

Department of Physics

E-content (B.Sc. 4th Semester Honors)

Subject: Mathematical Physics

Teacher Name: Dr. Renu Bala

1. Separation of Variable

https://drive.google.com/file/d/1Jf5eZAO-wt3CZuDO8ScPIVmEkqHM2myL/view?usp=share_link

2. Special Functions: Dirac Delta

https://drive.google.com/file/d/1SzZiTnOI38dIRDMXAT8jcNCv9rcrvhCV/view?usp=share_link

3. Gamma Function

https://drive.google.com/file/d/1kTvak0AR4LQUJHhyQLLixETcxSxYoRI/view?usp=share_link

4. Bessel Function

https://drive.google.com/file/d/1jvD-m50fW02Lcgrmd4cvLkZlzSUVCAWu/view?usp=share_link

5. Legendre Function: Rodrigues Formula

https://drive.google.com/file/d/1tVds2xUvPwU8zwtne82HfN7f34qQN8qw/view?usp=share_link

6. Laplace Transform

https://drive.google.com/file/d/1ivLcApcv0PRbBda9yFerkVEJdAIGzIza/view?usp=share_link

https://drive.google.com/file/d/1FHhCpqP99DoHvfQ-ryexHoxQj0DgSGWS/view?usp=share_link

7. Applications of Laplace transforms to derivatives and integrals

https://drive.google.com/file/d/1V-c6e3_cFNMf49F9ow8BhkdbBDU1ulof/view?usp=share_link

8. Analysis of simple circuits in s-domain

https://drive.google.com/file/d/1KsaV54CfpQtBVfhYREIf0avKRvfeYPxP/view?usp=share_link

9. Transfer Function

https://drive.google.com/file/d/1bYo2BkYDx4xIHVIJFaY7DtUM7iFA0FUv/view?usp=share_link

10. Poles and Zero

https://drive.google.com/file/d/1-K2icLgl2-jg3NQlavh39xm-q9bF-Ag/view?usp=share_link

11. Stability of Circuit

https://drive.google.com/file/d/1qA6YbpHQP7gsPWn6hnKu4oS0WmsVYu1D/view?usp=share_link

Questions

1. Long Answer Questions

https://drive.google.com/file/d/10YuArcwwCS0vTSItXoRTpwhPT2XDIGE6/view?usp=share_link

2. MCQ questions

<https://forms.gle/WDDjUwBvuHZPangp8>

Suggested books

1. Circuit theory Fundamentals and Applications : Aram Budak (Prentice-Hall, 1987).
2. Mathematical methods for Physicists : G. Arfken and H.J. Weber (Academic Press, San Diego, sixth edition, 2005)
3. Mathematical Physics: P.K. Chatopadhyay (Wiley Eastern, New Delhi, 2005)
4. Mathematical Physics : H K Dass
5. Mathematical Physics: Satya Parkash
6. Mathematical Physics : B S Rajput