31.10.19   TT English   Time: 45 Mins

STD: XI (E,H,I)   Marks: 25

I. Read the set of poetic lines and answer the following questions:

                                         12x1=12

"He, who does not stoop, is a king we adore.
We bow before competence and merit;"

1. Who is adored as a king?
2. What is the figure of speech used in the first line?

Honour is a property, common to all
In dignity and pride no one need to be poor"

3. Who is considered as rich?
4. What is their asset?

Our nature it is that whatever we try
We do with devotion deep and true.

5. Who does 'we' refer to?
6. How should we carry out our duties?

Everest is not only the peak.
Every hillock has a summit to boast,

7. What is a summit?
8. Why should we boast?

A life that knows no kneeling and bending
We are proud and feel so tall

9. How should our life be?

"Defeat we repel, courage our fort;
Cringing from others we haven't done".

10. What does repel mean?
11. What do we hate?
12. What does 'cringing' mean?

II. Explain the following lines with reference to the context: (3)
13. We bow before competence and merit
    The ones that are true and stand.

14. Respond to the Advertisement: (5)

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III. Answer the following: 1x5=5
15. Write an appreciation of the poem "Everest is not the only peak".

I. Choose the correct answer: 5x1=5

1. Cash received from sale of fixed asset is credited to _____.
       a) Profit & loss account   b) Fixed asset account
       c) Bank account

2. For which of the following assets, the depletion method is
   adopted for writing of cost of the asset?
       a) Plant and machinery   b) Mines and quarries
       c) Buildings

3. A depreciable asset may suffer obsolescence due to _____.
   a) Passage of time   b) wear and tear   c) Technological changes

4. Depreciation provided on machinery is debited to _____.
       a) Depreciation account   b) Machinery account
       c) Trading account

5. Residual value of an asset means the amount that it can fetch
   on sale at the _____ of its useful life.
       a) beginning   b) end   c) middle

II. Answer the following: 4x5=20

6. A boiler was purchased on 1st January 2015 from abroad for
₹20,000, shipping and forwarding charges amounted to ₹2000.
Import duty ₹7,000 and expenses of installation amounted to
₹1000. Calculate depreciation for the first 3 years @ 10% p.a on
diminishing balance method assuming that the accounts are
closed on 31st December every year.

7. A furniture costing ₹5,000 was purchased on 1.1.16, the
installation charges being ₹1,000. The furniture is to be
depreciated @ 10% p.a. on the diminishing balance method. Pass
Journal entries for the first two years.

8. On 1st October 2014, a truck was purchased for ₹10,00,000 by
Lakshmi Transports Ltd., Depreciation was provided 15% p.a
under diminishing balance method. On 31.03.17, the above truck
was sold for ₹9,10,000. Accounts are closed on 31st March every
year. Find out the profit or loss made on sale of the truck.

9. On 1st January 2015, a second hand machinery was purchased
for ₹58,000 and ₹2,000 spent on its repairs. On 1st July 2017, it
was sold for ₹28,600. Prepare the machinery account for the
years 2015 to 2017 under written down value method by
assuming the rate of depreciation as 10% p.a. and the accounts
are closed on 31st December every year.

31.10.19   TT Physics   Time: 45 Mins

STD: XI (C,D)   Marks: 30

I. Answer any 4 of the following: 4x2=8

1. State the law of floatation.

2. State Pascal's law in fluids.

3. Distinguish between cohesive and adhesive forces.

4. What are the energies possessed by a liquid? Write down their equations.

5. State Archimedes principle.

6. Write down the expression for the stoke's force and explain the symbols involved in it.

II. Answer the following:

7. How is surface tension related to surface energy?   (3 Marks)   (4 Marks)

8. What are the factors affecting the surface tension of a liquid?

III. Answer any 3 in detail: 3x5=15

9. State and prove Bernoulli's theorem for a flow of incompressible, non-viscous and streamlined flow of fluid.

10. Derive Poiseuille's formula for the volume of a liquid flowing per second through a pipe under streamlined flow.

11. Derive the expression for the terminal velocity of a sphere moving in a high viscous fluid using stokes force.

12. What is capillarity? Obtain an expression for the surface tension of a liquid by capillary rise method.

31.10.19   TT Chemistry   Time: 45 Mins

STD: XI (A,B)   Marks: 30

I. Choose the correct answer: 5x1=5

1. The molality of a solution containing 1.8g of glucose dissolved in 250g of water is _____.
      a) 0.2M   b) 0.01M   c) 0.02M   d) 0.04M

2. Which one of the following gases has the lowest value of Henrys law constant?
      a) N_2 b) He   c) CO_2 d) H_2

3. Which one of the following is incorrect for ideal solution?
      a) $\Delta H_{mix}=0$ b) $\Delta U_{mix}=0$
      c) $\Delta P=P_{observed}-P_{calculated}$ by Roaults law=0
      d) $\Delta G_{mix}=0$

4. In which of the following equilibrium, K_p and K_c are not equal?
      a) $2NO_{(g)} \rightleftharpoons N_{2(g)} + O_{2(g)}$ b) $SO_{2(g)} + NO_2 \rightleftharpoons SO_{2(g)} + NO_{(g)}$
      c) $H_{2(g)} + I_{2(g)} \rightleftharpoons 2HI$

5. At a given temperature and pressure the equilibrium constant values for the equilibria
   $$3A_2 + B_2 + 2C \xrightarrow{K_1} 2A_3BC \text{ and}$$
   $$A_3BC \xrightarrow{K_2} 3/_2A_2 + 1/_2B_2 + C$$
   The relation between K_1 and K_2 is
      a) $K_1=\frac{1}{\sqrt{K_2}}$ b) $K_2=K_1^{\frac{-1}{2}}$ c) $K_1^2=2K_2$ d) $\frac{K_1}{2}=K_2$

II. Answer any 5 of the following: 5x5=25

6. a) One mole of Pcl_5 is heated in one litre closed container. If 0.6 mole of chlorine is found at equilibrium, calculate the value of equilibrium constant.   (3 Marks)
   b) Define Molality.   (2 Marks)

7. a) State and explain Henry's law.   (3 Marks)
   b) Write the Limitations of Henry's law.   (2 Marks)

8. State Raoult law and obtain expression for lowering of vapour pressure when non volatile solute is dissolved in solvent.

9. Explain the types of solution with examples.

10. Write the factors influencing effect of temperature on solid solute in liquid solvent.

11. a) What are ideal and non-ideal solutions?   (2 Marks)
    b) The equilibrium constant K_p for the reaction $N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)}$ is 8.19×10^2 at 298K and 4.6×10^{-1} at 498K. Calculate ΔH^0 for the reaction.   (3 Marks)