



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

SUMMER-2024	
Exam Seat No.:	
Academic Year:2023-2024	Semester:II
Class:FY	Program:B.Tech
Branch Code:CIV	Pattern:2023
Name of Course:Introduction to Civil Engineering	Course Code:2300118C
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains THREE pages.
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Question No. 1 Attempt following Question

- 1 Explain in brief the general role of civil engineer in any construction work (6) CO1

Question No. 2 Attempt following Question

- 2 Explain the importance of Environmental Engineering in day to day life (6) CO1

Question No. 3 Attempt following Question

- 3.a) What are the various qualities of first class bricks used in construction (6) CO2

OR

- 3.b) What are the different types of steels used in construction? (6) CO2

Explain any one in detail

- 3.c) Explain the following materials and list their uses in building construction: (6) CO2

1. Cement 2. Stone

OR

- 3.d) Explain the following materials and list their uses in building construction: (6) CO2

1. Natural Sand 2. Aggregates

- 3.e) Explain in brief the importance of Artificial sand (4) CO2

OR

- 3.f) Explain in brief the various types of concretes. (4) CO2

Question No. 4 Attempt following Question

- 4.a) Define Foundation. Also state the various purpose of providing foundation (6) CO2

OR

- 4.b) Define Bearing Capacity of soil. Discuss in brief about Safe Bearing Capacity and Ultimate Bearing Capacity.? (6) CO2

- 4.c) Explain with a neat sketch the following: (6) CO2

1. Friction Pile 2. End Bearing Pile 3. Cantilever Footing

OR

- 4.d) Explain with a neat sketch the following: (6) CO2

1. Combined Footing 2. Raft Foundation 3. Friction Pile

- 4.e) Discuss in brief the various types of loads acting on the structure (4) CO2

OR

- 4.f) Discuss in brief the merits of framed structures. (4) CO2

Question No. 5 Attempt following Question

- 5.a) Explain in brief the following principles of planning: (6) CO3

1. Elegance 2. Prospect

OR

- 5.b) Explain how privacy of a residential building is achieved from the outside and among the various rooms within the building (6) CO3

- 5.c) Calculate the total area of the plot of the building from the following data: (6) CO3

(i) Building is two storeyed

(ii) Total carpet area is 100 m²

(iii) Carpet area is 0.5 times built up area.

(iv) The carpet area is same for each floor

(v) F.S.I. = 1.0

OR

- 5.d) A rectangular plot measures 20 x 35 m. The front and rear spacing is 3 m and side margin is 1.5 m. Permissible FSI is 1.45 and G + 1 storeyed building is to be constructed to consume full FSI. Determine the area on each storey. (6) CO3

- 5.e) State the different considerations for selection of a site for a residential building. (4) CO3

OR

- 5.f) State the list of important documents to be submitted to the competent authority for sanction of building plan (4) CO3

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