

Code No: R1642012

**R16**

**Set No. 1**

**IV B.Tech II Semester Regular Examinations, September - 2020**  
**CONSTRUCTION TECHNOLOGY AND MANAGEMENT**  
**(Civil Engineering)**

**Time: 3 hours**

**Max. Marks: 70**

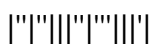
*Question paper consists of Part-A and Part-B*  
*Answer ALL sub questions from Part-A*  
*Answer any FOUR questions from Part-B*  
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**PART-A(14 Marks)**

1. a) What is bar chart? [3]
- b) Define PERT. [2]
- c) Write the capacities of trucks. [2]
- d) Write the purpose of bulldozers. [2]
- e) What are the different types of aggregates? [3]
- f) Write about placing of concrete. [2]

**PART-B(4x14 = 56 Marks)**

2. Briefly explain about (i) equipment management in construction projects.  
(ii) Safety management (iii) Job planning [14]
3. a) Draw a typical cost – duration curve and show on the optimum duration and minimum project Cost. [7]
- b) Explain the method of time –cost optimization of project network. [7]
4. Discuss the role of tractors in earth moving. What considerations govern the selection of wheel type or crawler type tractor on a job? Compare their applications. [14]
5. a) Describe the various applications of a bulldozer. [7]
- b) List any four operations that can be performed by a bull dozer. [7]
6. Discuss any three different types of crushers with neat line sketch and mention parts. [14]
7. a) Discuss importance of safety in construction sites. [7]
- b) State and describe various causes of accidents at the construction site. [7]



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**Set No. 2**

**IV B.Tech II Semester Regular Examinations, April - 2020**  
**CONSTRUCTION TECHNOLOGY AND MANAGEMENT**  
**(Civil Engineering)**

**Time: 3 hours**

**Max. Marks: 70**

*Question paper consists of Part-A and Part-B*

*Answer ALL sub questions from Part-A*

*Answer any FOUR questions from Part-B*

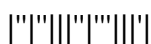
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**PART-A(14 Marks)**

1. a) What are milestone charts? [3]
- b) Write about cost analysis. [2]
- c) Discuss on rear dump trucks. [3]
- d) What are scrapers? [2]
- e) Discuss on finishing of concrete. [2]
- f) Write about form work. [2]

**PART-B(4x14 = 56 Marks)**

2. a) What is a Gantt bar chart? Explain with the help of a suitable example, the method of preparing a bar chart. [7]
- b) Defined 'earliest event time' and 'latest occurrence event time'. How these can be determined? Explain the tabular form for determining these. [7]
3. a) Explain about crashing for optimum cost and crashing for optimum resources. [7]
- b) Write about components of Networks? [7]
4. a) Explain with one example calculation of truck production. [7]
- b) Discuss on different types of compaction rollers. [7]
5. a) Write short notes on following. [7]  
i) Crawler tractor ii) Wheel tractor
- b) What are the uses of power shovels? Describe with neat sketch basic parts and operation of power shovel. [7]
6. a) Briefly explain about batching and mixing equipment. [7]
- b) Discuss about screening of aggregate. [7]
7. a) Explain in detail about quality control and safety engineering. [10]
- b) Discuss about erection. [4]



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**Set No. 3**

**IV B.Tech II Semester Regular Examinations, September - 2020**  
**CONSTRUCTION TECHNOLOGY AND MANAGEMENT**  
**(Civil Engineering)**

**Time: 3 hours**

**Max. Marks: 70**

*Question paper consists of Part-A and Part-B*  
*Answer ALL sub questions from Part-A*  
*Answer any FOUR questions from Part-B*  
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**PART-A(14 Marks)**

1. a) Write a short note on Critical Path Method. [2]
- b) Discuss on allocation of resources. [3]
- c) What are the different types of trucks? [2]
- d) Write the purpose of impact crushers. [3]
- e) What are the different concrete mixers? [2]
- f) What is fabrication? [2]

**PART-B(4x14 = 56 Marks)**

2. a) Describe PERT and CPM? [7]
- b) What are the different types of floats involved in CPM? [7]

3. A building project consists of 10 activities represented by the network shown. The normal duration represented to perform various activities of the above project are given in table below. Compute i) Event times ii) Activity times iii) total float. Also determine the critical path.

Activity	Estimated Duration	Activity	Estimated Duration
A	5	F	2
B	2	G	3
C	6	H	8
D	4	I	7
E	4	J	2

[14]

4. a) What are the factors influencing selection of equipment? [7]
- b) Explain about Earth movers and equipment used for erection of structures. [7]
5. a) Draw a neat sketch of a crawler mounted bulldozer and show various parts. [7]
- b) Discuss factors affecting output of a drag line. [7]
6. Discuss about the following [14]  
(i) Screening equipment (ii) Crushers (iii) Handling equipment.
7. a) What is piling? Explain different types of piles. [7]
- b) Explain about driven piles. [7]



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**Set No. 4**

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**CONSTRUCTION TECHNOLOGY AND MANAGEMENT**  
**(Civil Engineering)**

**Time: 3 hours**

**Max. Marks: 70**

*Question paper consists of Part-A and Part-B*  
*Answer ALL sub questions from Part-A*  
*Answer any FOUR questions from Part-B*

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**PART-A(14 Marks)**

1. a) What is scheduling? [3]
- b) Discuss on updating. [2]
- c) Write the different earthwork equipment. [2]
- d) Write about hoists. [2]
- e) Discuss about gyratory crushers. [3]
- f) Write about placing of concrete. [2]

**PART-B(4x14 = 56 Marks)**

2. a) What do you understand by 'earliest start time' and 'latest start time of an activity'? How are these determined? [7]
- b) Discuss about monitoring and controlling in project planning. [7]
3. a) What are different elements present in PERT network and explain with an example. [7]
- b) What is probability of achieving project targets? [7]
4. a) Discuss on economic considerations. [7]
- b) Write different compaction equipment and their capacities. [7]
5. Write short notes and merits of  
a) Tractors  
b) Motors  
c) Graders [14]
6. a) What are the various factors affecting while selecting construction equipments. [7]
- b) Explain in detail about gyratory crushers. [7]
7. Explain the different Construction methods with applications, merits and demerits. [14]

