

CORRECTIONS IN ANSWERS TO THE UG ENTRANCE EXAMINATION-2021 QUESTIONS

Date: 28.09.2021 (Batch 1) (10.30 am to 12.30 pm)

Q2783164 (Q110) During the electrolysis of water 4 moles of electrons were transferred from anode to cathode. The total volume of the gases produced at STP will be approximately.

- A. 44.8 L
- B. 89.4 L
- C. 67.2 L
- D. 22.4 L

Correct Answer: 67.2 L

Q 2783520 (Q111) In FCC lattice, if radius of each sphere is 140 pm, what will be the edge length of the unit cell?

- A. 400 pm
- B. 280 pm
- C. 170 pm
- D. 260 pm

Correct Answer: 400 pm

Q2783387 (Q122) Which of the following has only 1° hydrogen atom?

- A. 2, 3 – dimethyl cyclobutane
- B. Cyclopentene
- C. 2, 2, 3, 3 tetramethyl butane
- D. 2, 3 – dimethyl butane

Correct Answer: 2, 2, 3, 3 tetramethyl butane

Q2785401 (Q268) Pedicillate bracteate bisexual flowers borne acropetally on an elongated peduncle form an inflorescence

- A. Spike
- B. Raceme
- C. Corymb
- D. Catkin

Correct Answer: Both "Raceme" and "Corymb" are Correct

Date: 28.09.2021 (Batch 2) (2 pm to 4 pm)

Q2768643 (Q7) An EM wave of intensity I falls on a surface kept in vacuum and exerts radiation pressure P on it. Which one of the following is NOT true?

- A) Radiation pressure is $\frac{2I}{c}$ if the wave is totally reflected
- B) Radiation pressure is $\frac{I}{c}$ if the wave is totally absorbed
- C) Radiation pressure is $\frac{I}{c}$ if the wave is totally reflected
- D) Radiation pressure is in the range $\frac{I}{c} < p < \frac{2I}{c}$ for real surfaces

Correct Answer: Radiation pressure is $\frac{I}{c}$ if the wave is totally reflected

Q2782971 (Q100) A molecule of the formula AB_3 has three bond pair and two lone pair of electron on the central atom A. The shape of the molecule is

- A. Triangular planar
- B. T – shaped
- C. Pyramidal
- D. Triangular bipyramidal

Correct Answer: T – shaped

Q2781206 (Q245) Which of the following statements is correct?

- A. African catfish is not a threat to indigenous catfish
- B. Stellar's sea cow is an extinct animal
- C. Parthenium is an endemic species of our country
- D. Lantana is popularly known as Carrot grass

Correct Answer: Both Stellar's sea cow is an extinct animal and Lantana is popularly known as Carrot grass

Q2784962 (Q267) The toxic effect of carbon monoxide is due to its higher affinity for haemoglobin as compared to oxygen approximately by

- A. 300 times
- B. 100 times
- C. 200 times
- D. 250 times

Correct Answer: Both 200 times and 250 times

Date: 29.09.2021 (Batch 1) (10.30 am to 12.30 pm)

Q2783141 (Q114) During the electrolysis of water 4 moles of electrons were transferred from anode to cathode. The total volume of the gases produced at STP will be approximately

- A. 89.4 L
- B. 44.8 L
- C. 22.4 L
- D. 67.2 L

Correct Answer : 67.2 L

Q2785277 (Q.259) The scientist who discovered that all plants were made of cells and contributed to the development of the cell theory is

- A) Matthias Schleiden
- B) Robert Hooke
- C) Theodor Schwann
- D) Anton van Leeuwenhoek

Correct Answer: Both Matthias Schleiden and Robert Hooke

Q2781216 (Q263) According to IUCN RED list, what is the status of the Red panda?

- A) Vulnerable species
- B) Extinct species
- C) Critically endangered species
- D) Endangered species

Correct Answer: Endangered species

Date: 29.09.2021 (Batch 2) (2 pm to 4 pm)

Q2768788 (Q 55) Consider a beam of electrons (each electron with energy E_0) incident on a metal surface kept in an evacuated chamber. Then,

- A. Electrons can be emitted with any energy, with a maximum of E_0 .
- B. No electrons will be emitted as only photons can emit electrons
- C. Electrons can be emitted but all with an energy, E_0
- D. Electrons can be emitted with any energy, with a maximum of $E_0 - \phi$ (ϕ is the work function)

Correct Answer Electrons can be emitted with any energy, with a maximum of $E_0 - \phi$ (ϕ is the work function)

Date: 30.09.2021 (Batch 1) (10.30 am to 12.30 p.m)

Q2788075 (Q105) When a graph is plotted between $\ln k$ and $1/T$ for a first order reaction, a straight line is obtained. The slope of the line is equal to

- A. $-E_a/2.303R$
- B. $-E_a/R$
- C. $-E_a/2.303$
- D. $-E_aR/2.303$

Correct Answer: $-E_a/2.303R$

Q 2782932 (108) The pair of elements belonging to same period is

- A) Z=11 and Z=19
- B) Z=12 and Z=36
- C) Z=12 and Z=17
- D) Z=19 and Z=39

Correct Answer: Z=12 and Z=17

Q2782886 (Q131) The number of unpaired electrons in Mn^{2+} is

- A. 4
- B. 5
- C. 2
- D. 3

Correct Answer: 5

Date: 30.09.2021 (Batch 2) (2 p.m to 4 p.m)

Q2785244 (Q208) Which of the following is a CORRECT statement?

- A. Chromosomes are arranged along the equator during prophase of mitosis.
- B. During mitosis endoplasmic reticulum and nucleolus disappear completely at every prophase.
- C. Small disc shaped structures at the surface of the centromeres that appear during metaphase are kinetochores.
- D. A cell plate is laid down during interphase.

Correct Answer: Small disc shaped structures at the surface of the centromeres that appear during metaphase are kinetochores.