



**Government Degree College for Women
Autonomous
Begumpet, Hyderabad**

Faculty Forum

FACULTY FORUM Academic Year 2020-2021

Convener

Dr. G.Pranitha, Asst. Prof. of Chemistry

Members

Dr. N. Mrudula, Asst. Prof. of Telugu

Dr. D. Padmaja, Asst. Prof. of Sanskrit

Dr. N. Nirmala, Lecturer in English

Dr. K. Kamala, Asst. Prof. of Pol. Sciencess

Smt. Suprabha Panda, Asst. Prof. of Zoology

Faculty Forum

Faculty Forum is a faculty discussion platform/ forum in which faculties discuss the academic issues like teaching learning process, innovative methodology, research methodology, skill enhancement methods, new technologies, new applications of computer and different societal issues. As there is saying “Knowledge is better preserved through sharing”, Our institution believes in it and follows by inter-faculty expertise sharing which are planned for four to five times a year for an hour in a one day in which the fellow faculty members share their expertise by presenting their strengths in Seminars.

The aims and objectives of the faculty forum

- To encourage freedom of thought, expression.
- To promote a friendly feeling and foster a spirit of comradeship, unity and co-operation amongst the members.
- To improve the professional status and prospect of the members.
- To promote all round developments through discussions in various areas.
- To promote faculty welfare.

List of the Forums during 2020-2021

Year	Name of the Speaker	Designation	DEPARTMENT	Topic
2020-2021	Dr. S.PRASANNA RANI	ASSISTANT PROFESSOR OF MATHEMATICS	MATHEMATICS	AREAS OF MATHEMATICS – APPLICATION IN SCIENCE RESEARCH

**A TALK ON
AREAS OF MATHEMATICS –APPLICATION IN SCIENCE RESEARCH**

BY

Dr. S.PRASANNA RANI, ASST. PROF. OF MATHEMATICS
GDCW(A), BEGUMPET, HYDERABAD

DATE: 22-3-2021

Mathematics is a wonderful subject with a wide range of applications everywhere. Especially in science, it plays a pivotal role from fundamental concepts to the latest technological developments. Various areas of mathematics are finding enormously growing significance in the trending research in science fields. It is time to explore a curious connection between mathematics and other sciences which makes the research in them more convenient and meaningful. Some of the key points presented in this talk are as follows.

- Differential Equations – Ordinary Differential Equations and Partial Differential Equations – Basic concepts like independent variables , dependent variables, ratio of rate of change of variables as derivative ,partial derivatives , Initial value problems(IVP) and Boundary value problems(BVP) – Applications in chemistry, physics and biological sciences. Ex. Collision and diffusion of atoms especially in gases,a PDE - $\frac{\partial X_i}{\partial t} = f_i(x_1, x_2, x_3, \dots, x_n) + \mu \sigma^2 X_i, i=1,2,3, \dots, n$
- Single variable calculus
- Multi variable calculus
- Complex functions
- Group Theory
- Probability and Statistics
- Linear Algebra- Study of Big data system including numerous variables.
- Optimisation techniques-Darwin's evaluation theory,
- Law of contradiction- William Harvey in blood pumping by heart.
- Game theory-Animal behavior



Conclusions: Apart from above mentioned areas of mathematics there are many other topics which are very useful in the latest research in science fields.