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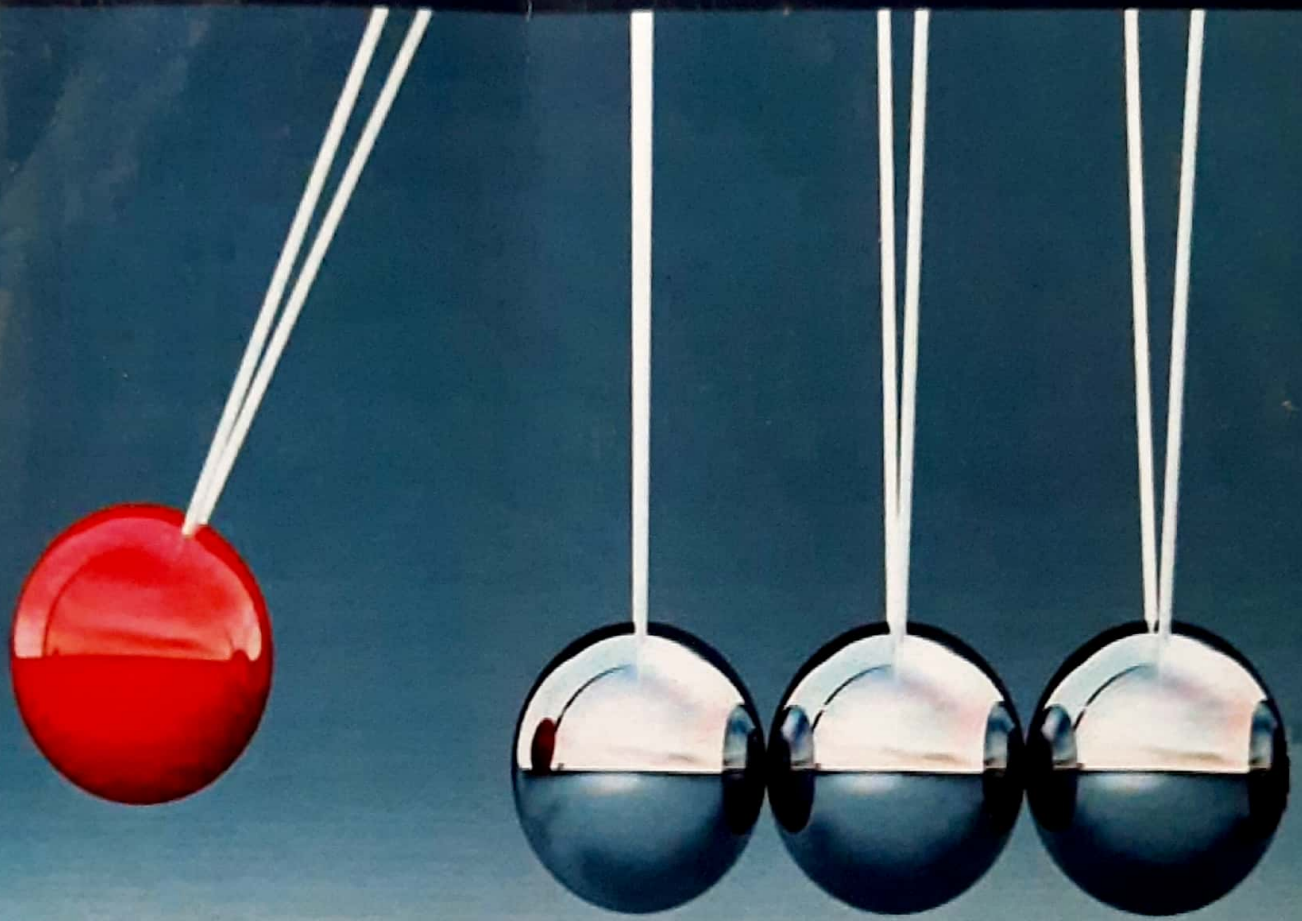
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OBJECTIVE PHYSICS

For B.Sc. Students

Editor : Dr. C. M. Kale

OBJECTIVE PHYSICS

For B.Sc. Students

Edited by
Dr. C. M. Kale

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FOREWORD

It gives me an immense pleasure to introduce this book consisting of multiple choice questions based on undergraduate (B.Sc.) Physics curriculum by the Editor Dr. C. M. Kale of Indraraj Arts, Commerce and Science College, Sillod. Dr. C. M. Kale and his co-authors have been teaching this subject for over twenty years and achieved thorough depth in the subject.

This book covers the current syllabus prescribed for the B.Sc. 1st, 2nd and 3rd year students and deals with the multiple choice questions generated on various topics of Physics with optimum level. M.C.Qs are also set on application of laws, principles and concepts of Physics.

I am sure, the book will prove a boon to students of B.Sc. as well as those students who are appearing for SET, NET, PET and other competitive examinations and help them to acquire sound knowledge of the Physics.

In today's pandemic situation all universities are going for online MCQ type examinations as well. For them this book will be very useful to teachers.

K. M. Jadhav

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INDEX

Chapter No.	Title, Author Name, and College Address	Page Number
-------------	---	-------------

SECTION-I :

MECHANICS, PROPERTIES OF MATTER AND SOUND

- | | | |
|-----------|--|-------|
| 1. | MECHANICS
Dr. Somshankar V. Rajmane
Assistant Professor and Head, Department of Physics
Jawahar Arts, Science and Commerce College, Anadur.
Tal. Tuljapur. Dist. Osmanabad | 02-07 |
| 2. | ELASTICITY
Dr. Santosh D. More
Assistant Professor and Head,
Department of Physics, Deogiri College, Aurangabad | 08-13 |
| 3. | VISCOSITY AND SURFACE TENSION
Dr. Suchita V. Deshmukh
Assistant Professor, Department of Physics
Indraraj Arts, Commerce and Science College, Sillod.
Dist. Aurangabad | 14-20 |
| 4. | ULTRASONIC AND ACOUSTICS
Dr. Ashok S. Padampalle
Associate Professor, Department of Physics
Shri Chhatrapati Shivaji College, Omerga.
Dist. Osmanabad | 21-27 |

SECTION-II :

HEAT AND THERMODYNAMICS

- | | | |
|-----------|---|-------|
| 5. | THERMAL CONDUCTIVITY
Dr. Manisha R. Patil
Assistant Professor, Department of Physics,
Deogiri College, Aurangabad | 29-35 |
| 6. | REAL GASES AND
TRANSPORT PHENOMENA
Dr. Sangita U. Shinde
Assistant Professor, Department of Physics
Pratishthan Mahavidyalaya, Paithan. Dist. Aurangabad | 36-42 |

7. THERMODYNAMICS 43-49

Mr. Ramesh T. Ubale

Assistant Professor, Department of Physics
Siddharth Arts, Commerce and Science College, Jafrabad,
Dist. Jalna

8. ENTROPY AND THERMODYNAMIC RELATIONS 50-57

Dr. Sudarshana G. Badhe

Assistant Professor, Department of Physics
R. B. Attal College, Georai. Dist. Beed.

SECTION-III :

GEOMETRICAL AND PHYSICAL OPTICS

9. GEOMETRICAL OPTICS AND OPTICAL INSTRUMENTS 59-65

Dr. Shailendra B. Kolhe

Assistant Professor, Department of Physics
Shivaji Arts, Commerce and Science College, Kannad.
Dist. Aurangabad

10. INTERFERENCE 66-71

Mr. Vitthal V. Gaikwad

Assistant Professor, Department of Physics
Moreshwar College of Arts, Science and Commerce,
Bhokardan. Dist. Jalna

11. DIFFRACTION 72-78

Dr. Vishwamber P. Deshpande

Associate Professor, Department of Physics
Shivaji Arts, Commerce and Science College, Kannad.
Dist. Aurangabad

12. POLARIZATION 79-85

Dr. Atul P. Keche

Assistant Professor, Department of Physics
MSP Mandal's Shri Muktanand College, Gangapur
Dist. Aurangabad.

SECTION-IV :

ELECTRICITY AND MAGNETISM

13. VECTOR ALGEBRA 87-93

Dr. Padmakar G. Sasane

Assistant Professor and Head, Department of Mathematics
Vasantdada Patil College, Patoda. Dist. Beed.

14. ELECTROSTATICS 94-99

Dr. Chandrakant T. Birajdar

Associate Professor, Department of Physics
Shri Madhavrao Patil Mahavidhyala, Murum.
Dist. Osmanabad

15. MAGNETOSTATICS 100-106

Dr. Ashok. K. Dongare

Assistant Professor and Head, Department of Physics
Vasantdada Patil College, Patoda. Dist. Beed.

16. TRANSIENT CURRENTS 107-112

Dr. Balwan U. Patil

Assistant Professor and Head, Department of Physics
Kohinoor College, Khuldabad. Dist. Aurangabad

SECTION-V :

MATHEMATICAL, STATISTICAL PHYSICS AND RELATIVITY

17. DIFFERENTIATION AND ORDINARY DIFFERENTIAL EQUATION 114-121

Ms. Vrushali C. Karade

Assistant Professor, Department of Physics
MSP Mandal's Shri Muktanand College, Gangapur
Dist. Aurangabad.

18. STATISTICAL BASIS AND CLASSICAL STATISTICS 122-127

Mrs. Suvarna B. Patil

Assistant Professor, Department of Physics
Deogiri College, Dist. Aurangabad.

19. QUANTUM STATICS 128-134

Dr. Pravin K. Gaikwad

Assistant Professor, Department of Physics
Shri Chhatrapati Shivaji College, Omerga.
Dist. Osmanbad

20. THEORY OF RELATIVITY 135-141

Dr. Suresh T. Alone

Assistant Professor and Head, Department of Physics
Rajarshi Shahu Arts, Commerce and Science College,
Pathri. Tal. Phulambri. Dist. Aurangabad.

SECTION-VI :

MODERN AND NUCLEAR PHYSICS

21. PHOTOELECTRIC EFFECT 143-149

Dr. Surekha B. Jaiswal

Assistant Professor and Head, Department of Physics
Moreshwar Arts, Science and Commerce College,
Bhokardan. Dist. Jalna

22. **X-RAYS** 150-156
Dr. Prashant T. Sonwane
 Assistant Professor and Department of Physics
 Sant Ramdas Arts, Commerce and Science College,
 Ghansawangi, Dist. Jalna
23. **NUCLEAR FORCES AND MODELS** 157-163
Dr. Vinod K. Barote
 Assistant Professor and Head, Department of Physics
 Sant Dnyaneshwar Mahavidyalaya, Soegaon.
 Dist. Aurangabad
24. **PARTICLE ACCELERATORS & DETECTORS** 164-170
Dr. Shaikh Asif Karim
 Associate Professor and Head, Department of Physics
 Sir Sayyed College of Arts, Commerce, and Science.
 Roshan gate, Aurangabad

SECTION-VII : GENERAL ELECTRONICS

25. **SEMICONDUCTOR** 172-177
Dr. Santosh S. Deshpande
 Assistant Professor and Head, Department of Physics
 Rashtramata Indira Gandhi College, Jalna
26. **TRANSISTOR BIASING AND AMPLIFIERS** 178-183
Dr. Sayyed Mujeeb Hadi
 Assistant Professor, Department of Physics
 Sir Sayyed College of Arts, Commerce, and Science.
 Roshan gate, Aurangabad
27. **OSCILLATORS AND MULTIVIBRATORS** 184-190
Dr. Vijaykumar B. Sanap
 Assistant Professor, Department of Physics,
 Yesheantaro Chavan College, Sillod. Dist. Aurangabad
28. **MODULATION AND DEMODULATION** 191-197
Dr. Sanjay K. Tupe
 Assistant Professor, Department of Physics
 Kalikadevi Arts, Com. and Science College, Shirur K.
 Dist. Beed.

SECTION-VIII: SOLID-STATE PHYSICS

29. **CRYSTAL STRUCTURE** 199-205
Dr. Jawaharlal M. Bhandari
 Vice-Principal and Head, Department of Physics
 Shri Amolak Jain Vidya Prasarak Mandals Smt. S. K.
 Gandhi Arts, Amolak Science and P. H. Gandhi
 Commerce College Kada, Dist. Beed.

30. **BONDING AND BAND THEORY OF SOLIDS** 206-212
Dr. Madhukar S. Patil
 Assistant Professor, Department of Physics,
 Yeshwantrao Chavan College, Sillod. Dist. Aurangabad
31. **THERMAL PROPERTIES OF SOLIDS** 213-218
Dr. Namdeo N. Waghule
 Assistant Professor, Department of Physics
 Bhagwan Mahavidyalaya, Ashti. Dist. Beed
32. **FREE ELECTRON THEORY OF METALS AND TRANSPORT PROPERTIES** 219-226
Dr. Dilip R. Sapate
 Assistant Professor and Head, Department of Physics
 Sant Ramdas Arts, Commerce and Science College,
 Ghansawangi. Dist. Jalna

SECTION-IX : CLASSICAL AND QUANTUM MECHANICS

33. **CLASSICAL MECHANICS** 228-234
Dr. Yogesh B. Rasal
 Assistant Professor, Department of Physics
 Shri Amolak Jain Vidya Prasarak Mandals Smt. S. K.
 Gandhi Arts, Amolak Science and P. H. Gandhi
 Commerce College, Kada. Dist. Beed.
34. **ORIGIN OF QUANTUM THEORY** 235-241
Dr. Sayd Q. Chishty
 Associate Professor and Head, Department of Physics
 Dr. Rafiq Zakaria College for Women, Navkhanda,
 Aurangabad
35. **WAVE-PARTICLE DUALITY** 242-250
Dr. Ramdas B. Kavade
 Assistant Professor and Head, Department of Physics
 Bhagwan Mahavidyalaya, Ashti. Dist. Beed
36. **THE SCHRÖDINGER EQUATION AND ITS APPLICATIONS** 251-257
Dr. Pradnya R. Maheshmalkar
 Assistant Professor, Department of Physics
 Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts,
 Science, and Commerce College, Beed

SECTION-X : ELECTRODYNAMICS

37. **ELECTROSTATICS** 259-264
Dr. Bhausaheb H. Devmunde
Assistant Professor, Department of Physics
Vivekanand Arts, Sardar Dalipsing Commerce and
Science College, Aurangabad
38. **TIME-VARYING FIELD** 265-271
Dr. Pathan Abdul Rahman Wahed khan
Assistant Professor, Department of Physics
Arts, Science and Commerce College Badnapur,
Dist. Jalna
39. **ELECTROMAGNETIC WAVES** 272-278
Mr. Mohd Khizar Syed
Assistant Professor, Department of Physics
Kohinoor College, Khuldabad. Dist. Aurangabad
40. **INTERACTION OF ELECTROMAGNETIC
WAVES WITH MATTER** 279-284
Dr. Ravindra C. Alange
Associate Professor, Department of Physics
Shri Madhavrao Patil Mahavidhyala, Murum.
Dist. Osmanabad

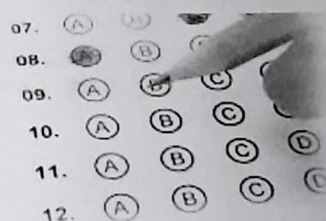
SECTION-XI : ATOMIC, MOLECULAR PHYSICS AND LASER

41. **THE ATOM MODEL** 286-292
Dr. Chandrashekhar M. Kale
Assistant Professor and Head, Department of Physics
Indraraj Arts, Commerce and Science College, Sillod.
Dist. Aurangabad
42. **VECTOR ATOM MODEL** 293-300
Mrs. Quadri Firdose Basheer
Assistant Professor, Department of Physics
Dr. Rafiq Zakaria Cllege for Women, Navkhanda,
Aurangabad.
43. **MOLECULAR SPECTRA** 301-307
Dr. Mahesh K. Babrekar
Assistant Professor, Department of Physics
Indraraj Arts, Commerce and Science College, Sillod.
Dist. Aurangabad

44. **LASER** 308-315
Mr. Kiran. H. Katke
Assistant Professor,
Department of Physics and electronics
Anandrao Dhonde Alias Babaji Arts, Commerce and
Science Mahavidyalaya, Kada. Tq. Ashti, Dist. Beed

SECTION-XII : NON-CONVENTIONAL ENERGY SOURCES AND OPTICAL FIBER

45. **NON-CONVENTIONAL ENERGY SOURCES** 317-322
Dr. Shaikh Mohd. Azhar
Vice-Principal and Associate Professor,
Department of Physics
Sir Sayyed College of Arts, Commerce, and Science.
Roshan gate, Aurangabad
46. **SOLAR PHOTOVOLTAIC SYSTEMS** 323-331
Dr. Raghunath G. Vidhate
Assistant Professor and Head, Department of Physics
Anandrao Dhonde Alias Babaji Arts, Commerce and
Science Mahavidyalaya, Kada. Tq. Ashti, Dist. Beed
47. **INTRODUCTION OF OPTICAL FIBER** 332-337
Dr. Shivanand V. Kshirsagar
Vice-Principal and Head, Department of Physics
Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts,
Science, and Commerce College, Beed
48. **FIBER CABLES AND FABRICATION** 338-344
Dr. Sayyad Shafiyoddin B.
IEEE Senior member, FIETE, FIARA, URSI Senior
member. Associate Professor and Head, Department of
Physics and Computer & Mgt. Science
Milliya Arts, Science and Management Science College,
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46.

SOLAR PHOTOVOLTAIC SYSTEM

MULTIPLE CHOICE QUESTIONS

- 1]. The electrons in the outermost shell of the atom are called as, - - -
 (a) **Valance Electron** (b) Conduction Electron
 (c) Free electron (d) None of the above
- 2]. At absolute zero temperature, a semiconductor is a perfect, - - -
 (a) Conductor (b) **Insulator**
 (c) Semiconductor (d) Dielectric
- 3]. Such a P-N junction forms a very useful device and is called
 (a) Transistor (b) Transformer
 (c) Resistor (d) **semiconductor diode**
- 4]. Whenever a semiconductor material is illuminated by a photon may be absorbed and propagated through the material depending upon the photon energy - - - of the semiconductor.
 (a) **Bandgap energy** (b) Binding Energy
 (c) Kinetic energy (d) Potential Energy
- 5]. When $E = h\nu > E_g$, the incident photons get - - - in the semiconductor.
 (a) Transmitted (b) Reflected
 (c) **Absorbed** (d) Scattered
- 6]. In the solar cell the typical value of fill factor is in the range of, - - -
 (a) **0.5-0.083** (b) 0.5-0.085
 (c) 0.5-0.081 (d) 0.5-0.082

- 7]. We know that holes and electrons are mobile charges, and therefore are known as, - - -
 (a) Free charge carriers (b) bound charge carriers
 (c) **Mobile charge carriers** (d) opposite charge carriers
- 8]. The potential barrier formed in a P-N junction exerts a - - - force on mobile charge carriers.
 (a) **Repelling force** (b) Attractive force
 (c) Both forces (d) None of these
- 9]. The emf of lead acid cell depends on concentration of, - - -
 (a) Acetic acid (b) **Sulphuric acid**
 (c) Both acid (d) None of these
- 10]. During discharging the lead-acid cell the lead at the negative electrode is converted to - - - and takes place of lead paste in the plate.
 (a) Lead phosphate (b) Lead solution
 (c) **Leadsulphate** (d) None of the above
- 11]. In Bell laboratories produced the first solar cell in, - - -
 (a) **1954** (b) 1854
 (c) 1945 (d) 1845
- 12]. How many junctions does a diode consist of?
 (a) 0 (b) **1**
 (c) 2 (d) 3
- 13]. If the positive terminal of the battery is connected to the anode of the diode, then it is known as, - - -
 (a) **Forward-bias** (b) Reverse-biased
 (c) Equilibrium (d) Schottky barrier
- 14]. During reverse bias, a small current develops known as, - - -
 (a) Forward current (b) Reverse current
 (c) Active current (d) **Reverse saturation current**
- 15]. If the voltage of the potential barrier is V_0 . A voltage V is applied to the input, at what moments will the barrier disappears?
 (a) $V < V_0$ (b) $V = V_0$
 (c) $V > V_0$ (d) $V \ll V_0$

- 16]. In a PN junction with no external voltage, the electric field between acceptor and donor ions is called a, - - -
 (a) Peak (b) **Barrier**
 (c) Threshold (d) Path
- 17]. In a PN junction the potential barrier is due to the charges on either side of the junction, these charges are, - - -
 (a) Majority carriers (b) Minority carriers
 (c) Both 'a' and 'b'
 (d) **Fixed donor and acceptor ions**
- 18]. The efficiency of the solar cell is about, - - -
 (a) 25 % (b) **15 %**
 (c) 40 % (d) 60 %
- 19]. The output power from solar cell is the product of, - - -
 (a) Current and charge
 (b) Current and resistance
 (c) **Current and Voltage**
 (d) Voltage and charge
- 20]. The output of the solar cell is of the order, - - -
 (a) 0.5 W (b) **1.0 W**
 (c) 5.0 W (d) 10.25 W
- 21]. In a fuel cell cathode is of, - - -
 (a) Oxygen (b) Ammonia
 (c) **Hydrogen** (d) Carbon monoxide
- 22]. What is the maximum possible output of a solar array?
 (a) 300 W/m² (b) 100 W/m²
 (c) **250 W/m²** (d) 500 W/m²
- 23]. The current density of a photo voltaic cell ranges from, - - -
 (a) 10 - 20 mA/cm² (b) **40 - 50 mA/cm²**
 (c) 20 - 40 mA/cm² (d) 60 - 100 mA/cm²
- 24]. The term photo voltaic comes from, - - -
 (a) Spanish (b) **Greek**
 (c) German (d) English

25]. The volt is the units of emf that was named after its inventor, - - -
 (a) **Alessandro Volta** (b) Alxender Volta
 (c) Alexa Volta (d) Alexandro Volta

26]. The capacitance of a reverse biased PN junction, - - -
 (a) Increases as reverse bias is increased
 (b) Decreases as reverse bias is increased
 (c) **Increases as reverse bias is decreased**
 (d) Is insignificantly low

27]. For a PN junction diode, the current in reverse bias may be, - - -
 (a) Few miliamperes (b) Between 0.2 A and 15 A
 (c) Few amperes (d) **Few micro or nano amperes**

28]. A module in a solar panel refers to, - - -
 (a) Series arrangement of solar cells.
 (b) Parallel arrangement of solar cells.
 (c) **Series and parallel arrangement of solar cells.**
 (d) None of the above.

29]. The term photo voltaic is in use since, - - -
 (a) 1840 (b) 1844
 (c) **1849** (d) 1850

30]. When the source of light is not sun light then the photo voltaic cell is used as, - - -
 (a) Photo diode (b) Photovoltaic cell
 (c) **Photo detector** (d) Photo transmitter

31]. The region where the electrons and holes diffused across the junction is called, - - -
 (a) Depletion Junction
 (b) **Depletion region**
 (c) Depletion space
 (d) Depletion boundary

32]. The current produce by the solar cell can be given by, - - -
 (a) $I_L - I_D + I_{Sh}$ (b) $I_L + I_D - I_{Sh}$
 (c) $I_L + I_D + I_{Sh}$ (d) **$I_L - I_D - I_{Sh}$**

33]. The amount of photo generated current increases slightly with an increase in, - - -
 (a) **Temperature** (b) Photons
 (c) Diode current (d) Shunt current

34]. A typical output of a solar cell is, - - -
 (a) 0.1 V (b) **0.26 V** (c) 1.1 V (d) 2 V

35]. Which of the following material is used in solar cells?
 (a) Barium (b) **Silicon**
 (c) Silver (d) Selenium

36]. The efficiency of a solar cell may be in the range, - - -
 (a) 2 to 5% (b) **10 to 15%**
 (c) 30 to 40% (d) 70 to 80%

37]. Satellite power requirement is provided through, - - -
 (a) **Solar cells** (b) Dry cells
 (c) Nickel Cadmium cells (d) Lead acid batteries

38]. Batteries are charged by, - - -
 (a) Rectifiers (b) Engine generator sets
 (c) Motor generator sets (d) **Any of the above**

39]. Battery container is acid resistance therefore it is made up of, - - -
 (a) Glass (b) Plastic
 (c) Wood (d) **All of the above**

40]. The following will happen if the battery charging rate is too high.
 (a) Excessive gassing (b) Temperature rise will occur
 (c) Bulging and buckling of plates we occur
 (d) **All of the above**

41]. The following indicate that battery on charge has attained full charge, - - -
 (a) Colour of electrode (c) Gassing
 (c) Specific gravity (d) **All of the above**

42]. To prevent local action in battery only - - - is used in electrolytes.
 (a) Pump water (b) **D stilled water**
 (c) Tap water (d) Both 'a' and 'c'

43]. Ampere hour capacity of an industrial battery is based on - - - hours discharge rate.

- (a) 8
- (b) 12
- (c) 16
- (d) 24

44]. When two batteries are connected in parallel, it should be ensured that - - -

- (a) **They have same emf**
- (b) They have same make
- (c) They have the same ampere-hour capacity
- (d) They have identical internal resistance

45]. In a lead acid battery, separators are provided to, - - -

- (a) Reduce internal resistance
- (b) Facilitate flow of current
- (c) Reduce tendency for polarization
- (d) **Avoid internal short circuits**

46]. The electrode for a battery must be, - - -

- (a) A semi-conductor
- (b) An insulator
- (c) **A good conductor of electricity**
- (d) A bad conductor of electricity

47]. Cells are connected in series in order to, - - -

- (a) **Increase the voltage rating**
- (b) Increase the current rating
- (c) Increase the life of the cells
- (d) None of the above

48]. Five 2V cells are connected in parallel. The output voltage is, - - -

- (a) 1 V
- (b) 1.5 V
- (c) 1.75 V
- (d) **2 V**

49]. The open-circuit voltage of any storage cell depends wholly upon, -

- (a) Its chemical constituents
- (b) On the strength of its electrolyte
- (c) Its temperature
- (d) **All of the above**

50]. The current in a chemical cell is a movement of, - - -

- (a) Positive ions only
- (b) **Positive and negative ions**
- (c) Negative ions only
- (d) Positive hole charges

328

51]. Each pentavalent atom donates one free electron and therefore are known as - - -

- (a) **Donor**
- (b) Acceptor
- (c) Combination
- (d) P-type semiconductor

52]. Internal resistance of a cell is due to, - - -

- (a) Resistance of electrolyte
- (b) Electrode resistance
- (c) Surface contact resistance between electrode and electrolyte
- (d) **All of the above**

53]. The output voltage of a charger is, - - -

- (a) Less than the battery voltage
- (b) **Higher than the battery voltage**
- (c) The same as the battery voltage
- (d) None of the above

54]. It is noticed that during charging, - - -

- (a) There is a rise in voltage
- (b) Energy is absorbed by the cell
- (c) Specific gravity of H_2SO_4 is increased
- (d) **All of the above**

55]. A typical output of a solar cell is, - - -

- (a) 0.1 V
- (b) **0.26 V**
- (c) 1.1 V
- (d) 2 V

56]. Which of the following material is used in solar cells?

- (a) Barium
- (b) **Silicon**
- (c) Silver
- (d) Selenium

57]. In a lead acid cell, hydrogen is liberated at, - - -

- (a) Positive plate
- (b) **Negative plate**
- (c) Both positive and negative plates
- (d) None of the above

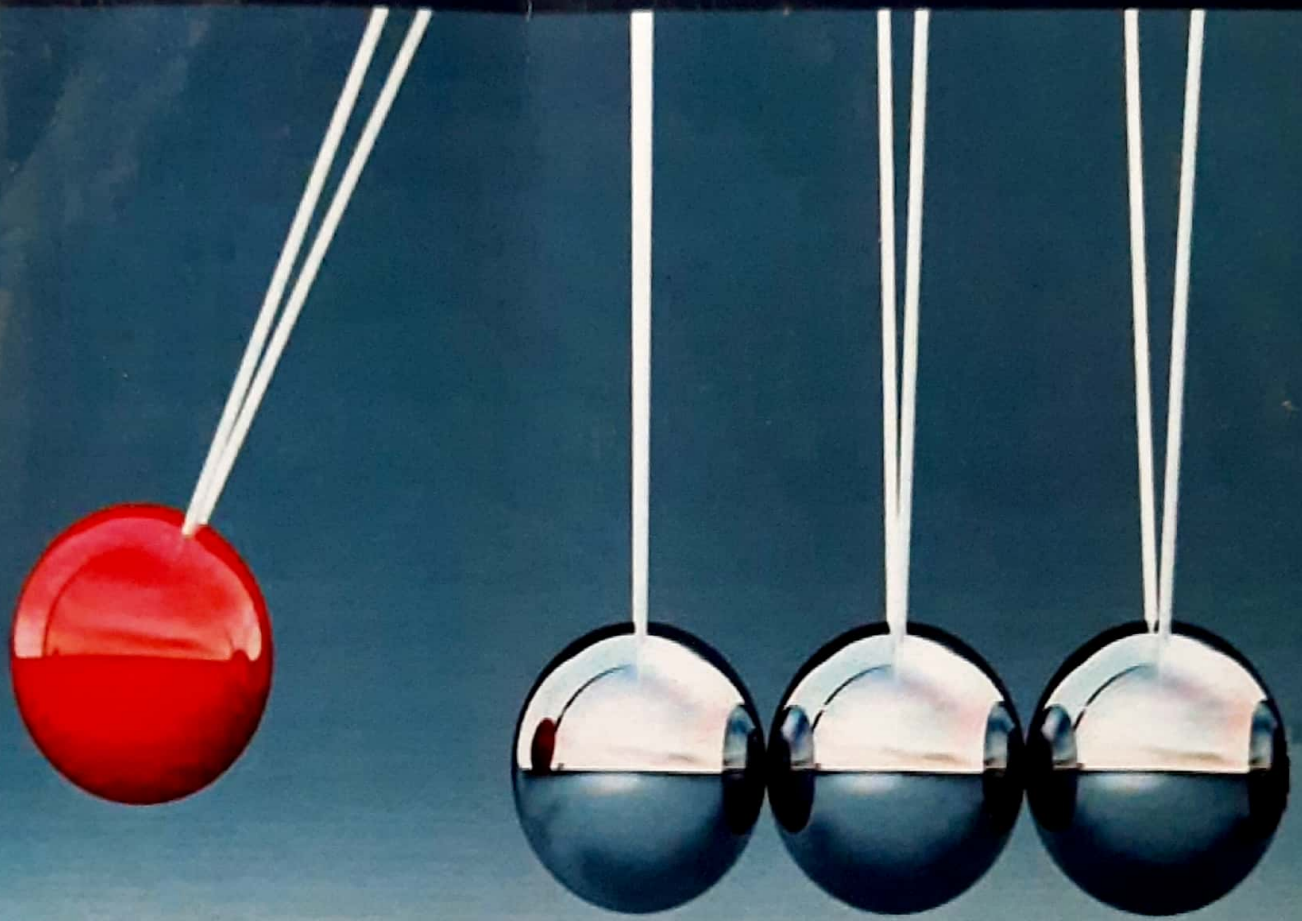
58]. Satellite power requirement is provided through, - - -

- (a) **Solar cells**
- (b) Dry cells
- (c) Nickel Cadmium cells
- (d) Lead acid batteries

329

- 59]. During the charging of a lead acid cell, - - -
 (a) **Its voltage increases** (b) It gives out energy
 (c) Its cathode becomes dark chocolate brown in Colour
 (d) Specific gravity of H_2SO_4 decreases
- 60]. Active materials of a lead acid cell are, - - -
 (a) Spongy lead (b) Lead peroxide
 (c) Dilute H_2SO_4 (d) **All of the above**
- 61]. During charging the specific gravity of the electrolyte of a lead acid battery, - - -
 (a) **Increases** (b) Decreases
 (c) Remains the same (d) Becomes zero
- 62]. The capacity of a lead acid cell does not depend on its, - - -
 (a) Temperature (b) **Rate of charge**
 (c) Rate of discharge (d) Quantity of active material
- 63]. In a lead-acid cell dilute sulphuric acid approximately comprises the following, - - -
 (a) One part H_2O , three parts H_2SO_4
 (b) Two-part H_2O , two parts H_2SO_4
 (c) **Three parts H_2O , One part of H_2SO_4**
 (d) All H_2SO_4
- 64]. The watt-hour efficiency of a lead acid cell varies between, - - -
 (a) 25 to 35% (b) 40 to 60%
 (c) **70 to 80%** (d) 90 to 95%
- 65]. The capacity of a lead acid cell depends on, - - -
 (a) Amperes (b) **Ampere-hours**
 (c) Watts (d) Watt-hours
- 66]. The capacity of a lead acid cell depends on, - - -
 (a) Rate of discharge (b) Temperature
 (c) Density of electrolyte (d) **All of the above**
- 67]. Level of electrolyte in a cell should be - - - the level of plates
 (a) Below (b) Equal to
 (c) **Above** (d) None of the above

- 68]. In a lead acid cell, lead is called as, - - -
 (a) Positive active material
 (b) **Negative active material**
 (c) Passive material
 (d) None of the above
- 69]. Electrolyte used in a lead acid cell is, - - -
 (a) NaOH (b) **H_2SO_4**
 (c) HCL (d) HNO_3
- 70]. The lead acid cell never be discharged beyond, - - -
 (a) **1.8 V** (b) 1.9 V
 (c) 2 V (d) 2.1 V
- 71]. If a lead-acid cell is discharge below 1.8 V, the following will happen, - - -
 (a) Capacity of cell will reduce
 (b) Sulphation of plates will occur
 (c) Internal resistance will increase
 (d) **All of the above**
- 72]. In a lead acid battery the energy is stored in the form of, - - -
 (a) Charged ions (b) **Chemical energy**
 (c) Electrostatic energy (d) Electromagnetic energy
- 73]. The forbidden band exists in, - - -
 (a) Semiconductor (b) Insulator
 (c) Conductor (d) **Both a and b**
- 74]. No forbidden band exists between the valence band and the conduction band in a, - - -
 (a) **Conductor** (b) Insulator
 (c) Semiconductor (d) None of these
- 75]. The current flow through electrolyte is due to the movement of, - - -
 (a) **Ions** (b) Holes
 (c) Electrons (d) None of the above



OBJECTIVE PHYSICS

For B.Sc. Students

Editor : Dr. C. M. Kale

OBJECTIVE PHYSICS

For B.Sc. Students

Edited by
Dr. C. M. Kale

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FOREWORD

It gives me an immense pleasure to introduce this book consisting of multiple choice questions based on undergraduate (B.Sc.) Physics curriculum by the Editor Dr. C. M. Kale of Indraraj Arts, Commerce and Science College, Sillod. Dr. C. M. Kale and his co-authors have been teaching this subject for over twenty years and achieved thorough depth in the subject.

This book covers the current syllabus prescribed for the B.Sc. Ist, IInd and IIIrd year students and deals with the multiple choice questions generated on various topics of Physics with optimum level. M.C.Qs are also set on application of laws, principles and concepts of Physics.

I am sure, the book will prove a boon to students of B.Sc. as well as those students who are appearing for SET, NET, PET and other competitive examinations and help them to acquire sound knowledge of the Physics.

In today's pandemic situation all universities are going for online MCQ type examinations as well. For them this book will be very useful to teachers.

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INDEX

Chapter No.	Title, Author Name, and College Address	Page Number
SECTION-I :		
MECHANICS, PROPERTIES OF MATTER AND SOUND		
1.	MECHANICS Dr. Somshankar V. Rajmane Assistant Professor and Head, Department of Physics Jawahar Arts, Science and Commerce College, Anadur. Tal. Tuljapur. Dist. Osmanabad	02-07
2.	ELASTICITY Dr. Santosh D. More Assistant Professor and Head, Department of Physics, Deogiri College, Aurangabad	08-13
3.	VISCOSITY AND SURFACE TENSION Dr. Suchita V. Deshmukh Assistant Professor, Department of Physics Indraraj Arts, Commerce and Science College, Sillod. Dist. Aurangabad	14-20
4.	ULTRASONIC AND ACOUSTICS Dr. Ashok S. Padampalle Associate Professor, Department of Physics Shri Chhatrapati Shivaji College, Omerga. Dist. Osmanabad	21-27
SECTION-II :		
HEAT AND THERMODYNAMICS		
5.	THERMAL CONDUCTIVITY Dr. Manisha R. Patil Assistant Professor, Department of Physics, Deogiri College, Aurangabad	29-35
6.	REAL GASES AND TRANSPORT PHENOMENA Dr. Sangita U. Shinde Assistant Professor, Department of Physics Pratishthan Mahavidyalaya, Paithan. Dist. Aurangabad	36-42

7. THERMODYNAMICS 43-49

Mr. Ramesh T. Ubale

Assistant Professor, Department of Physics
Siddharth Arts, Commerce and Science College, Jafrabad,
Dist. Jalna

8. ENTROPY AND THERMODYNAMIC RELATIONS 50-57

Dr. Sudarshana G. Badhe

Assistant Professor, Department of Physics
R. B. Attal College, Georai, Dist. Beed.

SECTION-III :

GEOMETRICAL AND PHYSICAL OPTICS

9. GEOMETRICAL OPTICS AND OPTICAL INSTRUMENTS 59-65

Dr. Shailendra B. Kolhe

Assistant Professor, Department of Physics
Shivaji Arts, Commerce and Science College, Kannad,
Dist. Aurangabad

10. INTERFERENCE 66-71

Mr. Vitthal V. Gaikwad

Assistant Professor, Department of Physics
Moreshwar College of Arts, Science and Commerce,
Bhokardan, Dist. Jalna

11. DIFFRACTION 72-78

Dr. Vishwamber P. Deshpande

Associate Professor, Department of Physics
Shivaji Arts, Commerce and Science College, Kannad,
Dist. Aurangabad

12. POLARIZATION 79-85

Dr. Atul P. Keche

Assistant Professor, Department of Physics
MSP Mandal's Shri Muktanand College, Gangapur
Dist. Aurangabad.

SECTION-IV :

ELECTRICITY AND MAGNETISM

13. VECTOR ALGEBRA 87-93

Dr. Padmakar G. Sasane

Assistant Professor and Head, Department of Mathematics
Vasantdada Patil College, Patoda, Dist. Beed.

14. ELECTROSTATICS 94-99

Dr. Chandrakant T. Birajdar

Associate Professor, Department of Physics
Shri Madhavrao Patil Mahavidhyala, Murum,
Dist. Osmanabad

15. MAGNETOSTATICS 100-106

Dr. Ashok. K. Dongare

Assistant Professor and Head, Department of Physics
Vasantdada Patil College, Patoda, Dist. Beed.

16. TRANSIENT CURRENTS 107-112

Dr. Balwan U. Patil

Assistant Professor and Head, Department of Physics
Kohinoor College, Khuldabad, Dist. Aurangabad

SECTION-V :

MATHEMATICAL, STATISTICAL PHYSICS AND RELATIVITY

17. DIFFERENTIATION AND ORDINARY DIFFERENTIAL EQUATION 114-121

Ms. Vrushali C. Karade

Assistant Professor, Department of Physics
MSP Mandal's Shri Muktanand College, Gangapur
Dist. Aurangabad.

18. STATISTICAL BASIS AND CLASSICAL STATISTICS 122-127

Mrs. Suvarna B. Patil

Assistant Professor, Department of Physics
Deogiri College, Dist. Aurangabad.

19. QUANTUM STATICS 128-134

Dr. Pravin K. Gaikwad

Assistant Professor, Department of Physics
Shri Chhatrapati Shivaji College, Omerga,
Dist. Osmanbad

20. THEORY OF RELATIVITY 135-141

Dr. Suresh T. Alone

Assistant Professor and Head, Department of Physics
Rajarshi Shahu Arts, Commerce and Science College,
Pathri, Tal. Phulambri, Dist. Aurangabad.

SECTION-VI :

MODERN AND NUCLEAR PHYSICS

21. PHOTOELECTRIC EFFECT 143-149

Dr. Surekha B. Jaiswal

Assistant Professor and Head, Department of Physics
Moreshwar Arts, Science and Commerce College,
Bhokardan, Dist. Jalna

- 22. X-RAYS** 150-156
Dr. Prashant T. Sonwane
 Assistant Professor and Department of Physics
 Sant Ramdas Arts, Commerce and Science College,
 Ghansawangi, Dist. Jalna
- 23. NUCLEAR FORCES AND MODELS** 157-163
Dr. Vinod K. Barote
 Assistant Professor and Head, Department of Physics
 Sant Dnyaneshwar Mahavidyalaya, Soegaon.
 Dist. Aurangabad
- 24. PARTICLE ACCELERATORS & DETECTORS** 164-170
Dr. Shaikh Asif Karim
 Associate Professor and Head, Department of Physics
 Sir Sayyed College of Arts, Commerce, and Science.
 Roshan gate, Aurangabad

SECTION-VII : GENERAL ELECTRONICS

- 25. SEMICONDUCTOR** 172-177
Dr. Santosh S. Deshpande
 Assistant Professor and Head, Department of Physics
 Rashtramata Indira Gandhi College, Jalna
- 26. TRANSISTOR BIASING AND AMPLIFIERS** 178-183
Dr. Sayyed Mujeeb Hadi
 Assistant Professor, Department of Physics
 Sir Sayyed College of Arts, Commerce, and Science.
 Roshan gate, Aurangabad
- 27. OSCILLATORS AND MULTIVIBRATORS** 184-190
Dr. Vijaykumar B. Sanap
 Assistant Professor, Department of Physics,
 Yesheantaro Chavan College, Sillod. Dist. Aurangabad
- 28. MODULATION AND DEMODULATION** 191-197
Dr. Sanjay K. Tupe
 Assistant Professor, Department of Physics
 Kalikadevi Arts, Com. and Science College, Shirur K.
 Dist. Beed.

SECTION-VIII: SOLID-STATE PHYSICS

- 29. CRYSTAL STRUCTURE** 199-205
Dr. Jawaharlal M. Bhandari
 Vice-Principal and Head, Department of Physics
 Shri Amolak Jain Vidya Prasarak Mandals Smt. S. K.
 Gandhi Arts, Amolak Science and P. H. Gandhi
 Commerce College Kada, Dist. Beed.

- 30. BONDING AND BAND THEORY OF SOLIDS** 206-212
Dr. Madhukar S. Patil
 Assistant Professor, Department of Physics,
 Yeshwantrao Chavan College, Sillod. Dist. Aurangabad
- 31. THERMAL PROPERTIES OF SOLIDS** 213-218
Dr. Namdeo N. Waghule
 Assistant Professor, Department of Physics
 Bhagwan Mahavidyalaya, Ashti. Dist. Beed
- 32. FREE ELECTRON THEORY OF METALS AND TRANSPORT PROPERTIES** 219-226
Dr. Dilip R. Sapate
 Assistant Professor and Head, Department of Physics
 Sant Ramdas Arts, Commerce and Science College,
 Ghansawangi. Dist. Jalna

SECTION-IX : CLASSICAL AND QUANTUM MECHANICS

- 33. CLASSICAL MECHANICS** 228-234
Dr. Yogesh B. Rasal
 Assistant Professor, Department of Physics
 Shri Amolak Jain Vidya Prasarak Mandals Smt. S. K.
 Gandhi Arts, Amolak Science and P. H. Gandhi
 Commerce College, Kada. Dist. Beed.
- 34. ORIGIN OF QUANTUM THEORY** 235-241
Dr. Sayd Q. Chishty
 Associate Professor and Head, Department of Physics
 Dr. Rafiq Zakaria College for Women, Navkhanda,
 Aurangabad
- 35. WAVE-PARTICLE DUALITY** 242-250
Dr. Ramdas B. Kavade
 Assistant Professor and Head, Department of Physics
 Bhagwan Mahavidyalaya, Ashti. Dist. Beed
- 36. THE SCHRODINGER EQUATION AND ITS APPLICATIONS** 251-257
Dr. Pradnya R. Maheshmalkar
 Assistant Professor, Department of Physics
 Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts,
 Science, and Commerce College, Beed

SECTION-X : ELECTRODYNAMICS

37. **ELECTROSTATICS** 259-264
Dr. Bhausaheb H. Devmunde
Assistant Professor, Department of Physics
Vivekanand Arts, Sardar Dalipsing Commerce and
Science College, Aurangabad
38. **TIME-VARYING FIELD** 265-271
Dr. Pathan Abdul Rahman Wahed khan
Assistant Professor, Department of Physics
Arts, Science and Commerce College Badnapur,
Dist. Jalna
39. **ELECTROMAGNETIC WAVES** 272-278
Mr. Mohd Khizar Syed
Assistant Professor, Department of Physics
Kohinoor College, Khuldabad. Dist. Aurangabad
40. **INTERACTION OF ELECTROMAGNETIC
WAVES WITH MATTER** 279-284
Dr. Ravindra C. Alange
Associate Professor, Department of Physics
Shri Madhavrao Patil Mahavidhyala, Murum.
Dist. Osmanabad

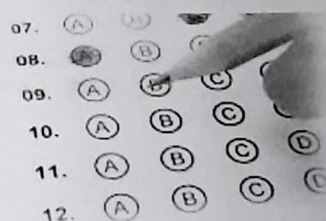
SECTION-XI : ATOMIC, MOLECULAR PHYSICS AND LASER

41. **THE ATOM MODEL** 286-292
Dr. Chandrashekhar M. Kale
Assistant Professor and Head, Department of Physics
Indraraj Arts, Commerce and Science College, Sillod.
Dist. Aurangabad
42. **VECTOR ATOM MODEL** 293-300
Mrs. Quadri Firdose Basheer
Assistant Professor, Department of Physics
Dr. Rafiq Zakaria Cllege for Women, Navkhanda,
Aurangabad.
43. **MOLECULAR SPECTRA** 301-307
Dr. Mahesh K. Babrekar
Assistant Professor, Department of Physics
Indraraj Arts, Commerce and Science College, Sillod.
Dist. Aurangabad

44. **LASER** 308-315
Mr. Kiran. H. Katke
Assistant Professor,
Department of Physics and electronics
Anandrao Dhonde Alias Babaji Arts, Commerce and
Science Mahavidyalaya, Kada. Tq. Ashti, Dist. Beed

SECTION-XII : NON-CONVENTIONAL ENERGY SOURCES AND OPTICAL FIBER

45. **NON-CONVENTIONAL ENERGY SOURCES** 317-322
Dr. Shaikh Mohd. Azhar
Vice-Principal and Associate Professor,
Department of Physics
Sir Sayyed College of Arts, Commerce, and Science.
Roshan gate, Aurangabad
46. **SOLAR PHOTOVOLTAIC SYSTEMS** 323-331
Dr. Raghunath G. Vidhate
Assistant Professor and Head, Department of Physics
Anandrao Dhonde Alias Babaji Arts, Commerce and
Science Mahavidyalaya, Kada. Tq. Ashti, Dist. Beed
47. **INTRODUCTION OF OPTICAL FIBER** 332-337
Dr. Shivanand V. Kshirsagar
Vice-Principal and Head, Department of Physics
Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts,
Science, and Commerce College, Beed
48. **FIBER CABLES AND FABRICATION** 338-344
Dr. Sayyad Shafiyoddin B.
IEEE Senior member, FIETE, FIARA, URSI Senior
member. Associate Professor and Head, Department of
Physics and Computer & Mgt. Science
Milliya Arts, Science and Management Science College,
Beed.



46.

SOLAR PHOTOVOLTAIC SYSTEM

MULTIPLE CHOICE QUESTIONS

- 1]. The electrons in the outermost shell of the atom are called as, - - -
 (a) **Valance Electron** (b) Conduction Electron
 (c) Free electron (d) None of the above
- 2]. At absolute zero temperature, a semiconductor is a perfect, - - -
 (a) Conductor (b) **Insulator**
 (c) Semiconductor (d) Dielectric
- 3]. Such a P-N junction forms a very useful device and is called
 (a) Transistor (b) Transformer
 (c) Resistor (d) **semiconductor diode**
- 4]. Whenever a semiconductor material is illuminated by a photon may be absorbed and propagated through the material depending upon the photon energy - - - of the semiconductor.
 (a) **Bandgap energy** (b) Binding Energy
 (c) Kinetic energy (d) Potential Energy
- 5]. When $E = h\nu > E_g$, the incident photons get - - - in the semiconductor.
 (a) Transmitted (b) Reflected
 (c) **Absorbed** (d) Scattered
- 6]. In the solar cell the typical value of fill factor is in the range of, - - -
 (a) **0.5-0.083** (b) 0.5-0.085
 (c) 0.5-0.081 (d) 0.5-0.082

- 7]. We know that holes and electrons are mobile charges, and therefore are known as, - - -
 (a) Free charge carriers (b) bound charge carriers
 (c) **Mobile charge carriers** (d) opposite charge carriers
- 8]. The potential barrier formed in a P-N junction exerts a - - - force on mobile charge carriers.
 (a) **Repelling force** (b) Attractive force
 (c) Both forces (d) None of these
- 9]. The emf of lead acid cell depends on concentration of, - - -
 (a) Acetic acid (b) **Sulphuric acid**
 (c) Both acid (d) None of these
- 10]. During discharging the lead-acid cell the lead at the negative electrode is converted to - - - and takes place of lead paste in the plate.
 (a) Lead phosphate (b) Lead solution
 (c) **Leadsulphate** (d) None of the above
- 11]. In Bell laboratories produced the first solar cell in, - - -
 (a) **1954** (b) 1854
 (c) 1945 (d) 1845
- 12]. How many junctions does a diode consist of?
 (a) 0 (b) **1**
 (c) 2 (d) 3
- 13]. If the positive terminal of the battery is connected to the anode of the diode, then it is known as, - - -
 (a) **Forward-bias** (b) Reverse-biased
 (c) Equilibrium (d) Schottky barrier
- 14]. During reverse bias, a small current develops known as, - - -
 (a) Forward current (b) Reverse current
 (c) Active current (d) **Reverse saturation current**
- 15]. If the voltage of the potential barrier is V_0 . A voltage V is applied to the input, at what moments will the barrier disappears?
 (a) $V < V_0$ (b) $V = V_0$
 (c) $V > V_0$ (d) $V \ll V_0$

- 16]. In a PN junction with no external voltage, the electric field between acceptor and donor ions is called a, - - -
 (a) Peak (b) **Barrier**
 (c) Threshold (d) Path
- 17]. In a PN junction the potential barrier is due to the charges on either side of the junction, these charges are, - - -
 (a) Majority carriers (b) Minority carriers
 (c) Both 'a' and 'b'
 (d) **Fixed donor and acceptor ions**
- 18]. The efficiency of the solar cell is about, - - -
 (a) 25 % (b) **15 %**
 (c) 40 % (d) 60 %
- 19]. The output power from solar cell is the product of, - - -
 (a) Current and charge
 (b) Current and resistance
 (c) **Current and Voltage**
 (d) Voltage and charge
- 20]. The output of the solar cell is of the order, - - -
 (a) 0.5 W (b) **1.0 W**
 (c) 5.0 W (d) 10.25 W
- 21]. In a fuel cell cathode is of, - - -
 (a) Oxygen (b) Ammonia
 (c) **Hydrogen** (d) Carbon monoxide
- 22]. What is the maximum possible output of a solar array?
 (a) 300 W/m² (b) 100 W/m²
 (c) **250 W/m²** (d) 500 W/m²
- 23]. The current density of a photo voltaic cell ranges from, - - -
 (a) 10 - 20 mA/cm² (b) **40 - 50 mA/cm²**
 (c) 20 - 40 mA/cm² (d) 60 - 100 mA/cm²
- 24]. The term photo voltaic comes from, - - -
 (a) Spanish (b) **Greek**
 (c) German (d) English

25]. The volt is the units of emf that was named after its inventor, - - -
 (a) **Alessandro Volta** (b) Alxender Volta
 (c) Alexa Volta (d) Alexandro Volta

26]. The capacitance of a reverse biased PN junction, - - -
 (a) Increases as reverse bias is increased
 (b) Decreases as reverse bias is increased
 (c) **Increases as reverse bias is decreased**
 (d) Is insignificantly low

27]. For a PN junction diode, the current in reverse bias may be, - - -
 (a) Few miliamperes (b) Between 0.2 A and 15 A
 (c) Few amperes (d) **Few micro or nano amperes**

28]. A module in a solar panel refers to, - - -
 (a) Series arrangement of solar cells.
 (b) Parallel arrangement of solar cells.
 (c) **Series and parallel arrangement of solar cells.**
 (d) None of the above.

29]. The term photo voltaic is in use since, - - -
 (a) 1840 (b) 1844
 (c) **1849** (d) 1850

30]. When the source of light is not sun light then the photo voltaic cell is used as, - - -
 (a) Photo diode (b) Photovoltaic cell
 (c) **Photo detector** (d) Photo transmitter

31]. The region where the electrons and holes diffused across the junction is called, - - -
 (a) Depletion Junction
 (b) **Depletion region**
 (c) Depletion space
 (d) Depletion boundary

32]. The current produce by the solar cell can be given by, - - -
 (a) $I_L - I_D + I_{Sh}$ (b) $I_L + I_D - I_{Sh}$
 (c) $I_L + I_D + I_{Sh}$ (d) **$I_L - I_D - I_{Sh}$**

33]. The amount of photo generated current increases slightly with an increase in, - - -
 (a) **Temperature** (b) Photons
 (c) Diode current (d) Shunt current

34]. A typical output of a solar cell is, - - -
 (a) 0.1 V (b) **0.26 V** (c) 1.1 V (d) 2 V

35]. Which of the following material is used in solar cells?
 (a) Barium (b) **Silicon**
 (c) Silver (d) Selenium

36]. The efficiency of a solar cell may be in the range, - - -
 (a) 2 to 5% (b) **10 to 15%**
 (c) 30 to 40% (d) 70 to 80%

37]. Satellite power requirement is provided through, - - -
 (a) **Solar cells** (b) Dry cells
 (c) Nickel Cadmium cells (d) Lead acid batteries

38]. Batteries are charged by, - - -
 (a) Rectifiers (b) Engine generator sets
 (c) Motor generator sets (d) **Any of the above**

39]. Battery container is acid resistance therefore it is made up of, - - -
 (a) Glass (b) Plastic
 (c) Wood (d) **All of the above**

40]. The following will happen if the battery charging rate is too high.
 (a) Excessive gassing (b) Temperature rise will occur
 (c) Bulging and buckling of plates we occur
 (d) **All of the above**

41]. The following indicate that battery on charge has attained full charge, - - -
 (a) Colour of electrode (c) Gassing
 (c) Specific gravity (d) **All of the above**

42]. To prevent local action in battery only - - - is used in electrolytes.
 (a) Pump water (b) **D stilled water**
 (c) Tap water (d) Both 'a' and 'c'

43]. Ampere hour capacity of an industrial battery is based on - - - hours discharge rate.

- (a) 8
- (b) 12
- (c) 16
- (d) 24

44]. When two batteries are connected in parallel, it should be ensured that - - -

- (a) **They have same emf**
- (b) They have same make
- (c) They have the same ampere-hour capacity
- (d) They have identical internal resistance

45]. In a lead acid battery, separators are provided to, - - -

- (a) Reduce internal resistance
- (b) Facilitate flow of current
- (c) Reduce tendency for polarization
- (d) **Avoid internal short circuits**

46]. The electrode for a battery must be, - - -

- (a) A semi-conductor
- (b) An insulator
- (c) **A good conductor of electricity**
- (d) A bad conductor of electricity

47]. Cells are connected in series in order to, - - -

- (a) **Increase the voltage rating**
- (b) Increase the current rating
- (c) Increase the life of the cells
- (d) None of the above

48]. Five 2V cells are connected in parallel. The output voltage is, - - -

- (a) 1 V
- (b) 1.5 V
- (c) 1.75 V
- (d) **2 V**

49]. The open-circuit voltage of any storage cell depends wholly upon, -

- (a) Its chemical constituents
- (b) On the strength of its electrolyte
- (c) Its temperature
- (d) **All of the above**

50]. The current in a chemical cell is a movement of, - - -

- (a) Positive ions only
- (b) **Positive and negative ions**
- (c) Negative ions only
- (d) Positive hole charges

328

51]. Each pentavalent atom donates one free electron and therefore are known as - - -

- (a) **Donor**
- (b) Acceptor
- (c) Combination
- (d) P-type semiconductor

52]. Internal resistance of a cell is due to, - - -

- (a) Resistance of electrolyte
- (b) Electrode resistance
- (c) Surface contact resistance between electrode and electrolyte
- (d) **All of the above**

53]. The output voltage of a charger is, - - -

- (a) Less than the battery voltage
- (b) **Higher than the battery voltage**
- (c) The same as the battery voltage
- (d) None of the above

54]. It is noticed that during charging, - - -

- (a) There is a rise in voltage
- (b) Energy is absorbed by the cell
- (c) Specific gravity of H_2SO_4 is increased
- (d) **All of the above**

55]. A typical output of a solar cell is, - - -

- (a) 0.1 V
- (b) **0.26 V**
- (c) 1.1 V
- (d) 2 V

56]. Which of the following material is used in solar cells?

- (a) Barium
- (b) **Silicon**
- (c) Silver
- (d) Selenium

57]. In a lead acid cell, hydrogen is liberated at, - - -

- (a) Positive plate
- (b) **Negative plate**
- (c) Both positive and negative plates
- (d) None of the above

58]. Satellite power requirement is provided through, - - -

- (a) **Solar cells**
- (b) Dry cells
- (c) Nickel Cadmium cells
- (d) Lead acid batteries

329

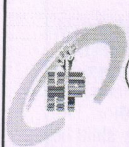
- 59]. During the charging of a lead acid cell, ---
 (a) **Its voltage increases** (b) It gives out energy
 (c) Its cathode becomes dark chocolate brown in Colour
 (d) Specific gravity of H_2SO_4 decreases
- 60]. Active materials of a lead acid cell are, ---
 (a) Spongy lead (b) Lead peroxide
 (c) Dilute H_2SO_4 (d) **All of the above**
- 61]. During charging the specific gravity of the electrolyte of a lead acid battery, ---
 (a) **Increases** (b) Decreases
 (c) Remains the same (d) Becomes zero
- 62]. The capacity of a lead acid cell does not depend on its, ---
 (a) Temperature (b) **Rate of charge**
 (c) Rate of discharge (d) Quantity of active material
- 63]. In a lead-acid cell dilute sulphuric acid approximately comprises the following, ---
 (a) One part H_2O , three parts H_2SO_4
 (b) Two-part H_2O , two parts H_2SO_4
 (c) **Three parts H_2O , One part of H_2SO_4**
 (d) All H_2SO_4
- 64]. The watt-hour efficiency of a lead acid cell varies between, ---
 (a) 25 to 35% (b) 40 to 60%
 (c) **70 to 80%** (d) 90 to 95%
- 65]. The capacity of a lead acid cell depends on, ---
 (a) Amperes (b) **Ampere-hours**
 (c) Watts (d) Watt-hours
- 66]. The capacity of a lead acid cell depends on, ---
 (a) Rate of discharge (b) Temperature
 (c) Density of electrolyte (d) **All of the above**
- 67]. Level of electrolyte in a cell should be --- the level of plates
 (a) Below (b) Equal to
 (c) **Above** (d) None of the above

- 68]. In a lead acid cell, lead is called as, ---
 (a) Positive active material
 (b) **Negative active material**
 (c) Passive material
 (d) None of the above
- 69]. Electrolyte used in a lead acid cell is, ---
 (a) NaOH (b) **H_2SO_4**
 (c) HCL (d) HNO_3
- 70]. The lead acid cell never be discharged beyond, ---
 (a) **1.8 V** (b) 1.9 V
 (c) 2 V (d) 2.1 V
- 71]. If a lead-acid cell is discharge below 1.8 V, the following will happen, ---
 (a) Capacity of cell will reduce
 (b) Sulphation of plates will occur
 (c) Internal resistance will increase
 (d) **All of the above**
- 72]. In a lead acid battery the energy is stored in the form of, ---
 (a) Charged ions (b) **Chemical energy**
 (c) Electrostatic energy (d) Electromagnetic energy
- 73]. The forbidden band exists in, ---
 (a) Semiconductor (b) Insulator
 (c) Conductor (d) **Both a and b**
- 74]. No forbidden band exists between the valence band and the conduction band in a, ---
 (a) **Conductor** (b) Insulator
 (c) Semiconductor (d) None of these
- 75]. The current flow through electrolyte is due to the movement of, ---
 (a) **Ions** (b) Holes
 (c) Electrons (d) None of the above

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स्त्रियांच्या आर्थिक, सामाजिक समस्या
— एक समाजशास्त्रीय अभ्यास’



प्रा. डॉ. आव्हाड भगवान भानुदास



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अनुक्रमणिका

प्रकरण पहिले	-	०६
भारतीय समाजातील स्त्रियांचा दर्जा		
प्रकरण दुसरे	-	२६
सैध्दांतिक दृष्टिकोन आणि पूर्व संशोधनाचा आढावा		
प्रकरण तिसरे	-	५३
संशोधन पद्धती		
प्रकरण चौथे	-	७३
परित्यक्तांच्या आर्थिक, सामाजिक स्थितीचे विश्लेषण		
प्रकरण - पाचवे	-	११०
परित्यक्तांच्या समस्यांचे विश्लेषण		
प्रकरण - सहावे	-	१५७
सारांश, निष्कर्ष आणि उपाययोजना		
संदर्भसूची	-	१७५
परिशिष्ट -	-	१८१

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