

G Pullaiah College of Engineering & Technology
Electrical & Electronics Engineering

SET-1

II B.Tech – II Sem-I Mid Exam

Sub: Electromagnetic fields Date : 06-03-2018 Max.Marks =10

Roll Number _____ Invigilator Signature _____

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- 1 What are the units of force _____ []
(a) Newton's (b) Watt's (c) Amperes (d) Volts
 - 2 What are the units of line charge density _____ []
(a) C/m (b) C/m² (c) C/m³ (d) C/m⁴
 - 3 What is the relative permittivity of the air _____ []
(a) 1 (b) 10 (c) 100 (d) Infinity
 - 4 Electric field intensity is defined as _____ []
(a) F/D (b) Q/F (c) F/Q (d) D/F
 - 5 Electric flux density is defined as _____ []
(a) F/D (b) Q/A (c) F/Q (d) D/Q

6. State divergence theorem _____

7. Write capacitance of a parallel plate capacitor _____

8. Define Current density _____

9. Define Electric flux _____

10. Write continuity equation of the current _____

11. Gauss's Law [] a) Force
12. Continuity Equation [] b) Conservation of Charge
13. Electrical Potential [] c) Work done
14. Coulomb's Law [] d) $\frac{1}{2} CV^2$
15. Capacitance [] e) Battery Charger

16. Find out capacitance if two capacitors of 2 F, 5 F are connected in series _____

17. Write differential volume equation in Cartesian coordinate systems _____

18. What are the units of dipole moment _____

19. NaCl is a polar dielectrics (TRUE / FALSE) _____

20. Polarization is defined as dipole moment per unit surface area (TRUE / FALSE) _____