

APPENDIX

APPENDIX-I

PRE- TEST QUESTION PAPER

Subject: General Science

Unit: Light (Reflection, Refraction)

Class: X

Full Marks = 20

All Questions are compulsory:

1. According to the law of reflection if the angle of incidence is 45° then what will be the angle of reflection? 1
2. Where does the focal point of a concave mirror lie? 1
3. What is the size of the image formed by a convex mirror? 1
4. State whether the image formed by a convex mirror is real or virtual? 1
5. What is the straight line propagation of light known as? 1

Or

- “Light travels in a straight line”- state whether the statement is true or false. 1
6. How many images of a candle will be formed if it is placed between two parallel plane mirrors separated by 40 cm? 1
 7. What is dispersion of light? 1
 8. The angle made by the incident ray with the plane mirror is 40° , find the angle of reflection. 2
 9. A person is standing at a distance of 1 m., In front of a plane mirror. How far is he from his image in the mirror? 1
 10. With a simple activity show the phenomenon of dispersion of light? 3
 11. State the differences between regular and diffused reflection giving suitable diagrams. 4
 12. Suppose you are in a dark room. Can you see objects in the room? Can you see objects outside the room? Explain. 3

APPENDIX-II

POST- TEST QUESTION PAPER

Subject : General Science

Unit: Light (Reflection, Refraction)

Full marks: 20

All Questions are compulsory:

1. What is the S.I. Unit of power of lens? 1
2. Which one has higher refractive index water or glass? 1
3. The focal length of a convex lens is 15 cm. What is the power of the lens? 1
4. A convex mirror always produces magnified / diminished image 1
5. Why is diamond so light? 1
6. If a ray of light goes from a rarer medium to a denser medium will it bends towards the normal or away from it. 1
7. At what position of an object, a real and point size image is formed by a convex lens. 1
8. If different mirrors a placed in front of you, how will you identify them without touching it. 2
9. If the focal length of a spherical mirror is 10 cm what will be the radius of curvature? 1
10. The focal length of a convex lens is 15 cm. An object is placed 20 c.ms away in front of the lens .Find the nature and location of the image. 3
11. With the help of a plan mirror strip draw, incident ray, normal and reflected ray. Measure angles of incidence and reflection. 4
12. .When light travels from a denser to a rarer medium the reflected ray bends away from the normal. Illustrate /explains this statement with the help of Snell's law. 3

APPENDIX-III

STRUCTURED INTERVIEW SCHEDULE FOR TEACHER

Name..... Sex: M/F.....

Professional Qualification.....

Name of School.....

Type of School: a) Govt./Aided/Private

b)Boys/Girls/Co-Educational

Locality:Rural/Urban/Semi-Urban

Medium of Instruction in School: Regional/English/Other

INSTRUCTION

Some alternate-response questions related to the teaching efficiency have been given below: You have to answer each question according to your judgment, so read question attentively and give your answer clearly. Your answer will be kept strictly confidential.

| Sl.No. | Items regarding science teaching | Yes | No | No Ans. |
|--------|---|-----|----|---------|
| 1. | Do you have any pre-plan of your Science demonstration lesson? | | | |
| 2. | Have you followed the step by step plan? | | | |
| 3. | Do you think your demonstration lesson motivate your students? | | | |
| 4. | Do you think your demonstration makes your explanation of the topic more clearly to the students? | | | |
| 5. | Do you think your lecture can replace demonstration method ? | | | |
| | (a) Is there proper arrangement in your classroom to make demonstration visible to all students? | | | |

| | | | | |
|-----|--|--|--|--|
| | | | | |
| | (b) Are you satisfied with the use of demonstrating materials along with additional materials appropriate to your purpose? (chalk ,board, diagram, chart etc). | | | |
| 7. | Do you think that time allotted in the routine is sufficient for demonstration? | | | |
| 8. | Are you satisfy with students' response? | | | |
| 9. | Have you encouraged them to ask/ discuss the hard points | | | |
| 10. | Have you encouraged your students to accurately observe or think and record carefully the observation or prediction? | | | |
| 11. | Have you trained your students in developing problem-solving attitude in theory and in science process? | | | |
| 12. | Have you seen enquiring attitude among the students? | | | |
| 13. | Have you given them the opportunity /training in open-ended experiments, scientific method & investigatory science activities? | | | |
| 14. | Are you satisfied with the provision of laboratory facility in your school? | | | |
| 15. | Do you ascertain that the students are able to catch the teaching points after experiment? | | | |
| 16. | Have you helped them to do their own generalization after laboratory work? | | | |
| 17. | Have you applied difficult skills particularly manipulation skills in teaching general science? | | | |
| 18. | Are you satisfied with the learning outcome or behavioral change of students after using laboratory method in teaching at your school? | | | |

| | | | | |
|-----|--|--|--|--|
| 19. | Are you satisfied with the performance of students during laboratory condition? | | | |
| 20. | Have you applied all the methods appropriately and correctly? | | | |
| 21. | Do you prefer the combination of the methods in science teaching? | | | |
| 22. | Which of the method of science teaching you prefer the most? | | | |
| | (a) Lecture cum Demonstration method | | | |
| | (b) Inquiry method | | | |
| | (c) Laboratory method | | | |
| 23. | Are you satisfy with students response? | | | |
| 24. | Have you reviewed and summarized the key points? | | | |
| 25. | Have you encouraged them to ask/discuss the hard points? | | | |
| 26. | Are you satisfied with the feedback and the responses of the students (achieved)? | | | |
| 27. | Have you referred the standard books and have included all the critical concepts rules, procedures etc? | | | |
| 28. | Have you prepared tests, to check the entry behaviour, transitional behavior and the terminal behaviour of the students? | | | |
| 29 | Have You faced any problem in teaching science ? If yes mention the problems, | | | |
| 30 | Suggest some measures to solve the problems faced in science teaching. | | | |



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