

# 1 ELECTROSTATIC FIELD IN FREE SPACE

## 1.1 Coulomb's Law

CONCEPTUAL QUESTION 1.1 Correct Answer: (B)

CONCEPTUAL QUESTION 1.2 Correct Answer: (C)

## 1.2 Electric Field Intensity Vector Due to Given Charge Distributions

CONCEPTUAL QUESTION 1.3 Correct Answer: (F)

CONCEPTUAL QUESTION 1.4 Correct Answer: (B)

CONCEPTUAL QUESTION 1.5 Correct Answer: (B)

CONCEPTUAL QUESTION 1.6 Correct Answer: (E)

CONCEPTUAL QUESTION 1.7 Correct Answer: (A)

## 1.3 Electric Scalar Potential

CONCEPTUAL QUESTION 1.8 Correct Answer: (A)

CONCEPTUAL QUESTION 1.9 Correct Answer: (C)

CONCEPTUAL QUESTION 1.10 Correct Answer: (E)

CONCEPTUAL QUESTION 1.11 Correct Answer: (E)

CONCEPTUAL QUESTION 1.12 Correct Answer: (D)

## 1.4 Differential Relationship between Field and Potential in Electrostatics, Gradient

**CONCEPTUAL QUESTION 1.13** Correct Answer: (C)

**CONCEPTUAL QUESTION 1.14** Correct Answer: (D)

**CONCEPTUAL QUESTION 1.15** Correct Answer: (A)

**CONCEPTUAL QUESTION 1.16** Correct Answer: (C)

**CONCEPTUAL QUESTION 1.17** Correct Answer: (D)

## 1.5 Gauss' Law in Integral Form

**CONCEPTUAL QUESTION 1.18** Correct Answer: (C)

**CONCEPTUAL QUESTION 1.19** Correct Answer: (E)

**CONCEPTUAL QUESTION 1.20** Correct Answer: (D)

**CONCEPTUAL QUESTION 1.21** Correct Answer: (C)

**CONCEPTUAL QUESTION 1.22** Correct Answer: (B)

**CONCEPTUAL QUESTION 1.23** Correct Answer: (A)

**CONCEPTUAL QUESTION 1.24** Correct Answer: (B)

## 1.6 Differential Form of Gauss' Law, Divergence

**CONCEPTUAL QUESTION 1.25** Correct Answer: (B)

**CONCEPTUAL QUESTION 1.26** Correct Answer: (A)

## 1.7 Conductors in the Electrostatic Field

**CONCEPTUAL QUESTION 1.27** Correct Answer: (C)

**CONCEPTUAL QUESTION 1.28** Correct Answer: (A)

**CONCEPTUAL QUESTION 1.29** Correct Answer: (E)

## 1.8 Electrostatic Shielding

**CONCEPTUAL QUESTION 1.30** Correct Answer: (B)

**CONCEPTUAL QUESTION 1.31** Correct Answer: (B)

## 1.9 Charge Distribution on Metallic Bodies of Arbitrary Shapes

**CONCEPTUAL QUESTION 1.32** Correct Answer: (A)

**CONCEPTUAL QUESTION 1.33** Correct Answer: (C)

**CONCEPTUAL QUESTION 1.34** Correct Answer: (C)

## 1.10 Image Theory

**CONCEPTUAL QUESTION 1.35** Correct Answer: (A)

**CONCEPTUAL QUESTION 1.36** Correct Answer: (B)

**CONCEPTUAL QUESTION 1.37** Correct Answer: (A)

## 2 ELECTROSTATIC FIELD IN DIELECTRICS

### 2.1 Polarization of Dielectrics

CONCEPTUAL QUESTION 2.1	Correct Answer: (C)
CONCEPTUAL QUESTION 2.2	Correct Answer: (B)
CONCEPTUAL QUESTION 2.3	Correct Answer: (A)
CONCEPTUAL QUESTION 2.4	Correct Answer: (B)
CONCEPTUAL QUESTION 2.5	Correct Answer: (B)
CONCEPTUAL QUESTION 2.6	Correct Answer: (D)
CONCEPTUAL QUESTION 2.7	Correct Answer: (B)
CONCEPTUAL QUESTION 2.8	Correct Answer: (A)
CONCEPTUAL QUESTION 2.9	Correct Answer: (B)
CONCEPTUAL QUESTION 2.10	Correct Answer: (D)
CONCEPTUAL QUESTION 2.11	Correct Answer: (C)
CONCEPTUAL QUESTION 2.12	Correct Answer: (B)

### 2.2 Generalized Gauss' Law and Permittivity

CONCEPTUAL QUESTION 2.13	Correct Answer: (D)
CONCEPTUAL QUESTION 2.14	Correct Answer: (C)
CONCEPTUAL QUESTION 2.15	Correct Answer: (E)
CONCEPTUAL QUESTION 2.16	Correct Answer: (A)
CONCEPTUAL QUESTION 2.17	Correct Answer: (D)
CONCEPTUAL QUESTION 2.18	Correct Answer: (D)
CONCEPTUAL QUESTION 2.19	Correct Answer: (A)
CONCEPTUAL QUESTION 2.20	Correct Answer: (D)