Code No.: AP102BS

R20 H.T.No.

8 R

CMR ENGINEERING COLLEGE: : HYDERABAD UGC AUTONOMOUS

I-B.TECH-I-Semester End Examinations (Regular) - JULY- 2021 APPLIED PHYSICS

(Common to CSE, INF, CSD, CSC)

[Time: 3 Hours]

[Max. Marks: 70]

- 1. Answer Any FIVE Questions. Each Question Carries 14 Marks
- 2. Illustrate your answers with NEAT sketches wherever necessary.

5 x 14M=70M

- a. Discuss the de Broglie's hypothesis of duality of material particles.
 - b. Determine the time independent wave equation?
- a. Give brief account of Kronig-Penny model. What are its main conclusions?
 - b. Briefly, explain the formation of energy bands in solids.
- a. Explain how a PN junction is formed. Draw IV characteristic curve of a PN junction diode and explain.
 - b. Explain the Hall Effect and its importance.
- a. Determine the expression for the internal field in solids of dielectric materials?
 - b. Distinguish between the ferro electricity and pyro electricity?
- 5. a. Explain how ferrites are superior to ferromagnetic materials?
 - B.Explain the Domain theory of ferro magnetism on the basis of hysteresis curve.
- 6. a. Determine the relationship between Einstein's coefficients.
 - b. Discuss the construction and working principle of He-Ne laser.
- 7. a. Determine the equation for Acceptance angle and Numerical Aperture..
 - b..Explain the classification of optical fibers and mention the applications of optical fibers.
- 8. a. Why nanomaterials exhibiting different properties? Explain in detail
 - b. Discuss the Chemical Vapour deposition method of synthesis of nanomaterials.

Cartiffe Strategic

THE THE SECOND SECTION OF THE SECOND SECOND

Libert 1980 April 10. The amounted as

a grant a green by

are amplyoned by

n de la gran de grandage grûndel kodafter tit delife di daar eel da engan di neel daar daar aan aleksiin di daar eel grandage tit d

art - Arthur R

The second of the second control of the second of the seco

a forma firing a security of the security of the security of the security s

garanta and the second of the

The second control of the second file of the second second

many me salitati magament a articularita a manifestatu i di mana a manatan pendagan tita da articularita da articularita da articularita da articularita

Liefermane Dr. asterlogs de l'engrée. Il du l'ille et long.
 Davis, d'a revons s'en and nombing a requieur nouvers.

e forest servición de la company de la forest de la company de la company de la company de la company de la comp la classificación de la company de la compa

ggar a filosoficial de la competitación de la competitación de la competitación de la competitación de la comp Alches successor de la competitación de la competitación de la competitación de la competitación de la competit