



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:IV
Class:SY	Program:B.Tech
Branch Code:CIV	Pattern:2022
Name of Course:Earth Sciences	Course Code:CIV222015
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 2 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 the processes involved in the formation of metamorphic rocks. (6) CO1, CO3

Question No. 2 Attempt following Question

- 2 How are rocks faulted? Describe various types and parts of a fault. (6) CO2, CO3

Question No. 3 Attempt following Question

- 3.a) Define endogenic processes in geology and provide two examples. (6) CO2, CO3

OR

- 3.b) Explain the processes of erosion, transportation, and deposition by rivers. (6) CO2, CO3

- 3.c) Define volcanism and describe the types of volcanic eruptions. (5) CO2, CO3

OR

- 3.d) How does the Indian Geological Time Scale differ from the global scale? (5) CO2, CO3

- 3.e) Define stratigraphy and its significance in geological studies. (5) CO2, CO3

OR

- 3.f) Explain the causes of earthquakes and the types of seismic waves they generate. (5) CO2, CO3

Question No. 4 Attempt following Question

- 4.a) Differentiate between surface and subsurface geological investigations. (6) CO4, CO5

OR

- 4.b) Explain the purpose of core drilling in geological investigations. (6) CO4, CO5

- 4.c) Define artificial recharge of groundwater. (5) CO4, CO5

OR

- 4.d) What factors influence the size of a cone of depression? (5) CO4, CO5

- 4.e) What are the geological impacts of dam construction? (5) CO4, CO5

OR

- 4.f) Differentiate between confined and unconfined aquifers. (5) CO4, CO5

Question No. 5 Attempt following Question

- 5.a) How do geological conditions influence the choice and type of foundation for a structure? (6) CO2, CO4, CO5

OR

- 5.b) Discuss the importance of geological investigations in dam site selection. (6) CO2, CO4, CO5

- 5.c) Define the term "preliminary geological investigations" in the context of tunneling. (5) CO2, CO4, CO5

OR

- 5.d) Explain the importance of durability in building stone selection. (5) CO2, CO4, CO5

- 5.e) How does groundwater influence excavation and tunneling operations? (5) CO2, CO4, CO5

OR

- 5.f) Explain the importance of assessing geological hazards during preliminary geological work. (5) CO2, CO4, CO5

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