JEECUP 2026 Group A Polytechnic June 3

Question Paper (Memory-Based)

Conducted by Joint Entrance Examination Council, Uttar Pradesh (JEECUP).

General Instructions

(i) The examination is conducted in Computer-Based Test (CBT) mode.

(ii) Each question carries **+4 marks** for a correct answer and **-1 mark** for a wrong answer.

(iii) The total number of questions is **100**.

(iv) The total duration of the exam is **150 minutes** (2 hours and 30 minutes).

1. The perimeter of an equilateral triangle whose area is $4\sqrt{3}\,\text{cm}^2$ is equal to

(A) 20 cm

(B) 10 cm

(C) 15 cm

(D) 12 cm

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2. $\tan 3A - \tan 2A \cdot \tan A$ is equal to

(A) $\tan 3A - \tan 2A - \tan A$

(B) $\tan 3A + \tan 2A + \tan A$

(C) $\tan 3A - \tan 2A - \tan A$

(D) None of these

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3. The value of $\sqrt[5]{\dfrac{72.9}{0.4096}}$ is

(A) 5.625

(B) None of these

(C) 5.652

(D) 5.265

4. If 7 is the mean of $5, 3, 0.5, 4.5, a, 8.5, 9.5$, then the value of a is

(A) 49

(B) 18

(C) 31

(D) 12

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5. The value of $\sin\theta + \cos(90^\circ + \theta) + \sin(180^\circ - \theta) + \sin(180^\circ + \theta)$ is

(A) 0

(B) -1

(C) 1

(D) $\frac{1}{2}$

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6. One proton enters in a magnetic field of $2500\,\text{N/Amp}\cdot\text{m}$ intensity with velocity of $4 \times 10^5\,\text{m/s}$ in parallel to the field. The force exerted on proton will be

(A) $0\,\text{N}$

(B) $4.8 \times 10^{-10}\,\text{N}$

(C) $0.48 \times 10^{-10}\,\text{N}$

(D) $4.8 \times 10^{10}\,\text{N}$

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7. $100\,\text{g}$ of water at $60^\circ C$ is added to $180\,\text{g}$ of water at $95^\circ C$. The resultant temperature of mixture is

(A) $80^\circ C$

(B) $82.5^\circ C$

(C) $77.5^\circ C$

(D) $85^\circ C$

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8. Two unlike parallel forces $2N$ and $16N$ act at the ends of a uniform rod of length $21\,cm$. The point where the resultant acts is at a distance of ____ from the greater force.

(A) $4\,cm$

(B) $3\,cm$

(C) $2\,cm$

(D) $1\,cm$

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9. Magnetic flux of a 20 turn coil is reduced to zero from $0.3\,Wb$ in one second. The induced e.m.f. between the terminals of the coil is

(A) $1.5\,V$

(B) $6\,V$

(C) $2.5\,V$

(D) $3\,V$

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10. The electric field strength at a point in an electric field is $30\,N/C$. Find the force experienced by a charge of $20\,C$ at that point.

(A) $600\,N$

(B) $30\,N$

(C) $20\,N$

(D) $300\,N$

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11. Electronic configuration of copper can be represented as

(A) $[\mathrm{Ar}]\,4s^1\,3d^{10}$

(B) $[\mathrm{Ar}]\,4s^2\,3d^9$

(C) $[\mathrm{Ar}]\,4s^2\,3d^9\,4p^1$

(D) $[\mathrm{Ar}]\,4s^2\,3d^{10}\,4p^1$

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12. Which among the following pairs are not having same number of total electrons?

(A) Na^+ and Al^{3+}

(B) O^{2-} and F^-

(C) Mg^{2+} and Ar

(D) P^{3-} and Ar

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13. The half life period of a radioactive element is 150 days. After 600 days $1\,g$ of the element will be reduced to

(A) $\frac{1}{32}\,g$

(B) $\frac{15}{16}\,g$

(C) $\frac{1}{8}\,g$

(D) $\frac{1}{16}\,g$

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14. The number of molecules present in $2.8\,g$ of nitrogen is

(A) 6.023×10^{22}

(B) 6.023×10^{21}

(C) 6.023×10^{20}

(D) 6.023×10^{23}

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15. The common name of 2-Butanone is

(A) Acetone

(B) Butyraldehyde

(C) Acetic anhydride

(D) Ethyl Methyl Ketone
