

# Odisha B.Ed Entrance Exam 2025 Answer Key (Unofficial)

## Odisha B.Ed Entrance Exam 2025 Question Paper II Set Code D Science Stream

### Physical Science

A person going away from his factory on a scooter at a speed of  $36 \text{ kmh}^{-1}$  listens to the siren of the factory. If the main frequency of the siren is 600 Hz and a wind is blowing along the direction of the scooter at  $36 \text{ kmh}^{-1}$ , the main frequency as heard by the person is:

Answer - 583 Hz

Monochromatic light of wavelength 600 nm is used in a Young's double slit experiment. One of the slits is covered by a transparent sheet of thickness  $1.8 \times 10^{-5} \text{ m}$  made of material of refractive index 1.6. The number of fringes will shift due to the introduction of the sheet is:

Answer - 18

A uniform wire of resistance 50 ohm is cut into 5 equal parts. These parts are now connected in parallel. The equivalent resistance of the combination is:

Answer - 2 ohm

How many possible combinations of quantum numbers are there for the N shell?

- A. 8
- B. 10
- C. 18
- D. 32

Answer - 32

Among the following molecules, which one has the highest dipole moment?

- A.  $\text{CH}_3\text{Cl}$
- B.  $\text{CH}_2\text{Cl}_2$
- C.  $\text{CHCl}_3$
- D.  $\text{CCl}_4$

Answer -  $\text{CHCl}_3$

Which of the following is a hard acid?

- A.  $\text{Li}^+$
- B.  $\text{Cu}^+$
- C.  $\text{Ag}^+$
- D.  $\text{Au}^+$

Answer -  $\text{Li}^+$

Bohr's model can explain:

- A. Spectrum of hydrogen atom only
- B. Spectrum of atom or ion containing one electron only
- C. Spectrum of hydrogen molecule
- D. Solar spectrum

Answer - Spectrum of atom or ion containing one electron only

In which of the following C-H bond, the highest s character is found?

- A. Acetylene

- B. Ethylene
- C. Methane
- D. Carbene

Answer - Acetylene

If the energies of two photons are in the ratio of 3:2, their wavelengths will be in the ratio of:

- A. 9:4
- B. 2:3
- C. 1:2
- D. 3:2

Answer - 2:3

## Bio-Science

Prokaryotic cells do not have:

Answer - Mitochondrion

Sandwich model of the plasma membrane was proposed by:

Answer - Davson and Danielli

G2 phase of cell cycle occurs between:

Answer - M phase and S phase

Which one is said to have semi-autonomous nature?

- A. Endoplasmic reticulum
- B. Golgi complex
- C. Peroxisome
- D. Chroloplast

Answer - Chroloplast

The family Xanthophyceae belongs to \_\_\_\_

Answer - Algae

The sporophyte of \_\_\_\_ is devoid of seta.

Answer - Riccia

Which is not a renewable energy source?

- A. Fossil fuel
- B. Water
- C. Tide
- D. Sunlight

Answer - Fossil fuels

Regarding biological resource, the number of species per unit area is called species \_\_\_\_.

- A. Diversity
- B. Evenness
- C. Equitability
- D. Richness

Answer - Richness

In relation to energy flow in an ecosystem, PAR refers to:

- A. Photosynthetically Active Radiation
- B. Photosynthetically Accurate Radiation
- C. Photosynthetically Assured Radiation
- D. Photosynthetically Absorbed Radiation

Answer - Photosynthetically Active Radiation

The consumers that feed on the herbivores are called:

Answer - Primary carnivores

## Mathematics

The decimal equivalent of the binary number 11001 is \_\_\_\_

Answer - 25

On the set  $\{1, 2, 3, 4\}$ , consider the relation  $R = \{(1,2), (3,1), (3,4)\}$ . What is the minimum number of elements to be added in  $R$  to make it an equivalence relation?

- A. 11
- B. 10
- C. 8
- D. 6

Answer - 11

Rs 8400 is divided among A, B, C, and D in such a way that the shares of A and B, B and C, and C and D are in the ratios of 2:3, 4:5, and 6:7, respectively, then what is the share of A?

Answer - Rs 1280

The angle of elevation of the top of a tower is  $30^\circ$ . If the height of the tower is doubled, then the angle of elevation of its top will be \_\_\_\_

Answer - Less than  $60^\circ$

Three or more lines which pass through the same point are called \_\_\_\_

Answer - Concurrent lines

