



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Engg.)
I Semester Re- Examination-November 2021
2019 Admission

Basc.1103

Engineering Physics (2+1)

Marks: 50
Time: 2 hours
(10x1=10)

I Fill in the blanks

1. The Fundamental unit in a grating is called _____
2. The tangential force acting on the surface of a liquid is known as _____
3. When _____ of a crystal matches with applied frequency, resonance is produced.
4. Splitting spectral lines in presence of electric field is called _____
5. In Newton's rings experiment, radius of n^{th} dark ring is proportional to _____ of natural numbers
6. Expulsion of magnetic lines of force from the interior of superconductor material when cooled to its critical temperature is called _____
7. _____ is the wavelength of red light emitted by a helium-neon laser
8. The transition zone for Raman spectra is between _____ and _____ levels
9. When there are no external forces, the shape of a liquid drop is determined by _____
10. _____ laser is an example of optical pumping

II Write short notes on ANY FIVE of the following

(5x2=10)

1. Briefly explain Zeeman effect and Stark effect
2. Describe stream line and turbulent flow in fluid flow
3. Compare holography with ordinary photography
4. What are Einsteins coefficients?
5. Explain Curie-Weiss law
6. Ferromagnetism
7. Applications of Raman spectroscopy

III Answer ANY FIVE of the following

(5x4=20)

1. Describe diode laser with a neat diagram
2. Explain law of mass action
3. Explain about SQUID and its uses
4. How to find out the viscosity of a liquid by Stoke's method?
5. Different types of lasers
6. Langevins theory of Diamagnetism
7. Meissner effect

IV Write an essay on ANY ONE of the following

(1x10=10)

1. What is super conductivity? Explain Josephson effect, isotop effect and Meissner effect
2. Construction and working of CO₂ laser and its applications
