

Practice Questions for GATE 2024 General Aptitude

Question 1: In 2022, June Huh was awarded the Fields Medal, which is the highest prize in Mathematics. When he was younger, he was also a poet. He did not win any medals in the International Mathematics Olympiads. He dropped out of college. Based only on the above information, which one of the following statements can be logically inferred with certainty?

- (A) Every Field medalist has won a medal in an International Mathematics Olympiad.
- (B) Everyone who has dropped out of college has won the Fields medal.
- (C) All Fields medalists are part-time poets.
- (D) Some Fields medalists have dropped out of college.

Question 2: You are delaying the completion of the task. Send _____ contributions at the earliest.”

- (A) you are
- (B) your
- (C) you're
- (D) yore

Question 3: References : _____ : : Guidelines : Implement (By word meaning)

- (A) Sight
- (B) Site
- (C) Cite
- (D) Plagiarise

Question 4: To construct a wall, sand, and cement are mixed in a ratio of 3:1. The cost of sand and of cement are in the ratio of 1:2. If the total cost of sand and cement to construct the wall is 1000 rupees, then what is the cost (in rupees) of cement used?

- (A) 400
- (B) 600
- (C) 800
- (D) 200

Question 5: In a two-dimensional potential flow, the doublet is a limit of the superposition of

- (A) a uniform stream and a source
- (B) a source and a sink of equal strength
- (C) a uniform stream and a sink
- (D) a source and a vortex

Question 6: Human beings are one among many creatures that inhabit an imagined world. In this imagined world, some creatures are cruel. If in this imagined world, it is given that the statement "Some human beings are not cruel creatures" is FALSE, then which of the following set of the statement(s) can be logically inferred with certainty?

- (i) All human beings are cruel creatures.
- (ii) Some human beings are cruel creatures.
- (iii) Some creatures that are cruel are human beings.
- (iv) No human beings are cruel creatures.

Options:

- (A) only (i)
- (B) only (iii) and (iv)
- (C) only (i) and (ii)
- (D) (i), (ii) and (iii)

Question 7: For a stage of a 50% reaction ideal axial flow compressor (symmetrical blading), select the correct statement from the options given.

- (A) The stagnation enthalpy rise across the rotor is 50% of the rise across the stage.
- (B) The static enthalpy rise across the rotor is 50% of the rise across the stage.
- (C) Axial velocity component of the flow at the rotor exit is 50% of that at the rotor entry.
- (D) The static pressure rise across the rotor is 50% of the rise across the stator

Question 8: Which of the following statement(s) is/are true about the harmonically excited forced vibration of a single-degree-of-freedom linear spring-mass-damper system?

- (A) The total response of the mass is a combination of free vibration transient and steady-state response.

- (B) The free vibration transient dies out with time for each of the three possible conditions of damping (under-damped, critically damped, and over-damped).*
- (C) The steady-state periodic response is dependent on the initial conditions at the time of application of external forcing.*
- (D) The rate of decay of free vibration transient response depends on the mass, spring stiffness, and damping constant.*

Question 9: Which of the following statement(s) is/are true about the state of stress in a plane?

- (A) Maximum or major principal stress is algebraically the largest direct stress at a point.*
- (B) The magnitude of minor principal stress cannot be greater than the magnitude of major principal stress.*
- (C) The planes of maximum shear stress are inclined at 90 degrees to the principal axes.*
- (D) The normal stresses along the planes of maximum shear stress are equal.*