

## VITEEE 2025 April 24 Question Paper

**Time Allowed :1 Hour**

**Maximum Marks :100**

**Total Questions :50**

### General Instructions

**Read the following instructions very carefully and strictly follow them:**

The test is of 2 hours and 30 minutes duration.

2. The question paper consists of 125 questions. The maximum marks are 200.
3. There are three parts in the question paper consisting of Physics, Chemistry, Biology/Mathematics, Aptitude and English e.

**1.** A body of mass 2 kg is moving with a velocity of 3 m/s. What is its kinetic energy?

- (1) 6 J
  - (2) 9 J
  - (3) 12 J
  - (4) 18 J
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**2.** A bulb rated 60 W operates for 2 hours. How much energy does it consume in this time?

- (1) 120 J
  - (2) 1200 J
  - (3) 720 J
  - (4) 4320 J
- 

**3.** What is the focal length of a lens if its power is +2 D?

- (1) 0.5 m
  - (2) 1.0 m
  - (3) 2.0 m
  - (4) 0.2 m
- 

**4.** A stone is dropped from a height of 45 m. What is the time taken for the stone to reach the ground?

- (1) 3 s
  - (2) 5 s
  - (3) 6 s
  - (4) 9 s
- 

**5.** A current of 2 A flows through a resistor for 10 minutes. What is the total charge that flows through the resistor?

- (1) 120 C
  - (2) 1200 C
  - (3) 240 C
  - (4) 360 C
-

**6.** A body of mass 10 kg is moving with a speed of 5 m/s. What is the momentum of the body?

- (1) 50 kg m/s
  - (2) 100 kg m/s
  - (3) 200 kg m/s
  - (4) 25 kg m/s
- 

**7.** The potential energy of a body at a height of 10 meters is 200 J. What is its mass? (Take  $g = 10 \text{ m/s}^2$ )

- (1) 2 kg
  - (2) 5 kg
  - (3) 10 kg
  - (4) 20 kg
- 

**8.** What is the resistance of a conductor if the potential difference across it is 12 V and the current flowing through it is 3 A?

- (1) 4  $\Omega$
  - (2) 6  $\Omega$
  - (3) 9  $\Omega$
  - (4) 12  $\Omega$
- 

**9.** A convex lens has a focal length of 10 cm. What is the magnification produced when the object is placed 30 cm from the lens?

- (1) 2
  - (2) 1.5
  - (3) 1
  - (4) 4
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**10.** What is the molar mass of NaCl?

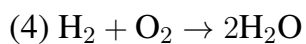
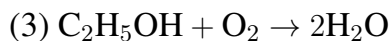
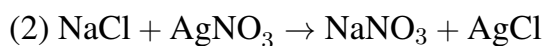
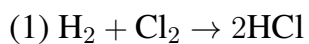
- (1) 58 g/mol
- (2) 60 g/mol

(3) 62 g/mol

(4) 56 g/mol

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**11.** Which of the following is an example of a redox reaction?



**12.** What is the pH of a solution if the concentration of  $\text{H}^+$  ions is  $1 \times 10^{-5}$  mol/L?

(1) 5

(2) 6

(3) 4

(4) 7

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**13.** What is the number of moles in 18 g of water ( $\text{H}_2\text{O}$ )?

(1) 1 mol

(2) 0.5 mol

(3) 2 mol

(4) 0.25 mol

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**14.** Which of the following gases has the highest density at STP?

(1)  $\text{O}_2$

(2)  $\text{N}_2$

(3)  $\text{CO}_2$

(4)  $\text{H}_2$

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**15.** Which of the following acids is a strong acid?

(1)  $\text{H}_2\text{SO}_4$

(2)  $\text{CH}_3\text{COOH}$

(3)  $\text{H}_2\text{CO}_3$

(4)  $\text{HNO}_3$

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**16.** What is the pH of a solution with a  $H^+$  concentration of  $1 \times 10^{-3}$  mol/L?

- (1) 3
  - (2) 4
  - (3) 5
  - (4) 6
- 

**17.** What is the molar volume of an ideal gas at standard temperature and pressure (STP)?

- (1) 22.4 L/mol
  - (2) 1 L/mol
  - (3) 24 L/mol
  - (4) 12 L/mol
- 

**18.** Which of the following is a characteristic property of acids?

- (1) They turn blue litmus paper red.
  - (2) They turn red litmus paper blue.
  - (3) They have a bitter taste.
  - (4) They are slippery to touch.
- 

**19.** Find the value of  $x$  in the equation  $2x + 3 = 7x - 8$ .

- (1)  $x = 1$
  - (2)  $x = 2$
  - (3)  $x = 3$
  - (4)  $x = 4$
- 

**20.** In a code language, 'TIGER' is written as 'JUISF'. How will 'EQUAL' be written in that language?

- (1) RFXMB
  - (2) RFXMB
  - (3) RFXMB
  - (4) RXMBF
-

**21.** Images of consonants of the capital English alphabets are observed in a mirror. What is the number of images of these which look like their original shapes?

- (1) 11
  - (2) 9
  - (3) 7
  - (4) 5
- 

**22.** TUV : VYB :: PRA : ?

- (1) PRS
  - (2) RVG
  - (3) QVR
  - (4) RVO
- 

**23.** A is the brother of R. C is the mother of B. M is the sister of C. How is M related to B?

- (1) Nephew
  - (2) Niece
  - (3) Aunt
  - (4) Cannot be determined
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**24.** How is P related to R? Statements:

I. Q is the son of R.

II. Q is the brother of P.

(A) If Statement I, alone is sufficient to answer the question. (B) If Statement II, alone is sufficient to answer the question. (C) If Statements I and II together are needed to answer the question. (D) If Statements I and II together are not sufficient to answer the question.

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**25.** Find the value of  $x$  in the equation  $5x - 7 = 3x + 9$ .

- (1)  $x = 8$
  - (2)  $x = 6$
  - (3)  $x = 5$
  - (4)  $x = 4$
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**26.** Images of vowels of the capital English alphabets are observed in a mirror. What is the number of images of these vowels that look like their original shapes?

- (1) 3
  - (2) 4
  - (3) 5
  - (4) 2
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**27.** MNO : PQR :: XYZ : ?

- (1) YZ
  - (2) ZY
  - (3) ZXA
  - (4) ABC
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**28.** Find the value of  $x$  in the equation  $4x - 2 = 10$ .

- (1)  $x = 3$
  - (2)  $x = 2$
  - (3)  $x = 4$
  - (4)  $x = 5$
- 

**29.** How many numbers between 0 and 9 look the same when observed in a mirror?

- (1) 4
  - (2) 3
  - (3) 6
  - (4) 5
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**30.** Find the odd one out from the following series: 5, 10, 20, 40, 100, 150, 200

- (1) 10
  - (2) 40
  - (3) 100
  - (4) 150
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