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DASHAIN- TIHAR VACATION ASSIGNMENT – 2078
GRADE – XI (Science and Management)
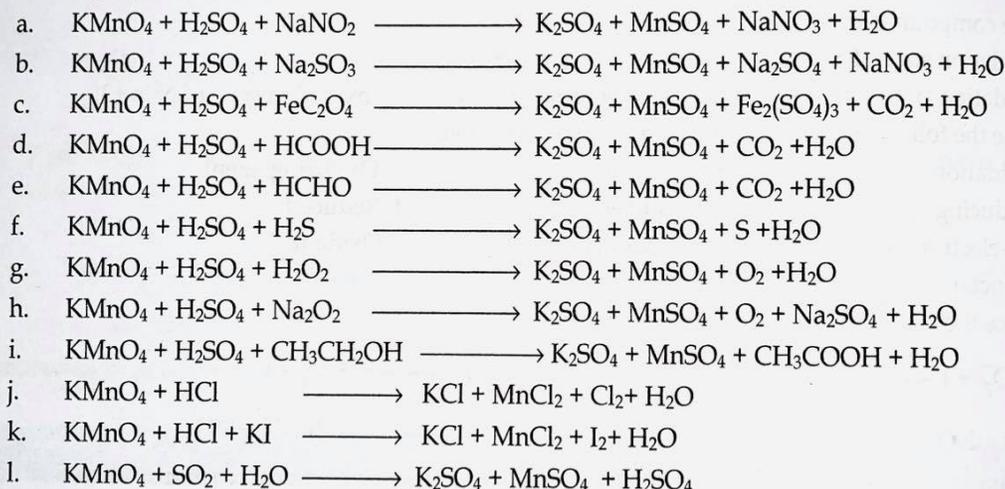
Physics   (jwalapdev@gmail.com)

1. Solve all the questions of Asmita question bank of tought lesson. (Basic physics and physics quantity)

2. Represent all the formulae and key notes on chart paper.

3. Write a song involving words used in tought lesson and prepare it to sing in the class.

Chemistry   lamasanjiv029@gmail.com

1. Define electronic concept of oxidation and reduction with example.

2. Define oxidizing agent and reducing agent with example.

3. Oxidation and reduction reactions always go side by side. Explain it.

4. Calculate the oxidation number of underlined element.

a. K_2CrO_4 b. H_2O_2 c. PO_4^{3-} d. NH_3 e. $Na_2S_2O_3$ f. SO_2Cl_2

g. $(NH_4)_2SO_4$ h. $C_6H_{12}O_6$ i. NH_4NO_3 j. $K_2Cr_2O_7$ k. $K_4[Fe(CN)_6]$ l. $Cr_2(SO4)_3$

m. $C_2H_2O_4$ n. $TiCl_4$

5. Balance the following redox reaction by oxidation number method or ion electron method and

indicate the oxidizing and reducing reagent in these reactions.

a. $KMnO_4 + H_2SO_4 + NaNO_2 \longrightarrow K_2SO_4 + MnSO_4 + NaNO_3 + H_2O$

b. $KMnO_4 + H_2SO_4 + Na_2SO_3 \longrightarrow K_2SO_4 + MnSO_4 + Na_2SO_4 + NaNO_3 + H_2O$

c. $KMnO_4 + H_2SO_4 + FeC_2O_4 \longrightarrow K_2SO_4 + MnSO_4 + Fe_2(SO_4)_3 + CO_2 + H_2O$

d. $KMnO_4 + H_2SO_4 + HCOOH \longrightarrow K_2SO_4 + MnSO_4 + CO_2 + H_2O$

e. $KMnO_4 + H_2SO_4 + HCHO \longrightarrow K_2SO_4 + MnSO_4 + CO_2 + H_2O$

f. $KMnO_4 + H_2SO_4 + H_2S \longrightarrow K_2SO_4 + MnSO_4 + S + H_2O$

g. $KMnO_4 + H_2SO_4 + H_2O_2 \longrightarrow K_2SO_4 + MnSO_4 + O_2 + H_2O$

h. $KMnO_4 + H_2SO_4 + Na_2O_2 \longrightarrow K_2SO_4 + MnSO_4 + O_2 + Na_2SO_4 + H_2O$

i. $KMnO_4 + H_2SO_4 + CH_3CH_2OH \longrightarrow K_2SO_4 + MnSO_4 + CH_3COOH + H_2O$

j. $KMnO_4 + HCl \longrightarrow KCl + MnCl_2 + Cl_2 + H_2O$

k. $KMnO_4 + HCl + KI \longrightarrow KCl + MnCl_2 + I_2 + H_2O$

l. $KMnO_4 + SO_2 + H_2O \longrightarrow K_2SO_4 + MnSO_4 + H_2SO_4$

6. State Boyle's law and Charles' law.

7. On the basis of Boyle's law, explain why do mountaineers carry oxygen cylinders with them.

8. Draw a PV versus P graph.

9. Define ideal gas equation and derive PV=nRT.

10. What is universal gas constant. Calculate the value of R in $L.atm.mol^{-1}K^{-1}$.

11. State Dalton's law of partial pressure.

12. State and explain Graham's law of diffusion and list its application.

13. A saturated hydrocarbon having molecular formula C_nH_{2n+2} diffuses through a porous membrane twice as fast as SO_2. Determine the molecular formula of hydrocarbon.

14. Through the two end of a glass tube of length 2 meters, hydrogen chloride (HCl) and ammonia (NH_3) gases are allowed to enter. At what distance ammonium chloride will first appear?

15. How long will it take for 500 ml of hydrogen gas to diffuse through a partition, if 250 ml oxygen diffuse in 500 minutes under the similar condition?

16. An evacuated glass vessel weighs 50gm, when empty and 148 gm when filled with a liquid of density 0.98 g/ml and 50.5 gm when filled with an ideal gas at 760mmHg at 27°C. Determine the molecular masss of the gas.

Maths   (9841762752, metarajj@gmail.com)

1. Solve all the questions of exercise and Asmita question bank of tought lesson. (properties of triangle)

2. Represent all the formulae and key notes on chart paper.

3. Write a song involving words used in tought lesson and prepare it to sing in the class.

Zoology   (9848848477, chetryyogeeta25@gmail.com

Research and Prepare a report on National Parks and wildlife conservation in Nepal and also find out Endangered,

Vulnerable, Extinct, Rare and Threatened species of Nepal.

नेपाली   (9851145635, gkgkafle@gmail.com)

उपन्य ाकार निलम कार्की निहारिकाद्वारा लिखित **योगमाया** उपन्या पढेर उपन्या का प्रमुख पात्रहरूको परिचय र उपन्या को ारांश लेख्नुहो ् ।

Computer Science (avijitbhowmick22@gmail.com)

Create a website of your family. Create separate page of each family member. Link all these pages.

Accounts   (9808049897, tolangeshyamlal@gmail.com)

1. The following information is given to you:

    Marg1: Started business with cash balance Rs. 1, 00,000.

    Marg2: Purchased furniture for Rs. 50,000.

    Marg5: Purchased goods Rs. 2, 00,000 in cash and Rs. 100,000 on credit.

    Marg8: Paid to creditor of Rs. 25,000.

    Marg10: Furniture sold for Rs. 20,000.

    Marg15: Sold goods for Rs 15, 000.

    Required: Journal entries

2. The following information is given to you:

    1Asadh 2062: Goods purchased of Rs. 70,000.

    2 Asadh 2062: goods purchased on credit from Ram Of Rs. 30,000.

    3 Asadh2062: Goods sold for Rs. 80,000.

    6 Asadh2062: Goods withdrawn by proprietor for personal use Rs. 3,000.

    7 Asadh2062: goods destroyed by fire of Rs. 5,000 and claim admitted by insurance company for Rs. 3,000.

    8 Asadh2062: paid to Ram Rs, 29,000 in full settlement of his account.

    Required: Journal Entries

3. The following information is given to you:

March 1: commenced business by investing Rs. 1, 50,000

March 1: Goods purchased of Rs. 1, 00,000

March 4: Goods purchased on credit from Amir of Rs. 50,000

March 10: Goods sold Rs. 60,000

March 15: Goods withdrawn by proprietor for personal us

March 19: Goods destroyed by fire of Rs. 15,000 and claim admitted by insurance company for Rs. 13,000

March 30: paid to Amir Rs. 48, 500 in full settlement of his account

Required: Journal Entries

4. The following information is given to you:

Magh 1 : Ram started his own business with Rs. 1, 20,000.

Magh 5: Goods sold to Shyam Rs 1, 00,000.

Magh 10: Received goods returned by Shyam Rs. 5,000

Magh 22: Sold goods to Shyam Rs. 50,000 (40 % cash and 60 % credit)

Magh 25: Received a cheque of Rs. 94,000 from Shyam in full settlement of Rs. 95,000

Magh 28: interest on loan due Rs. 2,000.

Magh 29: Mohan, a debtor for Rs. 3,000 settled its account receiving cash discount of Rs. 125

Magh 30 : Amount due from Harish Rs. 5,000 has been written as off bad debt.

Required: Journal entries

5. Give accounting Equation of following transactions:

a) Business established with Rs. 2, 50,000.

b) Goods costing Rs. 5,000, sold for cash and on credit Rs. 4,000.

c) Goods lost by fire Rs. 15,000.

d) Payment made by debtor Rs. 3,900. For full payment.

Ans : 2, 35, 900

7. Consider the following transactions;

a. Commenced business with cash Rs. 2, 00,000 and stock of goods worth Rs. 25,000.

b. Distributed goods worth Rs, 1,000 as free sample.

c. Cash Rs. 500 paid for charity show.

d. Deposited cash Rs. 1, 50,000 in to bank.

e. Withdrew hard cash Rs. 20,000 from bank: Rs. 15,000 for office use and rest for domestic use.

f. Purchased household furniture for Rs. 10,000; paying Rs. 5000 through cheque and rest on credit.

Required: Accounting Equation Assets: Rs. 2, 23, 500; capital = Rs. 2, 18, 500; liabilities; Rs. 5,000.

8. State the meaning of book – keeping.

9. Explain in brief the meaning of accounting.

10. Mention the accounting process.

11. State any three functions of accounting.

12. What is meant by 'going concern concept'?

13. What is money measurement concept?

14. Write about the meaning of accounting standard and its use in accounting report.

15. Give the meaning of book- keeping and account.

Economics   (9841619123,   dahalyogesh4@gmail.com

1. Prepare a report by selecting a type of forest in your community or near to your community incorporating its current status, importance to the community, problems and suggested measures to solve the problems.

2. Prepare a report incorporating the list of change that are taken place in nature during the last 30 years by discussing with senior citizens in your locality and present it in your class.

3. Make a report by visiting the farmers of your locality and finding out their problems related to agricultural marketing and measures to solve these problems.

4. Prepare a report by making a list of organized and unorganized sources of agricultural finance by visiting and interviewing the farmers residing in your locality and incorporate suggestions for the farmers to select and use the best source available in the locality by making comparisons between the sources.

Business Studies   (9841619123,   dahalyogesh4@gmail.com

1. **Visit any nearby business organization and prepare a field report describing the following aspect:**

   i. Name of the business

   ii. Nature and type of business organization

   iii. The main objectives of business organization and their classification

   iv. The activities conducted in the business: dealings products and services

   v. Environmental factors affecting business activities: controllable and uncontrollable.

   vi. How did the entrepreneur get motivated to establish the business?

   vii. Problems of the business.

2. **Visit near about any business organizations and prepare a field report by including the following contents:**

   i. Name and address of the business organization

   ii. Name of shareholders or board of directors of business organization

   iii. Capital structure of business organization.

   iv. Nature of business and areas of operation of the organization.

   v. Prepare a list of products and services dealt by the organization and its annual turnover and profit/loss.

   vi. Areas of social responsibility fulfilled by the business organization.

3. **List the ethical works of the business organization. Point out the major events as the social involvement of business.**