Bharati Vidyapeeth's College Of Engineering For Women

Department of Electronics & Telecommunication Engineering

ELECTROMAGNETIC WAVES & RADIATION SYSTEMS

CLASS TEST-I

[2009- 10]

Max. Marks-20 **Time- 1Hrs**

Q.1 Define Electric Field Intensity, Derive expression for E using coulombs law of forces. **[6-Marks]**

Q.2 State & explain Divergence theorem, also find divergence of D due to point charge. **[6-Marks]**

Q.3 State & prove Guass's law, explain application of Gauss's law **[6-Marks]**

Q.4 Write a short note on **[8-Marks]**

1. Biot-Savart law
2. Electric Flux Density

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CLASS TEST-II

[2009-10]

Max. Marks-20 **Time- 1Hrs**

Q.1. Explain the following parameters of antenna **[10-Marks]**

a. Radiation pattern

b. Antenna efficiency

c. Directivity

d. Beam width

Q.2 Write a short note on any three **[15-Marks]**

a. Antenna Feeding techniques

b. Yagi-uda antenna

c. Helical antenna

d. End-fire array

e. Antenna polarization

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ELECTROMAGNETIC WAVES & RADIATION SYSTEMS

CLASS TEST-I

[2008-09]

Max. Marks-25 **Time- 1Hrs**

Q.1 Solve any two of the followings

1] Define Electric Field Intensity, Derive expression for E using coulombs law of forces. **[8-Marks]**

2] State & prove Divergence theorem, with the help of Gauss's law with respect to an electrostatic field **[8-Marks]**

3] Justify that the total flux crossing through a closed surface in a magnetic field must be zero. Write the maxwell's equation which represent this statement. Also write the dual to this equation in electric field and displacement flux

[8-Marks]

Q.2 Solve any two of the followings

1] State & prove Guass's law **[4-Marks]**

2] Define potential and potential difference. Derive the expression for potential difference due to infinite line charge **[4-Marks]**

3] State & explain Stokes theorem **[5-Marks]**

BHARATI VIDYAPEETH COLLEGE OF ENGINEERING FOR WOMEN ,PUNE

TE-I(E & TC) - (2009-10 SEM II)

UNIT TEST-II

SUB: EWRS **MARKS:30** **TIME:1 hr**

Q.1) Explain the following parameters of antennas 15M

a)Radiation pattern

b)Antenna efficiency

c)Directivity

d)Beam width

Q.2) Write a short note on any three: 15M

a) Antenna feeding techniques

b) Yagi- Uda antenna

c) Helical antenna

d) End-Fire Array

e) Antenna polarization

BHARATI VIDYAPEETH COLLEGE OF ENGINEERING FOR WOMEN ,PUNE

TE-I(E & TC) - (2009-10 SEM II)

UNIT TEST-I

SUB: EWRS **MARKS:30** **TIME:1 hr**

Q.1) A)What are charge distribution .derive an expression of electric field intensity due to surface charge 10M

Q.2) a)Explain application of Gauss's low in detail due to point charge 10M

OR

Q.3)the point charge q1= 10^{-6} c,q2= - 10^{-6} c and q3= 0.5 * 10^{-6} c are located in air at the corners of the equilateral tringle of 50 cm side.Determine the magnitude and direction of the force on q3. 10m

Q.3) a) State and explain Coulombs low. 10m