

22.08.19

TT

Marks:25

Std:XI [A,C]

Chemistry

Time:45mins

I. Choose the correct answer:

5x1=5

- In an adiabatic process, which of the following is true?
 - $q=w$
 - $q=0$
 - $\Delta E=q$
 - $P\Delta V=0$
- The intensive property among the quantities below is _____.
 - mass
 - volume
 - enthalpy
 - $\frac{\text{mass}}{\text{volume}}$
- Heat of combustion is always _____.
 - positive
 - negative
 - zero
 - either positive or negative
- The temperature of the system, decreases in an _____.
 - Isothermal expansion
 - Isothermal compression
 - adiabatic expansion
 - adiabatic compression
- Change in internal energy, when 4KJ of work done on the system and 1KJ of heat is given out by the system is _____.
 - +1KJ
 - 5KJ
 - +3KJ
 - 3KJ

II. Answer any 5 of the following:

5x2=10

- State the first law of thermodynamics.
- What are states and path functions? Give two examples?
- Explain intensive properties with two examples.
- Define following term - a. Adiabatic process.
- Define enthalpy.
- Define heat enthalpy of combustion.

III. Answer any 2 of the following:

2x5=10

- List the characteristics of internal energy.
- Write mathematical statement of the first law of thermodynamics.
- Derive the relation between ΔH and ΔU for an ideal gas. Explain each term involved in the equation.

22.08.19

TT

Marks:30

Std:XI [B,D]

Maths

Time:45mins

I. Choose the correct answer:

- The number of 5 digit number all digits of which are odd is _____.
 - 25
 - 5^5
 - 5^6
 - 625
- If $(n+5) P_{(n+1)} = \left(\frac{11(n-1)}{2}\right) (n+3) P_n$, then the value of n are _____.
 - 7 & 11
 - 6 & 7
 - 2 & 11
 - 2 & 6
- If $a^2 - aC_2 = a^2 - aC_4$ then the value of 'a' is _____.
 - 2
 - 4
 - 3
 - 5
- The product of r consecutive positive integers is divisible by _____.
 - $r!$
 - $(r-1)!$
 - $(r+1)!$
 - r^r
- The sum of the digits at the 10th place of all number formed with the help of 2,4,5,7 taken all at a time is _____.
 - 432
 - 108
 - 36
 - 18

II. Answer any 5 of the following:

5x3=15

- Evaluate $\frac{n^6}{(n-r)!r!}$ When (i) $n=7, r=5$, (ii) For any n with $r=3$
- If $\frac{1}{7!} + \frac{1}{8!} = \frac{A}{9!}$ then find the value of 'A'.
- Four children are running a race.
 - In how many ways can the first two places be filled?
 - In how many different ways could they finish the race?
- How many three digit number are there with 3 in the unit place?
 - with repetition
 - without repetition
- In how many ways (i) 5 different balls be distributed among 3 boxes?
 - 3 different balls be distributed among 5 boxes?
- How many two digit number, which are divisible by 3, can be formed using the digit 0,3,5,6,9 (i) repetition allowed (ii) repetition not allowed

III. Answer any 2 of the following:

2x5=10

- Count the number between 999 & 10000 subject to the condition that there are (i) no restriction (ii) no digit is repeated (iii) at least one of the digits is repeated
- Prove that $\frac{(2n)!}{n!} = 2^n (1,3,5,\dots,(2n-1))$
- How many numbers are there between 100 & 500 with the digits 0,1,2,3,4,5,6,7? if
 - repetition of the digits allowed
 - the repetition of digits not allowed

1. The source document or voucher used for recording entries is sales book is _____.
 - a. Debit note
 - b. Credit note
 - c. Invoice
 - d. Cash receipt
2. Closing entries are recorded in _____.
 - a. cash book
 - b. ledger
 - c. Journal proper
 - d. Purchases book
3. Purchases of Fixed assets on credit basis recorded in _____.
 - a. Purchases book
 - b. Sales book
 - c. Purchases return book
 - d. Journal proper
4. Purchases books is used to record
 - a. all purchases of books
 - b. all credit purchases of assets
 - c. all credit purchases of goods
 - d. all purchases of assets
5. The total of the sales book is posted periodically to the credit of
 - a. sales A/C
 - b. cash account
 - c. purchases account
 - d. journal proper

II. Answer any five:

5x2=10

6. Mention four types of subsidiary books.
7. What is purchases book?
8. What is sales book?
9. What is purchases return book?
10. What is Journal proper?
11. What is an opening entry?

III. Answer the following questions:

5 Marks

12. Prepare purchase book and sales book in the books of Santhosh textiles Ltd., From the following transactions given for April, 2017

2017 April 1, Purchased goods from Prasad, Kancheepuram
on credit 100 meter silk @ Rs.450 per meter
75 meters velvet @ Rs.180 per meter

- April 10, Sold goods to Rathinam, Chennai on credit
60 meters silk @ Rs.490 per meter,
50 meters velvet @ Rs.210 per meter
- April 18, Nathan 2 sons purchased from us on credit
100 meters silk @ Rs.510 per meter
- April 20, Purchased goods from Hari Ram & Sons, Madurai
on credit 50 rolls kada cloth @ Rs.730 per roll,
80 rolls cotton cloth @ Rs.650 per roll
- April 24, Purchased from Mohan, Karur for cash shirting
cloth @ Rs.7,000, Sarees @ Rs.25,000
- (10 Marks)
13. Record the following transactions in the sales book and sales returns books of M/S Ponni & Co., and post then to ledger.
- 2017 Aug1, Sold goods to Senthil as per Invoice No.68
for Rs.20,500 on credit
- Aug 4, Sold goods to Madhavan as per Invoice No.74
for Rs.12,800 on credit
- Aug 7, Sold goods to Kanagasabai as per Invoice No.78 for
Rs.7500 on credit
- Aug 15, Returns inwards by Senthil as per Credit Note No.7
for Rs.1500 for which cash is not paid
- Aug 20, Sold goods to Selvam for Rs.13,300 for cash
- Aug 25, Sales returns of Rs.1800 by Madhavan as per Credit
Note No.11 for which cash is not paid

I. Read the following poetic lines and answer the questions below:

17x1=17

'I heard a thousand blended notes'

1. Mention the figure of speech in the above line.

"Through primroses tufts, in that sweet bower,

The Periwinkle trail'd its wreaths;

2. What is a primrose?

3. What are wreaths?

4. What does the poet mean by 'bower'?

5. What is a periwinkle?

6. Name the figure of speech in the above lines.

"And much it grieved my heart to think

What man has made of man".

7. What does the word 'grieved' mean?

8. Name the figure of speech in the above lines.

9. Why does the poet become sad when he thinks about the activities of man?

If this belief from heaven be sent,

If such be Nature's holy plan.

10. What does 'heaven' refer to?

11. Why does the poet call it 'holy'?

12. Mention the figure of speech.

13. What is the antithesis explained here?

Have I not reason to lament

What man has made of man?

14. What does the poet mean by the word 'lament'?

15. Mention the figure of speech in the above lines.

And 'tis My faith that every flower

Enjoys the air it breathes.....

16. What is the poet's faith?

17. What trait of Nature do we see here?

II. Explain the reference to the context: [Any one] 1x3=3

18. How I not reason to lament,

What man has made of man?

19. The birds around me hopp'd and play'd ,
their thoughts I cannot measure".

III. Write a paragraph in about 100-150 words about the following. 1x5=5

20. Does nature affect a person's thoughts and feelings? Explain.