

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2018 - 19 Examination

Semester: 4
Subject Code: 03104254
Subject Name: Construction Techniques

Date:06/05/2019
Time:02:00pm to 04:30pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Fill in the blanks**(15)**

1. What is the size of modular brick with mortar? ____ cm x ____ cm x ____ cm
2. Which type of formwork will be used for the construction which can climb by itself?

3. Which method uses anode and cathode for dewatering in excavation? _____

4. Rippers are used in bulldozer for breaking _____

5. Pile foundation is used where soil bearing capacity is _____

One Word Answer

6. A mould with all supporting structures used to shape and support the concrete until it attains sufficient strength to carry its own weight is called?

7. Which kind of walls are underground structural elements commonly used for retention systems and permanent foundation walls.

8. Outer curve or surface of the arch is called as?

Very Short Answer

9. List types of coffer dam?

10. List methods of demolition?

11. List any four construction equipments?

12. List any three method of dewatering during excavation?

Multiple Choice Question

13. The 9 cm x 9 cm side of a brick as seen in the wall face, is generally known as _____

- (a) Stretcher (b) Front (c) Face (d) Header

14. Black cotton soil is unsuitable for foundations because it's _____.

- (a) Bearing capacity is low (b) Permeability is uncertain (c) Particles are non-cohesive (d) All of the above

15. _____ method is a demolition technique.

- (a) Racking ball (b) Well point (c) Electro osmosis (d) Vibro flotation

Q.2 Answer the following questions. (Attempt any three)**(15)**

A) Briefly explain types of caissons?

B) Explain factors effecting selection of cranes?

C) Explain Well Point method with neat sketch?

D) Explain the concept of Arch. Show the parts of Arch with a neat sketch

Q.3 A) Explain factors affecting design of coffer dam?**(07)**

B) State the purpose of caissons and briefly describe various type of Caissons in brief?

(08)**OR**

B) State the purpose of providing form work. What are the requirements for The good formwork?

(08)**Q.4 A) What are the points to be considered before and during demolition of a Structure?****(07)****OR**

A) List type of earthwork equipment? Explain any three equipment?

(07)

B) Enlist various types of coffer dam? Explain any two?

(08)