

KEAM 2026 Pharmacy April 18

Question Paper

Conducted by CEE Kerala



General Instructions

- (i) **Duration:** The total duration of the examination is 3 hours (180 minutes).
- (ii) **Total Marks:** The complete paper carries a maximum of 600 marks.
- (iii) **Structure:** The paper has 3 Sections:
 - **Section A:** 45 Multiple Choice Questions (Physics).
 - **Section B:** 30 Multiple Choice Questions (Chemistry).
 - **Section B:** 75 Multiple Choice Questions (Mathematics).
- (iv) **Compulsory Questions:** All 150 questions are compulsory.
- (v) Each question has four options. Only **one** option is correct.
- (vi) **Correct Answer:** +4 marks.
- (vii) **Incorrect Answer:** -1 (Negative marking).
- (viii) **Unanswered/Marked for Review:** 0 marks.

PHYSICS

1. The dimension of mutual inductance is (Denote dimension of current as A)

- (A) $ML^2T^2A^{-2}$
- (B) $ML^2T^{-2}A^{-2}$
- (C) $ML^{-2}T^2A^{-2}$
- (D) $ML^2T^{-3}A^{-3}$

(E) $\text{ML}^2\text{T}^{-3}\text{A}^{-2}$

2. A pure inductor of inductance 0.1H is connected to an AC source (of rms voltage 220 V and angular frequency 300 Hz). The rms current is

- (A) $\frac{3}{22}$ A
 - (B) $\frac{22}{3}$ A
 - (C) $\frac{11}{150}$ A
 - (D) $\frac{150}{11}$ A
 - (E) $\frac{22}{6\pi}$ A
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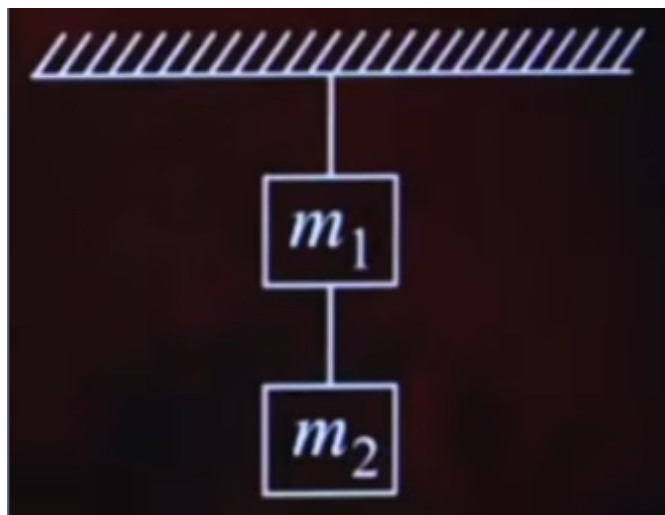
3. An object having a velocity of 5 m/s is accelerated at the rate 2 m/s^2 for 6s. Find the distance travelled during the period of acceleration.

- (A) 60 m
 - (B) 25 m
 - (C) 36 m
 - (D) 66 m
 - (E) 45 m
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4. A vehicle moving at 36 km/hr is to be stopped by applying brakes in the next 5 m. If the vehicle weighs 2000 kg, determine the average force that must be applied on it.

- (A) 10^4 N
 - (B) 2×10^4 N
 - (C) 3×10^4 N
 - (D) 5×10^3 N
 - (E) 10^3 N
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5. Two masses connected in series with two massless strings are hanging from a support as shown in the figure. Find the tension in the upper string.



- (A) $m_1 g$
 - (B) $(m_1 - m_2)g$
 - (C) $m_2 g$
 - (D) $(m_1 + m_2)g$
 - (E) $(m_1 \times m_2)g$
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CHEMISTRY

6. The elemental analysis of an organic compound gave: C: 38.71%, H: 9.67%, O: 51.67%. What is the empirical formula of the compound?

- (A) CH_2O
 - (B) CH_3O
 - (C) CH_4O
 - (D) CHO
 - (E) CH_5O
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7. Which of the following statement is incorrect about Bohr's model of atom?

- (A) It fails to account for the finer details of the hydrogen atom spectrum.
- (B) Unable to explain the splitting of spectral lines in the presence of magnetic field.
- (C) The angular momentum of electron is quantised.

- (D) The ability of atoms to form molecule by chemical bonds.
(E) Unable to explain the splitting of spectral lines in the presence of magnetic field.
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8. The number of electrons in one mole of methane (CH_4) is:

- (A) 6.023×10^{23}
(B) 60.23×10^{23}
(C) 0.6023×10^{23}
(D) 602.3×10^{23}
(E) 6023×10^{23}
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9. No two electrons in an atom can have the same set of quantum numbers. This is known as:

- (A) Hund's rule
(B) Pauli's exclusion principle
(C) Aufbau principle
(D) Heisenberg's principle
(E) Fajan's rule
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10. Uncertainty principle is valid for:

- (A) Proton
(B) Methane
(C) Both (A) and (B)
(D) $1\mu\text{m}$ sized platinum particles
(E) $1\mu\text{m}$ sized NaCl particles
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11. Which of the following has the least atomic radius?

- (A) B
(B) C
(C) N

(D) O

(E) F

12. Which one of the following elements is represented as Eka-silicon in Mendeleev's periodic table?

(A) Gallium

(B) Germanium

(C) Aluminium

(D) Tin

(E) Arsenic
