Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: 2020-21 TYBTech	**School of Technology**	**Department: ECE**
Course Code: ECE 305	**Course Title: Electromagnetic Field Theory**	**Semester : V**
Day :Monday Date:21.12.2020	**End Semester Examination**	**Time:2 Hrs. Max Marks:50**

Instructions: 1) All Questions are compulsory.

		Marks	**Bloom's Level**	**CO**
Q.1	**Answer the following (Any Two)**–			
a)	Elaborate definitions of Divergence and Curl. Write del operator expansion for them in three coordinate systems.	8	L3	1
b)	State Gauss law. Derive it in point form.	8	L2	2
c)	For vec. D = $2xy\,i + x^2\,j$ c/m^2 and $0 \leq x \geq 1$, $0 \leq y \geq 2$, $0 \leq z \geq 3$ boundary condition prove divergence theorem.	8	L4	3
Q.2	**Answer the following (Any two) –**			
a)	Derive boundary conditions for two dielectric materials.	8	L4	4
b)	Explain is current density? Write its types. Also derive current continuity equation.	8	L2	4
c)	Derive magnetic field intensity due to infinite conductor placed along z-axis?	8	L4	3
Q.3	**Answer the following (Any two) –**			
a)	Derive transmission line equation.	9	L4	2
b)	Explain Smith chart? Write applications of smith chart.	9	L5	1
c)	Explain Electromagnetic wave with neat diagram? Write equation which governs EM wave?	9	L3	3

*****