

EVERWIN MATRIC. HR. SEC. SCHOOL

24.07.19 T.T Chemistry Time: 45 Mins  
 STD: XI (A,B) Marks:30

I. Choose the correct answer: 5x1=5

1. Use of hot air balloon in sports at meteorological observation is an application of \_\_\_\_\_.  
 a) Boyle's law      b) Newton's law      c) Kelvin's law  
 d) Brown's law
2. The value of gas constant R is \_\_\_\_\_.  
 a)  $0.082 \text{ dm}^3 \text{ atm}$     b)  $0.987 \text{ cal mol}^{-1} \text{ k}^{-1}$     c)  $8.3 \text{ J mol}^{-1} \text{ k}^{-1}$   
 d)  $8 \text{ erg mol}^{-1} \text{ k}^{-1}$
3. Rate of diffusion of a gas is \_\_\_\_\_.  
 a) directly proportional to its density  
 b) directly proportional to its molecular weight  
 c) directly proportional to its square root of its molecular weight  
 d) inversely proportional to the square root of its molecular weight
4. The S.I unit of pressure is \_\_\_\_\_.  
 a) atm      b) mmHg      c) pascal      d) Torr
5. Consider the following statements:  
 i) Atmospheric pressure is less at the top of a mountain than at sea level  
 ii) Gases are much more compressible than solids or liquids  
 iii) When the atmospheric pressure increases the height of the mercury column rises  
 Select the correct statement:  
 a) (i) and (ii)    b) (ii) and (iii)    c) (i) and (iii)    d) (i), (ii) and (iii)

II. Answer any 5 of the following: 5x2=10

6. Distinguish between diffusion and effusion.
7. State Boyle's law.
8. Give the mathematical expression that relates gas volume and moles.
9. What is the consequence of Boyle's law?
10. State Gay-Lussac law.
11. A mixture of gases contains 4.76 mole of Ne, 0.74 mole of Ar and 2.5 mole of Xe. Calculate the partial pressure of Xe, if the total pressure is 2atm.

III. Answer any 5 of the following: 5x3=15

12. Derive ideal gas equation.
13. Derive a relation to find the partial pressure of a gas in a gaseous mixture.

14. State and explain Charles law.
15. All the passenger aeroplane cabins have to be artificially pressurised. Why?
16. State i) Dalton's law of partial pressure ii) Graham's law of diffusion.
17. Aerated water bottles are kept under water during summer. Give reason.

24.07.19 T.T Physics Time: 45 Mins

STD: XI (C,D) Marks:30

I. Choose the correct answer: 5x1=5

- The kinematic equation for velocity and time relation is  
a)  $v=u+at$  b)  $v=u-at$  c)  $v^2=u^2+2as$  d)  $v^2=u^2-2as$
- A ball is thrown from a height then the time taken by a particle is  
a)  $T=\sqrt{\frac{2h}{g}}$  b)  $T=\sqrt{\frac{g}{2h}}$  c)  $T=\frac{2h}{g}$  d) all the above
- The total path length travelled by a particle in a time interval is  
a) Average velocity b) Average speed  
c) Average acceleration d) None of these
- Relative error in measuring the depth of well is  
a)  $\frac{d_{correct}^{-d}}{d_{correct}}$  b)  $\frac{d_{correct}^{-d}}{d_{correct}} \times 100$  c)  $d_{correct}^{-d}$  d) both a & b
- \_\_\_\_\_ is the speed of a particle when it reaches ground in horizontal direction.  
a)  $v=u^2+2gh$  b)  $v=\sqrt{u^2+gh}$  c)  $v=u^2-gh$  d)  $v=\sqrt{u^2-2gh}$

II. Answer any 5 of the following: 5x3=15

- Define Integral calculus with example.
  - What is Momentum?
  - Differentiate Average and Instantaneous acceleration.
  - What is velocity of projectile at any time?
  - Write a note on Relative velocity in one and two dimension using rainfall.
  - A particle moves along the x-axis in such a way that its co-ordinates x varies with time 't' according to the equation  $x=2-5t+6t^2$  what is the initial velocity of the particle.
- III. Answer any 2 of the following: 2x5=10
- Derive the kinematic equation of motion with respect to displacement time relation and velocity-displacement relation.
  - Write a note on the following:  
i) Time of flight for projectile in horizontal projection  
ii) Average velocity
  - Explain the following:  
i) Differential calculus  
ii) The position vector of a particle is given  $\vec{r}=2t\hat{i}+3t^2\hat{j}-5\hat{k}$   
a) Calculate the velocity and speed of the particle at any instant 't'.

24.07.19 T.T English Time: 45 Mins

STD: XI (E,H) Marks:30

I. Choose the appropriate synonyms for the underlined word : 2x1=2

- She was lauded by everyone for her achievement in sports.  
a) christened b) appreciated c) haul d) etched
- Our latest trip to collect shells at the beach resulted in quite a haul.  
a) eased b) guess c) taking a collection d) balanced

II. Choose the appropriate antonyms for the underlined word : 1x1=1

- There was a victory ride across town, a felicitation programme.  
a) appreciation b) congratulatory address  
c) inferior d) blamed

III. Fill in the blanks with suitable modal verbs: 3x1=3

- The groom \_\_\_\_\_ certainly be over 30 years of age.
- Nirmala \_\_\_\_\_ write perfectly when she was seven.
- There is a lot of time left, so you \_\_\_\_\_ not panic.

IV. Write the expanded forms of the following abbreviations 4x1=4

- TNPSC
- PTA
- IIT
- IIM

V. Fill in the blanks in the following sentence with appropriate prepositions: 4x½=2

- The nearest hospital (i) this place is (ii) a distance of twenty kilometers. You can reach it either (iii) car or (iv) a bicycle.

VI. Fill in the blanks with suitable preposition: 2x1=2

- We strolled \_\_\_\_\_ the river.
- No eating \_\_\_\_\_ class.

VII. Answer any 3 of the following questions in three or four sentences: 3x2=6

- How did Mary Kom manage to get financial support for her trip to USA?
- Why did she call herself 'lucky'?
- How was she feliciated on her return to India?
- What did she consider her greatest achievements? Why?

VIII. Answer the following question in a paragraph of about 100-150 words: 1x5=5

- Why was Mary Kom named the 'Queen of Boxing' and 'Magnificent Mary'?

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24.07.19 T.T Accountancy Time: 45 Mins  
 STD: XI (F,G,I) Marks:30  
 I. Answer all the following: 10x3=30

1. Create an accounting equation on the basis of the following transaction:
- Rakesh started business with a capital of ₹1,50,000
  - Deposited money with the bank ₹ 80,000
  - Purchased goods from Mahesh and paid through credit card ₹ 25,000
  - Sold goods (costing ₹ 10,000) to Mohan for ₹14,000 who pays through debit card
  - Commission received by cheque and deposited the same in the bank ₹2,000
  - Paid office rent through ECS ₹6,000
  - Sold goods to Raman for ₹ 15,000 of which ₹5,000 was received at once.

2. Journalise the following transactions in the books of Sundar who is a book seller.

Dec 2017		₹
1	Commenced business with cash	2,00,000
2	Bought goods from X and Co., on credit	80,000
4	Opened a bank account with	50,000
5	Sold goods to Naresh who paid the amount through Net banking	5,000
6	Sold goods to Devi who paid through credit card	7,000
7	Sold goods to Ashish on credit	700
8	Money withdrawn from bank through ATM for office use	1,000
9	Purchased a furniture and paid through debit card	2,000
10	Salaries paid by cash	6,000
11	Furniture purchased from Y for ₹25,000 and advance given	5,000

3. From the following transactions of Shyam, a stationery dealer, pass Journal Entries for the month of August 2017.

Aug	
1	Commenced business with cash ₹4,00,000, Goods ₹5,00,000
2	Sold goods to A and money received through RTGs ₹2,50,000

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|----|--|
| 3  | Goods sold to Z on credit for ₹20,000                                      |
| 5  | Bills drawn on Z and accepted by him ₹ 20,000                              |
| 8  | Bill received from Z is discounted with the bank for ₹ 19,000              |
| 10 | Goods sold to M on credit ₹ 12,000   |
| 12 | Goods distributed as free samples for ₹ 2,000                              |
| 16 | Goods taken for office use ₹ 5,000   |
| 17 | M became insolvent and only 0.80 per rupee is received in final settlement |
| 20 | Bill of Z discounted with the bank is dishonoured.                         |