

Total No. of printed pages = 6

CT-603/C&PM/6th Sem/2018/M

**CONSTRUCTION AND
PROJECT MANAGEMENT**

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks
for the questions.

PART – A

Marks – 25

Question numbers 1(a) to 1(j) carry 1 mark each.

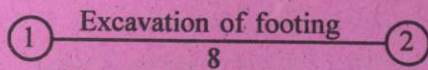
1. Question numbers 1(a) to 1(j) have four options out of which only one option is correct. Choose the correct answer from the available options :

10

- (a) Which one of the following represents an activity ?
- (i) Excavation for foundation
 - (ii) Curing of concrete
 - (iii) Setting of question paper
 - (iv) All of the above.

[Turn over

- (b) In the given figure, the network of a project represents an



- (i) activity of an excavation of a footing
- (ii) activity of an excavation which starts at event No.1 and ends at even No.2
- (iii) activity of excavation which takes 8 units of time
- (iv) None of these.
- (c) Pick up the PERT event from the following :
- (i) Digging of foundation started and completed
- (ii) Laying of concrete started
- (iii) Laying of concrete completed
- (iv) All of the above.

(d) If D is the duration, ES and EF are the earliest start and earliest finish, LS and LF are latest start and latest finish time, then which of the following relation holds good ?

(i) $EF = ES + D$

(ii) $LS = LF - D$

(iii) $LF = LS + D$

(iv) All of the above.

(e) The performance of a specific task in CPM, is known as

(i) Dummy

(ii) Event

(iii) Activity

(iv) Contract.

(f) Completion of an activity on CPM network diagram, is generally known as

(i) Event

(ii) Node

(iii) Connector

(iv) All of the above.

- (g) Bar charts are suitable for
- (i) Minor works
 - (ii) Major works
 - (iii) Large projects
 - (iv) All of the Above.
- (h) Frederick W. Taylor introduced a system of working known as
- (i) Line organisation
 - (ii) Line and staff organisation
 - (iii) Functional organisation
 - (iv) Effective organisation.
- (i) The first stage of a construction, is
- (i) Preparation of estimate
 - (ii) Survey of the site
 - (iii) Initiation of proposal
 - (iv) Preparation of tender

- (j) Pick up the correct statement from the following :
- (i) Forward pass is used for calculating earliest expected time.
 - (ii) Backward pass is used for calculating the latest occurrence time.
 - (iii) Maximum value of earliest expected time is used if there is more than one value of any event.
 - (iv) All of the above.

Question numbers 2(a) to 2(e) carry 3 marks each.

2. Answer the following questions briefly : 15

- (a) Define briefly scientific management and its importance in civil engineering works.
- (b) State the different phases of project management.
- (c) What is cost control ? Explain briefly.
- (d) State the differences between CPM and PERT.
- (e) Define Event, Activity and Critical Path.

PART – B

Marks – 45

Answer *all* questions.

3. Estimate the expected time of each of the following activities from the three time estimates : 15

Sl No.	Activity	Time Estimates in days		
		t_0	t_1	t_p
(i)	Driving precast piles for a bridge abutment	22	30	50
(ii)	Erecting roof trusses for a factory shed	11	14	17
(iii)	Concreting foundation of Turbo-generator	3	$5_{1/4}$	6
(iv)	Fabricating sheet metal AC ducts for an auditorium	12	16	17

4. What are the benefits of good project management? Explain with examples different types of civil engineering projects and their importance.

5+10=15

5. What are the different types of project monitoring reports? Show a format of project schedule chart.

5+10=15