

June 2016

CONSTRUCTION AND DISASTER MANAGEMENT*Time Allowed: 3 Hours**Full Marks: 70*

Answer to Question No.1 is compulsory and to be answered first.

This answer is to be made in separate loose script(s) provided for the purpose.

Maximum time allowed is 45 minutes, after which the loose answer scripts will be collected and fresh answer scripts for answering the remaining part of the question will be provided.

**On early submission of answer scripts of Question No.1,
a student will get the remaining script earlier.**

Answer any five questions from the rest.

1. Answer any twenty questions:

20x1

Fill in the blanks:

- i) 'PERT' stands for _____.
- ii) 'CPM' is an _____ oriented project network system.
- iii) Dummy activity does not _____ time.
- iv) The longest route covered in project network is known as _____.
- v) All projects must have a beginning and an _____.
- vi) The term 'D/B/B' stands for _____.
- vii) Total Project Cost is the sum of _____ cost and _____ cost.
- viii) _____ time is the minimum possible time in which an activity can be completed, by employing an extra resources.
- ix) Max Weber propounded _____ theory of management.
- x) The intensity of the earthquake is measured on the _____ scale.
- xi) _____ is a commonly used control chart.
- xii) Productivity in the construction industry can be broadly defined as the _____ per labour hour.
- xiii) EOQ stands for _____.

Select the suitable alternatives from the following statements:

- xiv) Bureaucracy is effective in (static / dynamic) environment.
- xv) A dummy activity consumes (both time and money / only money / neither time nor money).
- xvi) The (owner / designer / project manager) is the individual or organisation for whom a project is to be built under a contract.
- xvii) An (engineer / architect) is an individual who plans and design buildings and their associated landscaping.
- xviii) Seismic zone (III / IV / V) is the most active zone with the history or likelihood of high intensity quakes.
- xix) (Flood / Drought / Cyclone) is a type of rotating storm that occurs over the oceans and seas near the tropic.
- xx) A (tornado / drought / cyclone) is a situation caused due to an extended period of rain deficiency.
- xxi) (Material / Financial / Human Resource) management is concerned with ensuring that the quantity and quality required, are on the job as per requirement.
- xxii) Reduction of accidents in construction site is one of the objectives of (safety / traffic / communication) policy.

2.

- a) What do you mean by the term project?
- b) Describe the characteristics of a project.
- c) Explain the Project Manager's role.

2+3+5

3. a) Describe the advantage of Construction Management Method. 5+5
 b) Explain the different phases of construction briefly.
4. a) Define the term disaster. 2+3+5
 b) Classify and explain the different categories of disaster.
5. Differentiate the followings – (a) tender and contract, (b) bureaucratic and matrix organisation, (c) line and staff management, and (d) PERT and CPM. <https://www.wbscteonline.com> 2½x4
6. a) What do you mean by Resource Management? 2+8
 b) Explain the necessities of it for utilisation of various resources in a construction project.
7. a) What do you mean by the term risk with respect to disaster management? 2+8
 b) Explain briefly the disaster risk management cycle.
8. Define the terms – (a) hazards, (b) vulnerability, (c) earthquake, and (d) cyclone. 2½x4
9. The three time estimates t_o , t_m and t_p of the following activities of a project are given below:

Activity	t_o (days)	t_m (days)	t_p (days)
1-2	2	5	14
1-3	3	12	21
2-4	5	14	17
3-4	2	5	8
4-5	1	4	7
3-5	6	15	30

- a) Draw the network diagram.
 b) Find the expected duration and variance of each activity.
 c) Calculate the early and late occurrence times for each event.
 d) Determine the expected duration of the project.
 e) Calculate the total float for each activity. 2x5
10. Determine (a) direct cost-duration relationship, and (b) total cost-duration relationship and corresponding least cost plan network for the following data of the various project network activities:

Activity	Normal duration (days)	Normal cost (Rs.)	Crash duration (days)	Crash cost (Rs.)
1-2	9	8000	6	9500
2-3	5	5000	3	5500

The project overhead costs are @ Rs. 300/- per day. 5x2

<https://www.wbscteonline.com>

Whatsapp @ 9300930012

Send your old paper & get 10/-

अपने पुराने पेपर्स भेजे और 10 रुपये पायें,

Paytm or Google Pay से

<https://www.wbscteonline.com>