Question statement	Marks	CO
1	Describe the wet and dry process of production of crumb rubber modified bitumen; explain its benefits over conventional bitumen.	8	CO1
	OR		
	What makes Glenium concrete as unique solutions to the problems in concrete technology? Discuss its features, properties and benefits.	8	CO1
2	Discuss material and construction requirements of Nuclear containment structure.	7	CO1
3	What do you understand by high strength and high performance concrete? Discuss materials used to produce HPC.	5	CO2
4	It is decided to construct Ground water tank using Ferro-cement technology, explain material used and construction process to be followed.	5	CO2



UNIT TEST-II

First Year M. Tech. Civil-Construction and Management Engineering SEM- II
Course: Statistical Analysis **Course Code: SHP 526**
Day & Date: Thursday, 14.07.2022 **Max. Marks: 25**
Time: 11.45am to 12.45 pm

Instructions: i) All questions are compulsory

ii) Use of non-programmable calculator is allowed

iii) Figure to the right indicate full mark

Q. 1. Attempt the following.

(a) (i) Discuss Sampling Distribution of mean \bar{X} 6 CO_3
(ii) What are applications of Central Limit theorem?

(b) If all possible samples of size 16 are drawn from a normal population with mean equal to 50 and standard deviation equal to 5, what is the probability that a sample mean \bar{X} will fall in the interval from $\mu_{\bar{X}} - 1.9\sigma_{\bar{X}}$ to $\mu_{\bar{X}} - 1.4\sigma_{\bar{X}}$? Assume that the sample means can be measured to any degree of accuracy. (Given $z = -1.9 = 0.3446$, $z = -0.4 = 0.0287$) 6 CO_3

or

(b) A certain type of thread is manufactured with a mean tensile strength of 78.3 kilograms and a standard deviation of 5.6 kilograms. How is the variance of the sample mean changed when the sample size is 6 CO_3
(i) increased from 64 to 196?
(ii) decreased from 784 to 49?

Q. 2. Attempt the following.

(a) Suppose that an allergist wishes to test the hypothesis that at least 30% of the public is allergic to some cheese products. Explain how the allergist could commit 6 CO_3
(i) a type I error;
(ii) a type II error.

(b) What is the role of probability in Hypothesis Testing? 7 CO_3

