



Padalsalai's Telegram Groups!

(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

- **Padalsalai's NEWS - Group**
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- **Padalsalai's Channel - Group**
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- **Lesson Plan - Group**
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- **12th Standard - Group**
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- **11th Standard - Group**
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- **10th Standard - Group**
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- **9th Standard - Group**
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- **6th to 8th Standard - Group**
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- **1st to 5th Standard - Group**
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- **TET - Group**
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- **PGTRB - Group**
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- **TNPSC - Group**
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MODEL TEST QUESTION PAPER - 2019

FIRST UNIT - PHYSICS - ELCTROSTATICS

state Board - Tamilnadu (new syllabus)

STD- 12

SECTION - A

Total mark : 70

choose the correct answer

15 x 1 = 15

1. The relative permittivity air is

- a) 1 b) >1 c) <1 d) 0

2. The gravitational force between masses is independent of the medium

- a) 1 b) 2 c) 3 d) 4

3. coulomb's law has same structure as law of gravitation

- a) coulomb's b) Newton's
c) Gravitational d) All the above

4. The superposition principle explains the interaction between charge

- a) single b) double c) three d) multiple

5. The interaction between two charges is determined by law

- a) coulomb's b) Newton's c) Gravitational d) Gauss's

6. The electric field created by a point charge is basically electric field

- a) uniform b) non uniform c) both a & b d) none of the above

7. An isolated positive point charge the electric field line starts from the charge and ends only at

- a) positive charge b) Negative charge c) infinity d) 0

8. The water molecule has atoms

- a) 1 b) 2 c) 3 d) 0

9. The total torque on the dipole using law.....

- a) Fleming's left b) Fleming's right c) Right hand corkscrew rule d) coulomb's

10. Microwave oven works on the principle of acting on an electric diople

- a) Torque b) inertia c) Electrostatics induction d) Action of points
11. The conservative force like
- a) Gravitational force b) coulomb's force
c) Electrostatic force d) Normal force
12. The total electric flux over a closed surface can be
- a) positive b) Negative c) zero d) All the above
13. Gauss's law is another form.....
- a) coulomb's b) Gauss's c) Ohm's d) Magnetostatic law
14. The electric field is every where inside the conductor
- a) 0 b) maximum c) minimum d) All the above
15. computer keyboard keys are constructed using
- a) capacitor b) inductor c) Resistance d) All the above

SECTION - B (6 x 2 = 12)

Answer any SIX question .but compulsory question no . 24

16. write basic properties of electric charge
17. state coulomb's law
18. write torque condition ,
- (i) zero
(ii) maximum
(iii) minimum
19. what is Gaussian surface
20. what is Electrostatic induction
21. what is flash capacitor
22. what is fringing field
23. Define action of point

24. Uses of Lightning arrestor

SECTION - C (6 X 3 = 18)

Answer any SIX question .but compulsory question no . 34

25. calculate the number of electrons in one coulomb of negative charge

26. what is conservation of charge

27. Define one coulomb

28. Difference between series and parallel connection capacitor

29. Different shape of capacitors

30. write Dielectric strength values In,

(i) mica (ii) paper (iii) pyrex glass

31. what is Electrical susceptibility

32. The electric field inside the charged spherical shell is zero why ?

33. Draw the diagram for electric flux following condition

(i) Electric flux = EA

(ii) Electric flux = 0

SECTION - C (5 X 5 = 25)

Answer ALL questions

34 a) Explain

The electrostatics force obeys Newton's third law why ? Reason

(OR)

b) Derive superposition principle

35 a) Draw diagram

(i) uniform electric field

(ii) non uniform electric field

(OR)

b) write electric dipole properties any five points

36. a) Explain electric flux for uniform electric field

(OR)

b) Derive Electric field due to charged infinite plane sheet

37 a) write application of capacitors

(OR)

b) Explain induced electric field inside the dielectric

38 .a) Explain capacitors

(OR)

b) Derive distribution of charge in a conductor

..... ALL THE BEST

prepared by

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PHYSICS

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