

**B.TECH. SEM -IV (CIVIL ) 2014 COURSE (CBCS) : SUMMER -  
2018**

**SUBJECT: CONSTRUCTION TECHNIQUES & MACHINERY**

Day: **Saturday**  
Date: **09/06/2018**

**S-2018-2279**

Time: **10.00 AM TO 01.00 PM**  
Max. Marks: 60

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.
- 4) Assume suitable data if necessary.

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**Q.1** Explain the necessity of mechanization in construction industry. (10)

**OR**

**Q.1** Write a note on following points in respect of high rise structures: (10)  
i) Necessity ii) Advantages  
iii) Disadvantages iv) Limitations

**Q.2** "Type of coffer dam depends upon types of ground conditions, velocity of water, depth of water and availability of equipment". Explain above statement with suitable illustration. (10)

**OR**

**Q.2** a) Compare advantages of bored piles with driven piles. (05)  
b) State measures to be taken to reduce negative skin friction. (05)

**Q.3** State the method of tunneling that you would recommend under following conditions: (10)  
i) Hydroelectric project with hard strata  
ii) Sewage disposal tunnel in urban area with hard strata.

**OR**

**Q.3** Explain with sketches any one of the following method used for shotcreting : (10)  
i) Wire mesh ii) Fiber glass iii) Dry concrete

**Q.4** Draw line diagram of any one of the following stating the factors affecting the selection of the same: (10)  
i) Dragline ii) Scrapper iii) Backhoe

**OR**

**Q.4** Make a list of various equipments required for construction of Road for removing and compacting of earth. Explain any one in detail. (10)

**Q.5** State any four conditions under which tower cranes and crawler cranes are advantageous. (10)

**OR**

**Q.5** Make a list of different types of conveyors and explain any one with suitable sketch. (10)

**Q.6** Explain following statement with suitable graph "type of dewatering technique depends upon type of subsoil, velocity of water, depth of water and soil permeability". Give examples. (10)

**OR**

**Q.6** Write short notes on any **TWO** of the following: (10)  
i) Well point system ii) Slip form pavers iii) Pumps for concreting

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