

1st Sessional of Microwave Engineering (Electronics & Comm. GNDIT-2019)

In this post, I have uploaded the 1st Sessional of Microwave Engineering. This Sessional is for the students of Diploma in Electronics and Communication Engineering. This Sessional Paper appeared in 2019th internal examination in Guru Nanak Dev Institute of Technology, college. This Question Paper is prepared by the teachers of Guru Nanak Dev Institute of Technology. I hope you will find this post useful ☐

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Write your Roll No..... G.N.D.I.T, Rohini Sec- 15
Ist Sess. Electronics & Communication Deptt. (Evening shift) ECE-5th Sem
M.M. -20 EDiploma.Club Subject- Microwave Engg. EDiploma.Club Duration- 1.30 Hours

Part A

(1×4)

All questions are compulsory:-

- 4) X band frequency range fromtoGhz.
- 5) What is dominant mode?
- 6) Waveguide work asfilter.
- 4) What is means by m & n in TE_{mn}

Part B

(2×2)

Attempt any two questions:-

- 4) Draw the field pattern of TE_{10} mode.
- 5) What is Gauss law? Find the electric field intensity E, given data $F=20\text{ N}$ & $Q=2\text{nC}$
- 6) Why TEM mode does not exist in rectangular Waveguide?

Part C

(4×3)

Attempt any three questions:-

- 5) Explain the advantage & application of microwave.
- 6) Write a Maxwell's equation in integral form.
- 7) What is skin effect? Explain the pointing vector.
- 8) An air filled rectangular waveguide has dimensions $a = 6\text{ cm}$, $b = 4\text{ cm}$. The signal frequency is 6 Ghz. Compute the following for TE_{10} mode
(i) Cut off frequency (ii) phase constant β (iii) phase velocity (iv) wave impedance

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