K.E.Society's
Rajarambapu Institute of Technology, Rajaramnagar
(An Autonomous Institute, affiliated to SUK)
Unit Test-01
First Year M. Tech. Civil Construction Management
SEMESTER- II
Project Economics & Financial Management (CCM1274)

Enroll No		**Q.P.Code**
		UT4023

Day & Date : Friday, 03/06/2022

Time   : 10.30 to 11.30 am

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) A finance company advertises two investment plans. In plan 1, the company   10   CO2
pays Rs. 12,000 after 15 years for Rs. 1,000 invested now. In plan 2, for every
Rs. 1,000 invested, the company pays Rs. 4,000 at the end of the 10th year and
Rs. 4,000 at the end 15th year. Select the best investment plan from the
investors point of view at i= 12 %, compounded annually.(Use present worth
method)

Q.2   Attempt any **THREE**

a) A company takes loan of Rs. 20,00,000 to modernize its boiler section. The   05   CO2
loan is to be repaid in 20 equal installments at 12 % interest rate, compounded
annually. Find the equal installment amount that should be paid for the next 20
years.

b) A person needs a sum of Rs. 2,00,000 for his daughter's marriage which will   05   CO2
take place 15 years from now. Find the amount of money that he should
deposit now in a bank if the bank gives 11 % interest, compounded annually.

c) A person invests a sum of rs. 50,000 in a bank at a nominal interest rate of 8 %   05   CO2
for 15 years. The compounding is monthly. Find the maturity amount of the of
the deposit after 15 years.

d) Determine the value of present worth in year 0 of the following series of   05   CO2
expenditures. Assume a rate of interest of 8 % per year.

Year	Expenditure in Rs.
0	0
1	15000
2	15000
3	15000
4	15000
5	25000
6	25000
7	25000
8	25000

e) Calculate effective interest rate for the following case:-   05   CO1
Nominal interest rate= 10 % per year
Compounded biannually, Quarterly, Monthly, Daily and Hourly

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Unit Test I
F.Y.M.Tech. Civil-CM.Sem- I
Course Code: CCM1284 Course Name: Construction Contracts

Day & Date: Friday , 3/6/2022

Time: 3.30 to 4.30 pm.

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.1

CO

a You want to construct your house, for which you need to invite tenders. Draft a tender notice for the above work considering all the contents required. 10   2

OR

b Bring out the stages for construction of any work in public sector, describe them in short. 10   2

Q.2

a You are a visitor to a hill station, when moving on the streets you saw that road side vendors were prompting and advertizing their products and were trying to communicate with people on the street so that they can attract customers and sell their products. As visitor you were also interested to buy few things as a token of remembrance of the visit, from the all the vendors you visit one and start looking at the products he had in the store, you liked few and you started to bargain on the cost factor, after some time both agreed on final amount to be paid and the transaction took place and both departed happily.
Identify and justify the statements related to following points. 10   1
    1. Proposal,
    2. Acceptance,
    3. Promise, and
    4. Agreement

b Discuss the pre-requisites of agreement to be a contract. 05   1

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Unit Test-01
F. Y. M. Tech Construction Management SEMESTER- II
Course:- **Health and Safety Management (PE-III)**
Course Code: **CCM1304**

Enroll No

Q.P. Code

VT4057

Day & Date: Sat., 04/06/2022
Time : 3:30 to 4:30 pm

Max Marks- 25

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

		Marks	CO's
Q.1	Solve any three		
(a)	Identify the roles and responsibilities of safety officer on construction site?	05	CO1
(b)	Discover the hazard identification and prevention process for construction site?	05	CO1
(c)	Give importance of giving the safety education and training to persons on construction site?	05	CO1
(d)	Should the wearing of safety footwear and safety helmets be a rule for everyone on site? Give Justification?	05	CO1
Q.2	Solve any two		
(a)	The Child Labour (Prohibition & Regulation) Act, 1986	05	CO2
(b)	Discuss the Workmen's Compensation Act, 1923?	05	CO2
(c)	Why are a considerable number of the accidents in excavation work fatal?	05	CO2

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UNIT TEST- 1
F.Y.M.Tech. Civil (CM) - Sem- I

Enroll No		Q.P.Code
		VT4047

Course Code: CCM1354   **Course Name**: PE-IV (Building Materials)

Day & Date: 4/6/2022
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		Sustainable building materials are need of time, justify. Enlist characteristic of sustainable materials.	7	CO1
		OR		
		What are the benefits of going green? Enumerate critical challenges of going green.	7	CO1
2		It is proposed to construct a Farm house by using sustainable building materials, suggest the different materials and construction methods used to construct different elements of Farm house.	8	CO1
3		Discuss role of chemical admixtures in cement concrete industry and Enumerate different types of it.	5	CO2
4		Discuss role of Pozzolanic admixture in cement concrete industry and Enumerate different types of it.	5	CO2

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(An Autonomous Institute, Affiliated to Shivaji University, Kolhapur)

Q.P. Code

UT4006

Unit Test-1 June 2022

First Year M. Tech. (Civil Construction Management Engineering) Semester – II

Course Name: Statistical Analysis   **Course Code:** SHP 526

Day & Date: Thur, 02/06/2022   Time: 10:30 to 11:30   Max. Marks – 25

Instructions: i) *All questions are compulsory.*
ii) *Figures to the right indicate full marks.*
iii) *Use of non-programmable calculator is allowed.*

		Marks	CO
1.	**Attempt the following.**		
	(a) A developer of a new subdivision offers prospective home buyers a choice of Tudor, rustic, colonial, and traditional exterior styling in ranch, two-story, and split-level floor plans. In how many different ways can a buyer order one of these homes? (Draw the tree diagram for finding the sample points)	7	CO_1
	(b) Statistics class for engineers consists of 25 industrial, 10 mechanical, 10 electrical, and 8 civil engineering students. If a person is randomly selected by the instructor to answer a question, find the probability that the student chosen is (i) an industrial engineering major (b) a civil engineering or an electrical engineering major.	6	CO_1

OR

(b) According to Consumer Digest in specific, the probable location of personal computers

(PC) in the home is as follows:
Adult bedroom: 0.03
Child bedroom: 0.15
Other bedroom: 0.14
Office or den: 0.40
Other rooms: 0.28

(i) What is the probability that a PC is in a bedroom?
(ii) What is the probability that it is not in a bedroom?
(iii) Suppose a household is selected at random from households with a PC; in what room would you expect to find a PC?

		Marks	CO
2.	**Attempt the following.**		
	(a) In an NBA (National Basketball Association) championship series, the team that wins four games out of seven is the winner. Suppose that teams A and B face each other in the championship games and that team A has probability 0.55 of winning a game over team B. (i) What is the probability that team A will win the series in 6 games? (ii) What is the probability that team A will win the series? (iii) If teams A and B were facing each other in a regional playoff series, which is decided by winning three out of five games, what is the probability that team A would win the series?	6	CO_2
	(b) What are the areas of applications of binomial distribution?	6	CO_2