

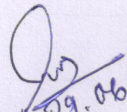


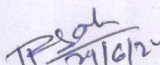
GIET POLYTECHNIC, JAGATPUR, CUTTACK

LESSON PLAN

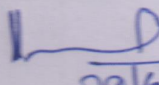
| Discipline: ETC | Semester: 5 th | Name Of The Teaching Faculty: SUDIPTA KUMAR DAS |
|-------------------------|---|---|
| Subject: W.P AND BCE | No. Of Days Per Week Class Allotted: 04 P | Semester From Date: 01.07.2024 To Date: 08.11.2024 No. of weeks: 15 |
| Week | Class Day | Theory Topic |
| 1 st week | 1 st | ➤ UNIT-1: 1.1: Effect of environment such as reflection,refraction and interference |
| | 2 nd | ➤ 1.1: Diffraction ,Absorption and Attenuation |
| | 3 rd | ➤ 1.2: Classification based on modes of propagation-Ground wave, ionosphere and sky wave propagation |
| | 4 th | ➤ 1.3: Definition-critical frequency,maximum useable freq.skip distance |
| 2 nd week | 1 st | ➤ 1.3: Fading, duct propagation and troposphere actual and virtual height |
| | 2 nd | ➤ 1.4: Radiation mechanism of an antenna-Maxwell equation |
| | 3 rd | ➤ 1.5: Definition-antenna gain, directive gain, directivity, polarization and effective aperture |
| | 4 th | ➤ 1.5: Definition-radiator to resistance, input impedadance,bandwidth,beam width and radiation pattern |
| 3 rd week | 1 st | ➤ 1.6: Antenna-types of antenna: monopole and dipole antenna and Omni directional antenna |
| | 2 nd | ➤ 1.7: Directional high freq. antenna, Yagi and rhombus only |
| | 3 rd | ➤ 1.7: U.H.F and microwave antenna: dish antenna and horn antenna |
| | 4 th | ➤ 1.8: Concept and benefit of smart antenna |
| 4 th week | 1 st | ➤ UNIT-2: 2.1: Fundamentals of transmission line |
| | 2 nd | ➤ 2.2: Equivalent ckt.of transmission and R.F equivalent ckt. |
| | 3 rd | ➤ 2.3: Characteristics impedance, methods of calculation |
| | 4 th | ➤ 2.3: Simple numerical |
| 5 th week | 1 st | ➤ 2.4: Losses in transmission line |
| | 2 nd | ➤ 2.5: Standing wave-SWR,VSWR |
| | 3 rd | ➤ 2.5: Reflection coefficient, simple numerical |
| | 4 th | ➤ 2.6: Quarter wave half wave length line |
| 6 th week | 1 st | ➤ 2.7: Impedance matching and stub-single and double |
| | 2 nd | ➤ 2.8: Primary and secondary constant of x-mission line |
| | 3 rd | ➤ ASSIGNMENT-1,2 |
| | 4 th | ➤ UNIT-3: 3.1: Define aspect ratio, rectangular switching, flicker and horizontal resolution |
| 7 th week | 1 st | ➤ 3.1: Define-video bandwidth, interlaced scanning, composite video signal ,synchronization pulses |
| | 2 nd | ➤ 3.2: T.V transmitter –block diagram and function of each block |
| | 3 rd | ➤ 3.3: Monochrome T.V receiver - block diagram and function of each block |
| | 4 th | ➤ 3.4: Color T.V signal |
| 8 th week | 1 st | ➤ 3.5: Types of T.V technology-C.R.T.TV,Plasma display panel |
| | 2 nd | ➤ 3.5: Digital lighting processing ,L.C.D,OLED display |
| | 3 rd | ➤ 3.5: Q.L.E.D display ,OLED display-only comparisons |
| | 4 th | ➤ 3.6: Discuss the principle of operation-LCD display |
| 9 th week | 1 st | ➤ 3.6: Large screen display |
| | 2 nd | ➤ 3.7: CATV system and types and n/w |
| | 3 rd | ➤ 3.8: Digital T.V technology-digital TV signal |

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| | 4 th | ➤ 3.8: Transmission of digital TV signal and digital TV receiver video programme processor unit |
| 10 th week | 1 st | ➤ ASSIGNMENT-3 |
| | 2 nd | ➤ Repeat of 3.8 |
| | 3 rd | ➤ UNIT-4 : 4.1: Define microwave wave guide |
| | 4 th | ➤ 4.2: Operation of rectangular wave guide and its advantages |
| 11 th week | 1 st | ➤ 4.3: Propagation of EM wave through wave guide with TE mode |
| | 2 nd | ➤ 4.3: Propagation of EM wave through wave guide with TM mode |
| | 3 rd | ➤ 4.4: circular wave guide |
| | 4 th | ➤ 4.5: Operation of cavity resonator |
| 12 th week | 1 st | ➤ 4.6: Working of directional coupler |
| | 2 nd | ➤ 4.6: Working of isolator and circulator |
| | 3 rd | ➤ 4.7: Microwave tubes –principle of operation of two cavity klystron |
| | 4 th | ➤ 4.8: Principle of operation of travelling wave tubes |
| 13 th week | 1 st | ➤ 4.9: Principle of operation of cyclotron |
| | 2 nd | ➤ 4.10: Principle of operation of tunnel diode and Gunn diode |
| | 3 rd | ➤ UNIT-5: 5.1: Broadband communication system-fundamentals of components and n/w architecture |
| | 4 th | ➤ 5.2: Cable broadband data n/w-architecture |
| 14 th week | 1 st | ➤ 5.2: Future broadband tele communication, internet based n/w importance |
| | 2 nd | ➤ 5.3: SONET-signal frame components ,topology advantages, application and disadvantages |
| | 3 rd | ➤ 5.4: ISDN devices interfaces |
| | 4 th | ➤ 5.4: ISDN service ,architecture and application |
| 15 th week | 1 st | ➤ 5.5: B-ISDN interfaces and terminology |
| | 2 nd | ➤ 5.5: B-ISDN protocol Architecture and application |
| | 3 rd | ➤ Last 5 previous year questions discussion |
| | 4 th | ➤ Last 5 previous year questions discussion |


29.06.2024
Signature of faculty


29/6/24
Signature of Sr. Lect.

Head of Dept. (HOD)
Electrical & ETC F
G. I. E.T (POLY), ...


29/6/24
Signature of principal