

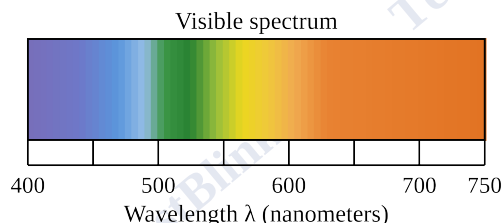
JEE MAIN STRUCTURE OF ATOM — PHOTOELECTRIC EFFECT — PYQS
Max. Marks: 12
Questions: 3
Section A (MCQ) — 2 questions

- Q.1** The work functions of two metals (M_A and M_B) are in the 1 : 2 ratio. When these metals are exposed to photons of energy 6 eV, the kinetic energy of liberated electrons of $M_A:M_B$ is in the ratio of 2.642 : 1. The work functions (in eV) of M_A and M_B are respectively.

[JEE Main 2026 (Online) 23rd January Evening Shift]

- (1) 3.1, 6.2 (2) 1.5, 3.0 (3) 2.3, 4.6 (4) 1.4, 2.8

 Scan or tap for the
full solution

Q.2


Which of the following statements are correct, if the threshold frequency of caesium is 5.16×10^{14} Hz?

- When Cs is placed inside a vacuum chamber with an ammeter connected to it and yellow light is focused on Cs, the ammeter shows the presence of current.
- When the brightness of the yellow light is dimmed, the value of the current in the ammeter is reduced.
- When a red light is used instead of the yellow light, the current produced is higher with respect to the yellow light.
- When a blue light is used, the ammeter shows the formation of current.
- When a white light is used, the ammeter shows formation of current.

Choose the correct answer from the options given below: [JEE Main 2025 (Online) 7th April Morning Shift]

- (1) B, C and D Only (2) A, C, D and E Only
- (3) A, B, D and E Only (4) A, D and E Only

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Section B (Numerical) — 1 question

- Q.3** The surface of sodium metal is irradiated with radiation of wavelength x nm. The kinetic energy of ejected electrons is 2.8×10^{-20} J. The work function of sodium is 2.3 eV. The value of x is _____ $\times 10^2$ nm. (Nearest integer)
(Given : $h = 6.6 \times 10^{-34}$ J s; $1 \text{ eV} = 1.6 \times 10^{-19}$ J; $c = 3.0 \times 10^8 \text{ m s}^{-1}$)

[JEE Main 2026 (Online) 2nd April Evening Shift]

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ANSWER KEY
Section A (MCQ) — 2 questions

Ques.	1	2									
Ans.	3	3									

Section B (Numerical) — 1 question

Ques.	3										
Ans.	5										