Code: 1G234 II B.Tech. I Semester Supplementary Examinations August 2021 Electric Magnetic Fields (Electrical and Electronics Engineering) Time: 3 Hours Max. Marks: 70 Time: 3 Hours Answer any five questions All Questions carry equal marks (14 Marks each) Time: 3 Hours 1. a) Derive and explain Maxwell's first equation. Time: 3 Hours b) List out any two application of gauss's law. Time: 3 Hours 2. a) Find the work done in a moving a point charge q from a to b along radial path centered at line charge density C/m. Time: 3 Hours b) Derive the relation between E and V State and prove the conditions at the boundary between two dielectrics. b) Derive point form of ohms law. A) a) Derive the MFI at center of the square carrying a current of I having side of the square is a meter. b) Explain the relationship between Magnetic flux, Magnetic flux density and MFI 5. a) Using Ampere's law Determine the magnetic field intensity of coaxial cable b) List out limitation of Ampere's circuital law. 6. a) Derive an expression for the force between parallel wire carrying current in the same direction. b) Express on Magnetic dipole and magnetic dipole moment 7. a) Describe the classification of magnetic materials with examples. b) A toroid has 600 turns of coil, circular cross section of 6cm ² and a mean diameter of 38cm. The permeabi	Γ	Hall	Ticket Number :)]		
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to the Magnetic field which weighs at a rate of 2wb/m ² sec. Estimate emf induced in the loop.		b)	to the Magnetic field	•	•		t a ra	ate of	•					-	6M