

## JENPAS UG 2023 Question Paper (Paper 1)

### BIOLOGY

- ATPase enzyme needed for muscle contraction is located in the?
- Which of the following plant parts is used to obtain haploidy?
- Which of the following cell organelles does not contain DNA?
- Down's syndrome in humans occurs due to the following chromosomal disorder:
- The waxy substance associated with the wall of the cork cell is:
- 'Bad Ozone' is found in?
- Which one of the following membranes surrounds the heart?
- Golden rice developed by genetic engineering is able to produce an excess amount of?
- Which one of the following malarial parasites has the longest incubation period?
- In which era reptiles were dominated?
- The respiratory center in the human brain is located in?
- Okazaki is known for his contribution in the understanding of which of the following?
- Which one of the following is true as per Chargaff's law?
- Which one of the following is the initiation codon for the synthesis of protein in eukaryotes?
- The edible part of the mango is?

### PHYSICS

- A thin uniform rod of length  $L$  and mass  $M$  is swinging freely about a horizontal axis passing through its end. Its maximum angular speed is  $w$ . Its centre of mass rises to a maximum height of:

A convex lens of focal length  $10$  produces a ten times magnified real image of an object. What is the object distance?

- The velocity  $v$  of a particle as function of time  $t$  is given by  $v(t) = v_0(1 - e^{-at})$ . The dimensions of  $v_0/a$  is
- A particle is falling freely from height  $h$  to the ground. Which of the following figure most correctly depicts the acceleration 'a' of the particle as a function of time  $t$ ?
- Let \*given formula\* represent the position of particles  $p$  and  $q$  respectively as function of time  $t$ . The relative speed of the two particles at that instant  $t=1$  sec will be:
- When a force  $F=XY\dots$  acts on a particle and moves it along a straight line from the origin to the point  $(4,0)$ , the work done is,
- When a spring is stretched by  $x$  amount, the potential energy is stored in it is  $E$ . When the spring is stretched by another  $x$  amount, the potential stored in the spring becomes  $E'$  then  $E'/E$  is,
- An artificial satellite is moving in a circular orbit around the earth with a speed equal to half the magnitude of the escape velocity from the earth's surface. The height of the satellite above the earth's surface is  $[R=\text{radius of the earth}]$
- Consider the two different situations  $X$  and  $Y$  of the two concentric coils of  $N_1$  and  $N_2$  turns and radii  $R_1$  and  $R_2$  respectively as shown above. If the magnetic field at  $O$  in situation  $X$  is  $B_x$  and in situation  $Y$  is  $B_y$  then  $B_x - B_y$  is

CollegeBekho

Discover · Prepare · Achieve

### LOGICAL REASONING

- There is a relationship between first two terms and the same relationship holds good between the next two terms. Find out the missing term. CAT: DDY :: BIG: ?
- Select the pair in which letter groups are similarly related as in the given pair- CEH:IKN
- Choose the word which is least like the other words in the group
- A clock seen through a mirror shows quarter to three. What is the correct time shown by the clock
- If SPIDER is written as PSDIRE in a certain code, how would COMMON be written in the code?
- If the letter PRABA is coded as 27595 and THILAK is coded as 368451, how can BHARAT be coded?

- In a certain language, 481 means 'sky is blue', 246 means 'sky is deep' and 698 means sky looks blue. What number is a code for 'deep'?
- Find the missing term of the given series- 1, 4, 27, 16, ?, 36, 343
- Choose the correct alternative? Assam: Dispur :: Nagaland: ?
- BEGK is related to ADFJ, in the same way PSVY is related to?

## Chemistry

- Which of the following is not paramagnetic?  
 (A)  $H_2^+$   
 (B)  $O_2$   
 (C)  $O_2^+$   
 (D)  $O_2^-$
- During extraction of copper (Cu) from its sulphide ore, which of the following compound is used to reduce the  $Cu_2O$  to Cu ?

(A) FeS                      (B)  $Cu_2S$                       (C)  $SO_2$                       (D) CO

- Which reagent will be used to remove  $SO_4^{2-}$  ion from the solution containing  $SO_4^{2-}$  and  $Cl^-$  ions?

(A) NaOH                      (B)  $BaSO_4$                       (C)  $Ba(OH)_2$                       (D)  $Mg(NO_3)_2$

- The total number of the isomers possible for tribromobenzene is

(A) 5                      (B) 4                      (C) 3                      (D) 2

- How many atoms of an acidic hydrocarbon of molecular formula  $C_4H_4$  lie on a straight line?

(A) 4                      (B) 5                      (C) 6                      (D) 8

## English

- Choose the most appropriate option to fill in the blank to complete the sentence most meaningfully:  
 I'll just tell the professor that I \_\_\_\_\_ him when he told us when the paper was due

- (A) used to misunderstand
- (B) must have understood
- (C) could misunderstand
- (D) should have understood

- Choose the most appropriate option to fill in the blank to complete the sentence most meaningfully:

Her silence was taken as \_\_\_\_\_ agreement

- (A) hostile
- (B) tacit
- (C) overt
- (D) general

- Choose the most appropriate filler to complete the given sentence correctly and most meaningfully:

Whichever way we approach the problem, \_\_\_\_\_

- (A) no one will not solve it.
- (B) it will not solve.
- (C) it will not be solved.
- (D) it is solvable.

- Choose the option, which can best replace the group of words given in bold italics:

She exhibited remarkable **sangfroid** during the crisis.

- (A) Temper
- (B) Irritation
- (C) Composure
- (D) Anger

- Select that word which needs to be removed from the given grammatically correct:

You should tell to me exactly what happened there.

- (A) should
- (B) to
- (C) what
- (D) but