K.E.Society's
Rajarambapu Institute of Technology, Rajaramnagar
(An Autonomous Institute, affiliated to SUK)
End Semester Examination Nov/Dec 2017
F.Y. M.Tech. Civil Construction Management SEMESTER- I
Operations Research in Construction (CCME11)

Enroll No

Q.P.Code

EB 1143

Day & Date: Thursday, 28/12/2017
Time   : 02.30 pm to 04.30 pm

Max Marks: 50

Instructions: 1) All questions are compulsory.
                  2) Figures to the right indicate marks.
                  3) Use of non-programmable calculator is allowed.

Q.1   Attempt the following.

(a)   Solve the following LPP by Simplex method.   10   CO1
      Maximize $Z= 3x_1+2x_2+5x_3$
                  Subject to $x_1+x_2+x_3\leq9$
                                 $2x_1+3x_2+ 5x_3\leq30$
                                 $2x_1-x_2-x_3\leq8$
      With $x_1,x_2,x_3\geq0$

(b)   Discuss in detail variants of transportation problems.   04   CO1

OR

(c)   Discuss the methods useful for decision making under uncertainty.   04   CO2

Q.2   Attempt the following.

a)   Consider the following payoff matrix for two firms. What is the best mixed   10   CO3
     strategy for both the firms and also find out the value of the game.

		Firm II		
		No advertising	Medium advertising	Large advertising
Firm I	No advertising	60	50	40
	Medium advertising	70	70	50
	Large advertising	80	60	75

b)   Solve the following game by Graphical method.   08   CO3

		Player B				
		B1	B2	B3	B4	B5
Player A	A1	3	0	6	-1	7
	A2	-1	5	-2	2	1

OR

(c)   Solve the following game by using dominance property.   08   CO3

		Player B				
		I	II	III	IV	V
Player A	I	6	15	30	21	6
	II	3	3	6	6	4
	III	12	12	24	35	3

Q.3 Attempt the following.

(a) A network consists of following activities and their duration of a small project. Draw the network, mark critical path and find all types of floats.   12   CO5

Activity	1-2	1-3	2-8	3-4	4-5	4-7	5-6	6-7	7-8	8-9	9-10
Duration in days	30	4	2	2	15	9	4	9	9	20	20

(b) Discuss in detail applications of Queuing theory in civil engineering.   06   CO5

OR

(c) Discuss in detail steps involved in carrying out Monte Carlo Simulation.   06   CO5

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Rajarambapu Institute of Technology, Rajaramnagar

(An Autonomous Institute)

END SEMESTER EXAMINATION, 2017-18

M. Tech. Civil Engineering SEMESTER-I

DISASTER MANAGEMENT

Course Code: **CCME 21**

Enroll. No.

EB 1155

Day & Date: Sat., 30/12/2017

Time : 2.30 pm — 4.30 pm

Max. Marks 50

Instructions :

i. *All questions are compulsory*

ii. *Figures to the right indicate full marks*

iii. *Assume suitable data if necessary and mention it.*

Que.1	a. Explain preparedness management action plan for flood disaster.	CO1	6
	b. Describe the disaster management cycle with sketch.	CO2	6
	OR		
	b. A hazardous chemical Industry is proposed in Islampur, describe the impact of chemical and industrial hazard on living and non-living things due to Industrial Accident.	CO2	6
	c. Describe with sketch the organizational structure of the disaster mitigating National Level government agency.	CO3	5
Que.2	a. Explain the role of IT and public awareness in Ockhi cyclone in South India.	CO3	6
	OR		
	a. Write in details post disaster management plan for Tsunami and cyclones.	CO3	6
	b. Write national and international strategy for disaster management.	CO4	7
	c. Write the role of research and training in disaster management.	CO4	4
Que.3	a. Write a role of various Agencies in Disaster Management	CO4	6
	b. Define vulnerability and discuss the process of vulnerability analysis.	CO5	6
	OR		
	b. Describe the role of Civil engineer in post disaster management	CO5	6
	c. Prepare regional development perspective for disaster management with focus on global warming and air pollution for Delhi.	CO5	4

K.E.Society's

Rajarambapu Institute of Technology, Rajaramnagar.
(An Autonomous Institute)
End Semester Examination December - 2017
First Year M. Tech. Civil Construction Management SEMESTER – I
Construction Project Management (CCM1012)

Day and Date: Sat., 23/12/2017

Time: 2.30 – 4.30 pm   Max Marks-50

Instructions:

    1) All questions are compulsory.

    2) Assume suitable data where ever necessary.

Q.1

(a) Calculate the Total Float, Free Float and Independent Float of the following construction project.
(12) CO2

Activity	1-2	1-3	2-5	2-7	3-4	3-6	4-5	5-6	5-7	6-7	7-8
Duration	10	12	8	12	6	5	8	8	10	6	12

(b) Prepare a linear schedule for any five activities of multi storied structure. **(6) CO2**

OR

(b) Explain the process of determining project cost with reference to direct and indirect cost **(6) CO3**

Q. 2

(a) Suggest a organization structure for a dam construction project of a company with roles and responsibilities. **(10) CO3**

(b) Develop RACT matrix for construction project? **(6) CO3**

OR

(b) Design communication management plan for construction project. **(6) CO3**

Q3. Solve any two

(a) Suggest the status reports to be generated with their frequency and content with reference to MS project software. **(8) CO4**

(b) Explain the benefits of PMIS success **(8) CO4**

(c) Describe the role of project management office with suitable example **(8)CO4**

First year M. Tech. Civil, Construction Management Semester I

Construction Equipments and Methods Subject Code: CCM1022

Day & Date: Tue, 26/12/2017

Time: 2.30 pm – 4.30 pm

Max Marks: 50

Instructions:

    i.   *All questions are compulsory.*

    ii.   *Figures to the right indicate marks.*

    iii.   *Use of non-programmable calculators allowed*

    iv.   *Assume suitable data wherever necessary*

Q.1 a) Explain cyclic operations in drill and blast method. On a construction project which measures you will take to minimize the cycle time.   **06**

Explain mechanical methods for tunnelling in hard and soft strata. List major differences in equipments and operations involved.   **06**

List various types of crushers, bifurcate them as primary, secondary and tertiary crushers.   **06**

OR

Reason the requirement of construction plant on the project. Explain in brief construction plants and projects on which they are required.   **06**

Q.2   Solve any **THREE**

  a)   Explain factors influencing selection of a dewatering method.   **06**

  b)   List various types of mixers, select one best for RMC plant and reason why?   **06**

  c)   Develop layout of any one construction plant and explain operation of the same.   **06**

 d)   Categories various trenchless methods and state their application areas.   **06**

Q.3

  a)   A deepening work of port requires removal of underwater laying material and strata to the depth of 12 meters, geological survey shows that loose soil plus sandy strata is available from 4 to 6 meters and below is hard strata. State the method which you will select to complete the project activities, also develop method statement for the planned activities.   **10**

OR

1

b) Drawing given below shows site condition, in order to facilitate construction activity the founding area needs to be kept dry, state method you propose to complete the activity. **10**

PLOT AREA

River

(a)

Water Table

Foundation level

(b)
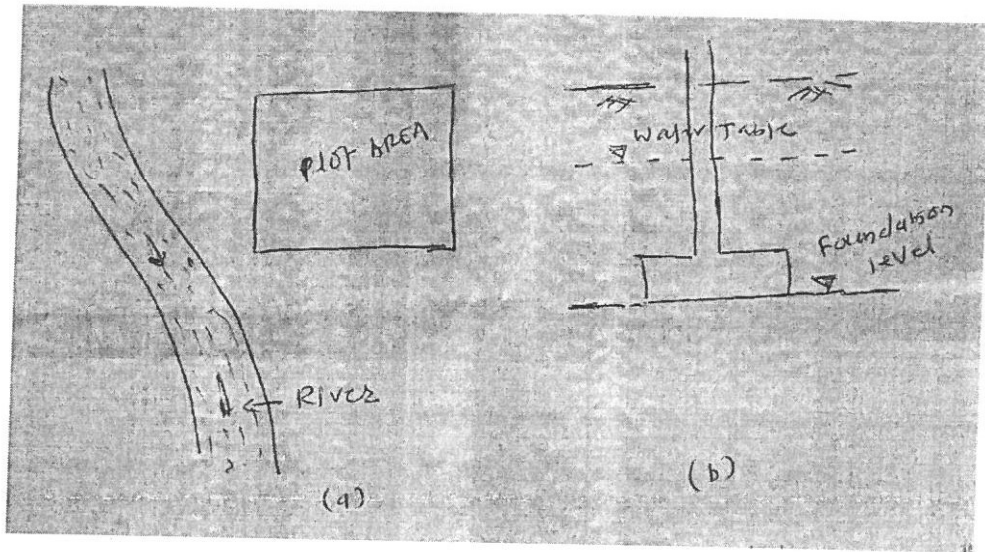
c) Bing out pilling methods and explain application area of each method. **04**