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| Pre Board Examination – 1 (2023 – 24) | | | | | |
| Subject: PHYSICS  Grade: XII | | Max. Marks:70Time: 3 hours | | | |
| Name: | | | Section: | Roll No: | |
| *General Instructions:*   * This question paper contains 35 questions. * *Questions 1 to 12 are MCQ carries 1 mark each.* * *Questions 13 to 16 are Assertion Reasoning questions carries 1 mark each.* * *Question 17 to 21 are short answer questions which carries 2 marks each* * *Questions 22 to 28 carries 3 marks each* * *Questions 29 and 30 are case study questions* * *Questions 31 to 33 are 5 marker questions.* | | | | | |
| 1 | D | | | | 1 |
| 2. | C | | | | 1 |
| 3 | A | | | | 1 |
| 4 | B | | | | 1 |
| 5 | C | | | | 1 |
| 6 | D | | | | 1 |
| 7 | B | | | | 1 |
| 8 | B | | | | 1 |
| 9 | D | | | | 1 |
| 10 | B | | | | 1 |
| 11 | C | | | | 1 |
| 12 | B | | | | 1 |
| 13 | C | | | | 1 |
| 14 | b | | | | 1 |
| 15 | C | | | | 1 |
| 16 | a | | | | 1 |
|  | **SHORT ANSWER TYPE QUESTION 1** | | | |  |
| 17 | Si – increases ( 1 mark each)  Cu – decreases  OR  Derivation (2 marks) | | | | 2 |
| 18 | **For first lens**  f1=+10cm  u1=−30cm  Using lens formula  1/v1−1/u1=1/f1  1/v1=1/f1+1/u1  v1=+15cm  For the first lens image is formed at a distance of 15cm from the right of it. This image behaves as object for second lens.  **For second lens**  f2=−10cm  u2=15−5=+10cm  1/v2=1/f2+1/u2  1/v2=−1/10+1/10  v2=∞  Real image is formed by the second lens at infinite distance. This image will acts as an object for third lens.  **For third lens**  f3=+30cm  u3=∞  1/v3=1/f3+1/u3  1/v3=1/30+1/∞  v3=+30cm  So, the final image is formed at distance of 30 cm to the right of third lens. | | | | 2 |
| 19 |  | | | | 2 |
| 20 |  | | | | 2 |
| 21 | Graph (1 mark)  Reason (1 mark) | | | | 2 |
| 22 |  | | | | 3 |
| 23 |  | | | | 3 |
| 24 | Draw the magnetic field lines of a current carrying solenoid when a rod made  of copper iron and aluminum is - Brainly.in | | | | 3 |
| 25 | OR | | | | 3 |
| 26 |  | | | | 3 |
| 27 | Statement + derivation (1+2) | | | | 3 |
| 28 | Graph (1 mark)  Conclusions (2 marks) | | | | 3 |
| 29 | **CASE STUDY 1** | | | | 4 |
| 1 | B | | | | 1 |
| 2 | B | | | | 1 |
| 3 | A | | | | 1 |
| 4 | B | | | | 1 |
|  | OR | | | |  |
|  | D | | | |  |
| 30 | **CASE STUDY 2** | | | | 4 |
| 1 |  | | | | 2 |
| 2 | Derivation  OR  2 conditions | | | | 2 |
| 31 | 1. Derivation – 2 marks diagram – ½ mark  ration 1:2 (1/2 marks)     OR   1. Diagram + derivation (3 marks)   2 marks | | | | 5 |
| 32 | 1. Derivation + graph+ diagram (2 +1/2 +1/2) 2. Ratio : 4/3 (2 marks)   **OR**   1. Diagram + derivation 3 marks 2. S = 0.2ohms (2 marks) | | | | 5 |
| 33 | 1. Diagram + derivation (3 marks) 2. Fo = 5fe = 30cm (2 marks)   OR   1. Diagram + derivation (3 marks) 2. reason 2 marks | | | | 5 |