

GATE 2026 CH Question Paper

Time Allowed :3 Hour	Maximum Marks :100	Total Questions :65
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General Instructions

Please read the following instructions carefully:

1. This question paper is divided into three sections:
 - **General Aptitude (GA):** 10 questions (5 questions \times 1 mark + 5 questions \times 2 marks) for a total of 15 marks.
 - **Environmental Science and Engineering + Engineering Mathematics:**
 - **Part A (Mandatory):** 36 questions (1 questions \times 1 mark + 19 questions \times 2 marks) for a total of 55 marks.
 - **Part B (Section 1):** Candidates can choose either Part B1 (Surveying and Mapping) or Part B2 (Section 2). Each part contains 16 questions (8 questions \times 1 mark + 11 questions \times 2 marks) for a total of 30 marks.
2. The total number of questions is **65**, carrying a maximum of **100 marks**.
3. The duration of the exam is **3 hours**.
4. Marking scheme:
 - For 1-mark MCQs, $\frac{1}{3}$ mark will be deducted for every incorrect response.
 - For 2-mark MCQs, $\frac{2}{3}$ mark will be deducted for every incorrect response.
 - No negative marking for numerical answer type (NAT) questions.
 - No marks will be awarded for unanswered questions.
5. Ensure you attempt questions only from the optional section (Part B1 or Part B2) you have selected.
6. Follow the instructions provided during the exam for submitting your answers.

1. For a first-order irreversible reaction carried out in a batch reactor, the rate of reaction is proportional to:

- (A) Square of concentration
 - (B) Concentration of reactant
 - (C) Inverse of concentration
 - (D) Product concentration
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2. Which law is used to describe steady-state diffusion in gases?

- (A) Henry's law
 - (B) Raoult's law
 - (C) Fick's first law
 - (D) Dalton's law
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3. Flow is said to be laminar when the Reynolds number is:

- (A) Less than 1000
 - (B) Less than 2000
 - (C) Between 2000 and 4000
 - (D) Greater than 4000
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4. Which mode of heat transfer is dominant in vacuum?

- (A) Conduction
 - (B) Convection
 - (C) Radiation
 - (D) All are equal
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5. For an ideal gas, internal energy is a function of:

- (A) Pressure only
 - (B) Volume only
 - (C) Temperature only
 - (D) Pressure and volume
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6. In distillation, relative volatility is a measure of:

- (A) Heat transfer rate
 - (B) Ease of separation of components
 - (C) Vapor pressure of a mixture
 - (D) Column efficiency
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7. A PID controller consists of:

- (A) Proportional and Integral actions
 - (B) Proportional and Derivative actions
 - (C) Integral and Derivative actions
 - (D) Proportional, Integral and Derivative actions
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