

KAMARAJ COLLEGE (Autonomous)

Accredited with A+ Grade by NAAC

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

THOOTHUKUDI – 628 003

(4 Pages)

Reg. No:

Question. Code No : 2400123

Sub Code : 24USPH11

UG Degree - End Semester Examinations , November 2024

First Semester

B.Sc. Physics

SEC I - PHYSICS FOR EVERYDAY LIFE

(For those who joined in July 2024 onwards)

Time : 3 Hours

Maximum : 75 Marks

PART A - (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

1. Name the key concept that enables a rocket to escape earth's atmosphere
 - (a) Gravity
 - (b) Thrust
 - (c) Velocity
 - (d) Acceleration
2. During bouncing ball motion kinetic energy is converted into ----- energy
 - (a) potential
 - (b) Thermal

- (c) magnetic (d) Mechanical
3. Which of the following principle is used in holography
(a) Interference & diffraction
(b) Reflection & refraction
(c) Polarization & scattering
(d) Absorption & transmission
4. Which type of lens is used to correct presbyopia
(a) bifocal (b) Progressive
(c) prismatic (d) Both (b) and (c)
5. What is the primary source used in the production of microwave in microwave oven
(a) Klystron (b) Magnetron
(c) Gunn diode (d) Diode
6. By -----process, the refrigerant absorbs heat from the indoor.
(a) evaporation (b) condensation
(c) compression (d) expansion
7. The approximate value of solar constant is -----
(a) 1360 W/m^2 (b) 13 W/m^2
(c) 1366 W/m^2 (d) 136 W/m^2
8. What is the maximum theoretical efficiency of a photovoltaic cell?
(a) 44 (b) 30
(c) 10 (d) 33.7
9. Name the award conferred on Vikram sarabai in 1972
(a) Padma sri (b) Padma vibhushan
(c) Padma bhushan (d) None
10. Which of the following is a space agency?
(a) NASA (b) ESA
(c) ISRO (d) All the above

PART – B (5X5=25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not Exceed 250 words.

11. (a) Explain the working of spring scale with neat diagram

(OR)

- (b) Give a brief note on the concept of elastic potential energy application in bouncing ball

12. (a) Write a note on Polaroid glasses

(OR)

- (b) Explore the applications of LASER in various field

13. (a) Discuss the working of electric bulb with neat diagram

(OR)

- (b) Bring out the working concept of electric hair drier

14. (a) Define solar constant? Give its unit

(OR)

- (b) List out any five general application of solar energy

15. (a) Write about the contributions of missile man of India to development of science

(OR)

- (b) Discuss the scientific contributions of Venkatraman Ramakrishnan

PART C - (5 × 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not Exceed 500 words.

16. (a) Enumerate the energy transformation that occur during the rocket launch in space

(OR)

- (b) Describe the mechanism of bicycle mentioning its different components.

17. (a) What are the various refractive defects of vision? How they can be corrected?

(OR)

- (b) Discuss about the importance UV protective glass in everyday life

18. (a) Express the mechanism of vacuum cleaner with neat diagram

(OR)

- (b) Explain principle and working of electric fan with neat diagram

19. (a) Describe the principle, construction and working of solar water heater with neat sketch

(OR)

- (b) Discuss about the functioning of photovoltaic cell in solar energy conversion

20. (a) Build C.V Raman's contribution in the field of spectroscopy towards Nobel prize

(OR)

- (b) Explore about Vikram Sarabhai's role in India's space program.