

CAREERS 360

JEE MAIN 2024

Paper Analysis

27th Jan Morning Shift

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Few Memory-Based Questions

1. A wire of length L and resistance R is cut into 5 equal parts and those connected in parallel then R_{eq} across it will be

- A) $25 R$
- B) $R/5$
- C) $5R$
- D) $R/25$

Answer- D) $R/25$

2. A body of mass 1000 kg has velocity 6 m/s if extra 200 kg mass is embedded in it then the new velocity of the combined body is ?

- A) 5 m/s
- B) 3 m/s
- C) 10 m/s
- D) 2 m/s

Answer - A) 5 m/s

3. If the electron revolving in the 3rd Bohr's orbit of Hydrogen species has a radius R , then what will be its radius in 4th orbit in terms of R

- A) $(25/9) R$
- B) $(16/9) R$
- C) $(36/9) R$
- D) $(9/16) R$

Answer - B) $(16/9) R$

4.

$$8 = 3 + \frac{3+p}{4} + \frac{3+2p}{4^2} \dots \infty$$

- A) 9
- B) $5/4$
- C) 3
- D) 1

Answer - A) 9

5. Which does not show a variable oxidation state?

- (A) F
- (B) Cl
- (C) Br
- (D) I

Answer - A) F

6. $4x + 5y = 20$ line is given.

Two other lines are given L_1 and L_2 which trisect it and pass through origin. Then find the slope made by these lines

Answer- A) $\frac{8}{5}$ & $\frac{2}{5}$

- (a) $\frac{8}{5}$ & $\frac{2}{5}$
- (b) $\frac{8}{5}$ & 1
- (c) $\frac{2}{5}$ & $\frac{1}{2}$
- (d) $\frac{5}{2}$ & $\frac{1}{2}$

7. If at the surface of Earth, the acceleration due to gravity is given 'g' then find the acceleration due to gravity at the surface of the Earth if the diameter of Earth reduces to half. (earth of mass is constant here)

- (1) g
- (2) 2g
- (3) 4 g
- (4) 16 g

Ans- (3) 4 g

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Important Details about the Exam

The National Testing Agency (NTA) conducted the Joint Entrance Examination (JEE) Main 2024, Jan 27 Morning shift exam today from 9 AM to 12 PM. Here are the other important exam details provided to you.

Particulars	Details
Mode of exam	Online (Computer-based test)
JEE Main exam duration	180 minutes (3 hours)
Types of questions	MCQs and Numerical value questions
Official website of JEE Main	https://jeemain.ntaonline.in/
JEE Main 2024 Marking Scheme	Correct Answer - Four marks (+4) Incorrect Answer- Minus one mark (-1)

Subject-wise distribution of Questions and Marks:-

Subject	Section A (MCQs)	Section B Numerical value questions	Marks
Mathematics	20*	10*	100
Physics	20*	10*	100
Chemistry	20*	10*	100
Total		90	300

*Each Subject will have two sections. Section A will be of Multiple-Choice Questions (MCQs) and Section B will contain Questions whose answers will be filled in as a numerical value. In Section B, candidates must attempt any 5 questions out of 10. There will be negative markings for both Section A and Section B. Section B's answer should be rounded off to the nearest integer.

Overall Paper Analysis

- The 2024 JEE Main Paper was relatively easy with respect to the 2023 JEE Main Paper.
- Maths was most difficult with respect to Physics and chemistry subjects.
- Questions asked from below given important topics

Physics-

- Modern physics 3-4 questions
- Kinematics 2-3 questions
- Rotation motion 1 question
- Capacitance
- Meter bridge
- Ray optics
- Collision

Maths

- Trigonometry
- Sequence and series
- Vector 3D (3 questions)
- Integration (3-4 questions especially definite integral)
- Matrices (2 questions)

Chemistry

- Chemical kinetics
- Mole concept
- Inorganic chemistry
- Magnetic moment calculations

- Lots of questions were easily solvable by using formulae.

This analysis is from the memory-based information provided by students who attended the exam. Real accurate analysis may vary and will be provided when the official question paper is released by the NTA.

Physic Analysis

- Physics subject questions were relatively easier than Maths.
- The overall difficulty level of physics was moderate to tough
- Questions were asked from below given important topics
 - Modern physics 3-4 questions
 - Kinematics 2-3 questions
 - Rotation motion 1 question
 - Capacitance
 - Meter bridge
 - Ray optics
 - Collision
- The paper was relatively theory-based.
- Few assertion and reason-type questions were asked.
- Lots of questions were easily solvable by using formulae.

This analysis is from the memory-based information provided by students who attended the exam. Real accurate analysis may vary and will be provided when the official question paper is released by the NTA.

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Maths Analysis

- Maths subject questions were relatively harder than the other two subjects.
- The overall difficulty level of physics was moderate to tough
- Questions asked from below given important topics
 - Trigonometry
 - Sequence and series
 - Vector 3D (3 questions)
 - Integration (3-4 questions especially definite integral)
 - Matrices (2 questions)
- Lots of questions were easily solvable by using formulae.
- Maths paper was lengthier and more calculative than the other two subjects.

This analysis is from the memory-based information provided by students who attended the exam. Real accurate analysis may vary and will be provided when the official question paper is released by the NTA.

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Chemistry Analysis

- Chemistry subject questions were relatively easier than Maths and physics.
- The overall difficulty level of physics was easy to moderate.
- Inorganic weightage was relatively more than organic chemistry and physical chemistry
- Questions asked from below given important topics
 - Chemical kinetics
 - Mole concept
 - Magnetic moment calculations
- Few assertion and reason-type questions were asked.
- A few questions were asked from NCERT directly.

This analysis is from the memory-based information provided by students who attended the exam. Real accurate analysis may vary and will be provided when the official question paper is released by the NTA.

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Tentative Percentile Vs Score

Since the paper was relatively easy. The higher percentile will be for higher marks. Here is the tentative percentile vs score obtained for the exam.

Overall Percentile	JEE Main scores (Difficulty level -Easy)
99.5	212-219
99.1	195-198
98.5	189-190

These are tentative percentiles from the memory-based information provided by students who attended the exam. Actual percentiles may vary based on the all shifts exam paper and their difficulty level.

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