# GIET UNIVERSITY, GUNUPUR – 765022

M. Tech (First Semester – Regular) Examinations, June – 2021

## MPCCT1030 – CONSTRUCTION PLANNING AND CONTROL

(Construction Technology and Management)

Time: 2 hrs                                                                         Maximum: 50 Marks

**The figures in the right hand margin indicate marks.**

## PART – A                                                                    (2 x 10 = 20 Marks)

Q1. Answer **ALL** questions

a.  Represent the characteristics of project manager.

b.  How to select suitable manpower for construction projects?

c.  Who are all the stakeholders of construction projects?

d.  What are the documents required for project planning?

e.  Compare critical path method with critical chain method.

f.  Why do we need management information system?

g.  How will check quality at construction site?

h.  What are important skills are required to handle construction projects?

i.  Represent the features of project control life cycle.

j.  What is meant by Minimum Wages Act?

## PART – B                                                                    (6 x 5 = 30 Marks)

Answer *ANY FIVE* questions                                                **Marks**

2.  Describe briefly the different stages of construction projects.          **(6)**

3.  Prepare work breakdown structure for residential building construction project.    **(6)**

4.  The following data given for a project.                                  **(6)**

| Activity | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| Node | 1-2 | 1-3 | 2-4 | 2-6 | 3-4 | 4-5 | 4-6 | 5-7 | 6-7 | 7-8 |
| Duration | 10 | 11 | 13 | 14 | 10 | 7 | 17 | 13 | 9 | 1 |

How many critical activities and non-critical activities are there in the above project network?

5.  In PERT Method of scheduling the following data are given.              **(6)**

| Activity | 1 - 2 | 1 - 3 | 2 – 3 | 2 - 4 | 2 - 5 | 3 - 5 | 4 - 5 | 5 - 6 |
|---|---|---|---|---|---|---|---|---|
| $t_o$ | 2 | 10 | 8 | 10 | 7 | 9 | 3 | 5 |

| $t_m$ | 4 | 12 | 9 | 15 | 7.5 | 9 | 3.5 | 5 |
|-------|----|----|----|----|-----|---|-----|---|
| $t_p$ | 12 | 26 | 10 | 20 | 11 | 9 | 7 | 5 |

Find the critical path in the above project network and also find the duration of the project.

6.                                                               **(6)**

| Average annual consumption (No.) | 5000 | 4000 | 3000 | 2000 | 1000 |
|----------------------------------|------|------|------|------|------|
| Average cost of consumption (Rs.) | 90 | 125 | 200 | 160 | 130 |

Do the ABC analysis for the given data.

A items : 0-70%, B items : 70-90%, C items : 90-100%

7.  Write a note on Payment Wages Act. **(6)**

8.  Explain the different motivational theories used to manage human resources. **(6)**

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