

Gr. No. \_\_\_\_\_

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2019

Ph.D. 1<sup>st</sup> Semester

COURSE CODE: 18M1WEC831

MAX. MARKS: 25

COURSE NAME: Computational Electromagnetics

COURSE CREDITS: 3

MAX. TIME: 1.5 Hrs

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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1. Explain forward, backward and central differencing in FDM. [CO-2; 5 Marks]
2. Explain in detail the meaning of Accuracy, Dispersion and Absorbing boundary conditions in FDM? [CO-2,4; 5 Marks]
3. What are Maxwell PDE systems and Maxwell EITL systems? [CO-2,3; 5 Marks]
4. Explain direct and indirect variational methods? [CO-3; 3 Marks]
5. Derive the expressions of electric and magnetic components of TE modes in circular waveguides. [CO-2; 5 Marks]
6. Derive the expression for cut off frequency in rectangular waveguides. [CO-4; 2 Marks]