



Elite 11 (PMC) Sample Paper

This question paper is a model test paper. Some of these questions may have appeared in the previous years' tests. The actual test may have a different number of questions and questions of different types. This paper is meant only to provide an idea of the kind of questions that may be asked in the test

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- An electric iron draws a current of 15A from a 220 V supply. What is the cost of using iron for 30 min everyday for 15 days if the cost of unit (1 unit = 1 kW hr) is 2 rupees?
(a) Rs. 49.5 (b) Rs. 60
(c) Rs. 40 (d) Rs. 10
- Two different sources of light A and B have wavelength $0.7 \mu\text{m}$ and $0.3 \mu\text{m}$ respectively. Then
which of the following statement is true
(a) A has greater energy than B (b) B has greater energy than A
(c) Both has equal energy (d) None of the above
- The type of radiation absorbed by CO_2 molecule in atmosphere are
(a) X-rays (b) Gamma rays
(c) Infra-red rays (d) UV-rays
- A Parachutist of weight W strikes the ground with his legs fixed and come to rest with an upward acceleration of magnitude $3g$. Force exerted on him by the ground during landing is
(a) W (b) $2W$
(c) $3W$ (d) None of the above
- Eight identical spherical mercury drops charged to a potential of 20 v each are coalesced into a single spherical drop
a) The internal Energy of the system remains the same
b) The new potential of the drop is 80 V
c) Internal Energy of the system decreases
d) The potential remains the same i.e. 20 V
- The electronic configuration of an ion M^{2+} is 2, 8,14. If its mass is 56, the number of neutrons in its nucleus is:
(a) 30 (b) 32
(c) 34 (d) 42
- If the quantity of metal in a metallic oxide is 60%, then its equivalent weight is:
(a) $\frac{1}{5}$ of molecular weight (b) $\frac{1}{2}$ of molecular weight
(c) $\frac{3}{2}$ of molecular weight (d) $\frac{3}{5}$ of molecular weight
- The normality of 0.3 M phosphoric acid is:
(a) 0.1 (b) 0.9
(c) 0.3 (d) 0.6
- Structures of nuclei of three atoms A, B and C are given below:

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A has 90 protons and 146 neutrons

B has 92 protons and 146

neutrons C has 90 protons and

148 neutrons

Based on the above data, which of these atoms are isotopes and which are isobars?

a) A and C are isotopes; B and C are isobars

b) A and B are isotopes; A and C are isobars

c) B and C are isobars; A and B are isotopes

d) A and C are isotopes; A and B are isobars

10. Which of the given metals liberate hydrogen gas in reaction with both acids and bases ?

a) Sodium

b) Potassium

c) Magnesium

d) Zinc

11. A shopkeeper prefers to sell his goods at the cost price but uses a weight of 800 gm instead of 1 kg weight. He earns of profit of

(a) 2%

(c) 20%

(b) 8%

(d) 25%

12. The compound interest on a certain sum for two years is Rs. 618 whereas the simple interest on the same sum at the same rate for two years is Rs. 600. The ratio of interest per annum is

(a) 18%

(c) 6%

(b) 9%

(d) 3%

13. If the zeros of the polynomial $f(x) = k^2x^2 - 17x + k + 2$, ($k > 0$) are reciprocal of each other, then the value of k is

(a) 2

(c) -2

(b) -1

(d) 1

14. If $\cos A + \cos^2 A = 1$, then the value of $\sin^2 A + \sin^4 A$ is

(a) 1

(c) 2

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

(d) 3

15. The angles of elevations of the top of the tower from two points in the same straight line and at a distance of 9 m. and 16 m. from the base of the tower are complementary. The height of the tower is

(a) 18 m

(c) 10 m

(b) 16 m

(d) 12 m

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Answer Key

1-a	2-b	3-c	4-d	5-b	6-a	7-b	8-b	9-a	10-d
11-d	12-c	13-a	14-a	15-d					

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