



GOVT. DEGREE COLLEGE, RAMACHANDRAPURAM
(AFFILIATED TO ADIKAVI NANNAYA UNIVERSITY
, RAJAMAHENDRAVARAM)

Ramachandrapuram-533255,
hkerjyee.ramachandrapuram@gmail.com

Dr.K.C.Satya Latha MSc.,Ph.D.,
Principal,GDC,RCPM

To,

The Principal,
GDC,Mandapeta,
Konaseema Dt.,

Sub: GDC, Ramachandrapuram-Department of Physics- Guest Lecture -Resource
Person from your College-Request -Regarding.

AV
5-11-22
The department of Physics of our college intends to conduct a Guest Lecture on 24-08-2022 for the II B.Sc. Physics students of our College. In this connection, I request you to kindly spare the services of Dr. K.Srinivasa Rao, Lecturer in Physics of GDC,Mandapeta to deliver a lecture on "Digital Electronics" and enlighten the students of our college.This is submitted for your kind consideration and necessary action.

Thanking you Sir.

Principal

23/8/2022

PRINCIPAL
Govt. Degree College
Ramachandrapuram.

Mandapeta,
August 24, 2022.

From
Dr.K.SrinivasaRao
Lecturer in Physics
Govt. Degree College
Mandapeta – 533 308.

To
The Principal
Govt. Degree College
Mandapeta – 533 308.

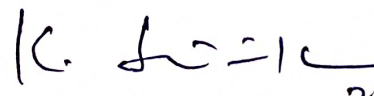
Subject: Request Letter to deliver guest lecture at Govt Degree College –
Ramachandrapuram-Request -Regarding.

Respected Sir

I request you to permit me to present guest lecture at Govt. Degree College, Ramachandrapuram on the afternoon of 24th August 2022 as requested by the Principal, Govt Degree College, Ramachandrapuram. I am herewith enclosing the copy of the letter. I also request you to treat my absence tomorrow AN i.e 24-08-2022 AN as on duty.

Thanking you sir.

Yours Sincerely,


(Dr.K.SrinivasaRao) 24/8/22

Government Degree College, Mandapeta

Relieving Certificate

Dt:24-08-2022.

Certify that Dr.K.Srinivasa Rao, Lecturer in Physics of this college is relieved off his duties on the AN of 24-08-2022 to conduct a Guest Lecture on 24-08-2022 for the II B.Sc. Physics students of Govt Degree College, Ramachandrapuram on Digital Electronics as requested by the Prinicipal, Govt Degree College, Mandapeta.


PRINCIPAL

Principal
Govt. Degree College
MANDAPETA-533 308.



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Dr.K.C.Satya Latha MSc.,Ph.D.,
Principal,GDC,RCPM

Attendance Certificate

This is to certify that Dr. K. Srinivasa Rao, Lecturer in Physics, GDC, Mandapeta, has attended GDC, Ramachandrapuram on 24-08-2022 and delivered guest lecture on "Digital Electronics" for II B.Sc. Physics students of this college.


24/8/2022
Principal
PRINCIPAL
Govt. Degree College
Ramachandrapuram

Digital Electronics

The digital electronics is a branch of electronics which deals the generation, processing and storage of digital signals. This helps in the analysis, design and construction of digital systems. Any variable that can be transmitted through space is called a signal.

We have studied about the analog signals such as electrical signals. On the other hand, there are another type of signals which are confined to a limited number of discrete levels of current or voltage. These signals are called as digital signals. These signals are coded as 0 or 1 numbers which correspond to OFF (low voltage) or ON (high voltage) conditions. These states are achieved by means of a switch.

The digital electronics was first invented by George Boole. The algebra which is used in digital electronics is called as Boolean algebra. In digital electronics, any information can be represented in terms of zeros and one's. It is represented by a bit. In this system, we use different types of number systems.

They are:

- (1) Decimal system (0 to 9)
- (2) Binary system (0 or 1)
- (3) Octal system (0 to 7)
- (4) Hexa-decimal system (0 to 9, A, B, C, D, E, F)

Linear and Non-Linear Circuits

In previous chapters, we have studied the use of transistors as amplifiers of sinusoidal signal or of pulses. For every change in the input circuit, the linear amplifier produces a corresponding change in the output circuit. Thus, the circuit acts as a linear circuit. There is another class of circuits where the transistor can be used as a switching circuit, i.e., it can be used to operate as ON and OFF switch. The action of a switching circuit is only to show the presence or absence of the output in accordance with certain magnitude of input. The operation of a switching circuit is non-linear i.e., the magnitude and waveform of output have no relation with those of input. The switching circuit represents mere ON or OFF switch action.

Logic Gates

A switch which can be closed or opened is known as a gate. The gate has two possible states.

