KEAM 2026 Pharmacy April 18

Question Paper (Memory-Based)

Conducted by CEE Kerala

General Instructions

(i) **Duration:** The total duration of the examination is 1.5 hours (90 minutes).

(ii) **Total Marks:** The complete paper carries a maximum of 300 marks.

(iii) **Structure:** The paper has 2 Sections:

- **Section A:** 30 Multiple Choice Questions (Physics).
- **Section B:** 45 Multiple Choice Questions (Chemistry).

(iv) **Compulsory Questions:** All 75 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) $ML^2T^{-3}A^{-2}$

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

(A) $\frac{3}{22}\,\text{A}$
(B) $\frac{22}{3}\,\text{A}$
(C) $\frac{11}{150}\,\text{A}$
(D) $\frac{150}{11}\,\text{A}$
(E) $\frac{22}{6\pi}\,\text{A}$

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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) $10^4\,\text{N}$
(B) $2 \times 10^4\,\text{N}$
(C) $3 \times 10^4\,\text{N}$
(D) $5 \times 10^3\,\text{N}$
(E) $10^3\,\text{N}$

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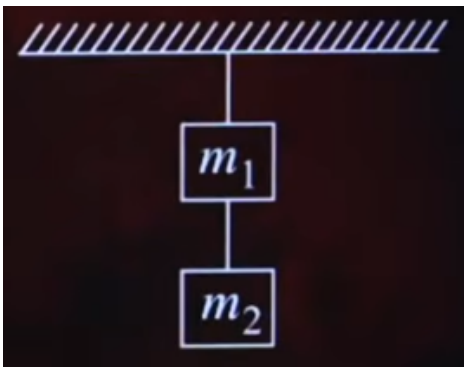
5. Two masses connected in series with two massless strings are hanging from a support as shown in the figure. Find the tension in the upper string.



(A) $m_1 g$

(B) $(m_1 - m_2)g$

(C) $m_2 g$

(D) $(m_1 + m_2)g$

(E) $(m_1 \times m_2)g$

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 μm sized platinum particles

(E) 1 μm 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

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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
