Project work

Choose one comprehensive problem of sole trader which will have minimum 20 transactions

and prepare

1. Journal (Journalize )
2. Ledger (account) posting
3. Trail balance (should balance)
4. Trading or manufacturing account
5. Profit and loss account
6. Balance sheet (balance)

Note: can be done in class work book or A4 size sheets which will help you to complete board final project.
Prepare project on any one of the following in a stick file with the following criteria

- Aim
- Raw materials required
- Different steps involved
- Different manufacturing units
- Advantages
- Disadvantages

**TOPICS FOR INVESTIGATION**

- Study of diffusion of a solid into a liquid.
- Determination of the minimum quantity of manganese dioxide required as a catalyst for the preparation of oxygen gas.
- Determination of rate of flow of solution and liquids horizontally.
- Study of the acidity of different samples of the tea leaves and reasons for the variation in their tests.
- Determination of rate of evaporation of different liquids.
- Study of effect of metal coupling on die corrosion of iron.
- Study of the effect of acids and bases on the tensile strength of fibres.
- Analysis of fruit and vegetable prices for the content (acids and mineral a present in them).
- Preparation of rayon threads from various cellulose sources.
- Study of dyeing fabrics under various conditions.
- Determination of the dosage of bleaching powder required for disinfectants of different ..........of water (taken from different sources).
- Study of presence of oxalate ions in guava fruit at different stages of ripenings
- Study of the setting of mixtures of cement with lime, sand of different qualities, rice husk, etc (with respect to time, volume and strengths.
- Study of the presence of insecticide/pesticide (nitrogen containing) in vegetables
and fruits.

- Study of the dialysis of different sewage water sample and identification of different ions in resulting solutions.
- Study on quantity of casein present in different samples of milk.
- Preparation of soyabean milk and its comparision with the natural milk with respect to curd formation, effect of temperature, taste etc.
- Study of the effect pH
- Study of digestion of starch salivary amylase and effect of pH and temperature on it.
- Comparitive study of the rate of formation on following materials wheat, flour, gram flour, patato juice, carrot juice and or ...........juice.
- Extraction of essential oils
HOLIDAY HOMEWORK

2013-14

Date of Distribution : 04/10/2013

Grade: XII

Date of Submission: 17/10/2013

Subject: Computer Science

Preparing Incharge: Ms. Sindhu

Topic: Communication and Network Concepts

1) What is cladding?

2) Differentiate between XML and HTML.

3) Define the following: a) Data channel b) Baud c) bps d) Bps e) Bandwidth

4) What are repeaters and router?

5) Compare open Source software and Proprietary Software

6) What is VoIP?

7) What are the major types of networks and explain?

8) What are the two types of modems?

9) Who are hackers? Who are crackers?

10) What is spam?

11) What is the difference between Message Switching technique and Packet Switching technique?

12) What is point-to-point protocol?

13) What are the types of Transmission media?

14) What is MAC address?
15) What are the important topologies for networks?

16) Give the full form of NFS and FTP

17) What is the difference between a repeater and a bridge?

18) How is Gateway different from Routers?

19) Expand the following terms (i) CDMA (ii) GSM (iii) SMS (IV) MAN

20) Differentiate between Internet and Intranet.
1. Will a profit maximizing firm in a competitive market ever produce a positive level of output in the range where there marginal cost is falling? Explain with diagram.

2. The following table shows the total revenue and total cost schedules of a competitive firm.

<table>
<thead>
<tr>
<th>Quantity sold (units)</th>
<th>TR (Rs)</th>
<th>TC (Rs)</th>
<th>Profit (Rs)</th>
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<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>5</td>
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<tr>
<td>1</td>
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<tr>
<td>6</td>
<td>33</td>
<td>33</td>
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</tr>
</tbody>
</table>
(i) Calculate the profit of each output level.

(ii) At what level of outputs the firm experiences breakeven? Show them drawing the curves.

3. Explain with diagram how price is determined in a perfectly competitive market with fixed number of firms.

4. Explain the concept of law of variable proportion with the help of diagram.

From the following data, calculate “national income” by (i) income method and (ii) expenditure method. (Rs. in crore)

<table>
<thead>
<tr>
<th>(i)</th>
<th>(ii)</th>
<th>(iii)</th>
<th>(iv)</th>
<th>(v)</th>
<th>(vi)</th>
<th>(vii)</th>
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<th>(ix)</th>
<th>(x)</th>
<th>(xi)</th>
<th>(xii)</th>
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<tbody>
<tr>
<td>Net domestic capital formation</td>
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<tr>
<td>Interest</td>
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<tr>
<td>Rent</td>
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<tr>
<td>Private final consumption expenditure</td>
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<tr>
<td>Net exports</td>
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<td>Net indirect taxes</td>
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<tr>
<td>Net current transfers from rest of the world</td>
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<td>Consumption of fixed capital</td>
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<td>Net factor income from abroad</td>
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<td>Profits</td>
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<tr>
<td>Compensation of employees</td>
<td>1200</td>
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HOLIDAY HOMEWORK– (TERM -I)  
(2013-14)

Grade XII  
05/10/13  
English  
17/10/13  

Prepared by: Vijayalakshmi

Write a personal essay about yourself. Read the requirements and write accordingly. Make the write up decorative and attractive. You are writing about yourself!!

. The Rationale:
This year English grade 12 students will say something about themselves...Students to write a personal essay, at least one page in length and double-spaced. One reason for this requirement is to provide the starting point for the personal statement required by so many universities. The other reason is that it will provide all students with an opportunity to write a reflective piece. Because the focus in English is on academic essays, we tend to forget the importance of writing for self-exploration. Being able to examine our lives, reflect on our experiences, and express these thoughts on paper is an important life skill.

Finally, this paper will give me some insight into who you are and what you are interested in.

What to Write About:
Identify what you feel passionate about and would feel comfortable writing about. Here are some topics that have appeared on the Common Application that you might find helpful:
Evaluate a significant experience, achievement, risk you have taken, or ethical dilemma you have faced and its impact on you.
Discuss some issue of personal, local, national, or international concern and its importance to you.
Indicate a person who has had a significant influence on you, and describe that influence.
Describe a character in fiction, a historical figure, or a creative work (as in art, music, science, etc.) that has had an influence on you, and explain that influence. Don't be afraid of writing about everyday things. Even routine activities can be interesting if you describe them in an interesting and imaginative way. Avoid formulaic, cliqued approaches.
1. You are a start-up entrepreneur for a software export. Identify your capital and development finances. What are the sources for financing? What will be your plan for debt management?

2. Study the public financing schemes of any two of the following enterprises and comment on the merits and demerits of financing them.
   a. A pharmaceutical industry
   b. An automobile manufacturing firm
   c. A granite manufacturing industry
   d. A software export enterprise.
(I) Project ONE: ELEMENTS OF BUSINESS ENVIRONMENT

The teachers should help the students in selecting any one element of the following:

1. Changes witnessed over the last few years on mode of packaging and its economic impact.
   The teacher may guide the students to identify the following changes:
   a) The changes in transportation of fruits and vegetables such as cardboard crates being used in place of wooden crates, etc. Reasons for above changes.
   b) Milk being supplied in glass bottles, later in plastic bags and now in tetra pack and through vending machines.
   c) Plastic furniture [doors and stools] gaining preference over wooden furniture.
   d) The origin of cardboard and the various stages of changes and growth.
   e) Brown paper bags packing to recycled paper bags to plastic bags and cloth bags.
   f) Re use of packaging [bottles, jars and tins] to attract customers for their products.
   g) The concept of pyramid packaging for milk.
   h) Cost being borne by the consumer/manufacturer.
   i) Packaging used as means of advertisements.

2. The reasons behind changes in the following:

   Coca – Cola and Fanta in the seventies to Thums up and Campa Cola in the eighties to Pepsi and Coke in nineties.
   The teacher may guide the students to the times when India sold Coca Cola and Fanta were being manufactured in India by the foreign companies.
   The students may be asked to enquire about
   a. Reasons of stopping the manufacturing of the above mentioned drinks in India THEN.
   b. The introduction of Thums up and Campa cola range.
   c. Re entry of Coke and introduction of Pepsi in the Indian market.
d. Factors responsible for the change.
e. Other linkages with the above.
f. Leading brands and the company having the highest market share.
g. Different local brands venturing in the Indian market.
h. The rating of the above brands in the market.
i. The survival and reasons of failure in competition with the international brands.
j. Other observations made by the students

The teacher may develop the following on the above lines

3. Changing role of the women in the past 25 years relating to joint families, nuclear families,
   women as a bread earner of the family, changes in the requirement trend of mixers, washing
   machines, micro wave and standard of living.

4. The changes in the pattern of import and export of different Products.

5. The trend in the changing interest rates and their effect on savings.

6. A study on child labour laws, its implementation and consequences.

7. The state of ‘anti plastic campaign,’ the law, its effects and implementation.

8. The laws of mining /setting up of industries, rules and regulations, licences required for running
   that business.

9. Social factors affecting acceptance and rejection of an identified product. (Dish washer, Atta
   maker, etc)

10. What has the effect been on the types of goods and services? The students can take examples
    like:
    a. Washing machines, micro waves, mixers and grinder.
    b. Need for crèche, day care centre for young and old.
    c. Ready to eat food, eating food outside, and tiffin centres.

11. Change in the man-machine ratio with technological advances resulting in change of cost
    structure.

12. Effect of changes in technological environment on the behaviour of employee.
(II) Project TWO: PRINCIPLES OF MANAGEMENT.

The students are required to visit any one of the following:
1) A departmental store.

2) An Industrial unit.

3) A fast food outlet.

4) Any other organisation approved by the teacher.

They are required to observe the application of the general Principles of management advocated by Fayol.

Fayol's principles
1. Division of work.
2. Unity of command.
3. Unity of direction.
4. Scalar chain
5. Espirit de corpse
6. Fair remuneration to all.
7. Order.
8. Equity.
9. Discipline
10. Subordination of individual interest to general interest.
11. Initiative.
12. Centralisation and decentralisation.

OR

They may enquire into the application of scientific management techniques by F.W.Taylor in the unit visited.

Scientific techniques of management.
1. Functional foremanship.
2. Standardisation and simplification of work.
4. Motion Study.
5. Time Study.
6. Fatigue Study
7. Differential piece rate plan.

Tips to teacher
i. The teacher may organize this visit.
ii. The teacher should facilitate the students to identify any unit of their choice and guide them to
identify the principles that are being followed.

iii. Similarly they should guide the students to identify the techniques of scientific management

    implemented in the organisation.

iv. It may be done as a group activity.

v. The observations could be on the basis of

    The different stages of division of work resulting to specialisation.

    Following instructions and accountability of subordinates to higher authorities.

    Visibility of order and equity in the unit.

    Balance of authority and responsibility.

    Communication levels and pattern in the organisation.

    Methods and techniques followed by the organisation for unity of direction and coordination

    amongst all.

    Methods of wage payments followed.

    The arrangements of fatigue study.

    Derivation of time study.

    Derivation and advantages of method study.

    Organisational chart of functional foremanship.

    Any other identified in the organisation

vi. It is advised that students should be motivated to pick up different areas of visit. As presentations of different areas in the class would help in better understanding to the

vii. The students may be encouraged to develop worksheets. Teachers should help students to prepare observation tools to be used for undertaking the project. Examples; worksheets,

    questionnaire, interviews and organisational chart etc.

(III) Project THREE: MARKETING MANAGEMENT

It is advised that teachers should assign the students to do a simple market research with the objective of finding out a product/service whose marketing may be profitable like

    i. Toothpaste
    ii. Noodles
    iii. Shampoo
    iv. Bathing soap
    v. Washing detergent
    vi. Washing powder
    vii. Lipstick
    viii. Moisturiser
    ix. Shoe polish
    x. Pen
    xi. Shoes
    xii. Hair dye
    xiii. Mobile
xiv. Chocolate
xv. Sauces/ketchup
xvi. Ready soups
xvii. Body spray
xviii. Fairness cream
xix. Hair oil
xx. Roasted Snacks
xxi. Jeans
xxii. Pickles
xxiii. Squashes
xxiv. Jams
xxv. Salt
xxvi. Bread
xxvii. Butter
xxviii. Shaving cream
xxix. Razor
xxx. Cheese spreads
xxxi. e-Wash
xxxii. Tiffin wallah

Any more as suggested by the teacher.
The teacher must ensure that the identified product should not be items whose consumption/use is discouraged by the society and government like alcohol products/pan masala and tobacco products, etc. Identify one product/service from the above which the students may like to manufacture/provide [pre assumption].

Now the students are required to make a project on the identified product/service keeping in mind the following.
1. Why have they selected this product/service?
2. Find out ‘5’ competitive brands that exist in the market.
3. What permission and licences would be required to make the product?
4. What are your competitors Unique Selling Proposition.[U.S.P.]?
5. Does your product have any range give details?
6. What is the name of your product?
7. Enlist its features.
8. Draw the ‘Label’ of your product.
9. Draw a logo for your product.
10. Draft a tag line.
11. What is the selling price of your competitor’s product?
   (i) Selling price to consumer
(ii) Selling price to retailer
(iii) Selling price to wholesaler

What is the profit margin in percentage to the
Manufacturer.
Wholesaler.
Retailer.

12. How will your product be packed?

13. Which channel of distribution are you going to use? Give reasons for selection?


15. What is going to be your selling price?
   (i) To consumer
   (ii) To retailer
   (iii) To wholesaler

16. List 5 ways of promoting your product.

17. Any schemes for
   (i) The wholesaler
   (ii) The retailer
   (iii) The consumer

18. What is going to be your ‘U.S.P’?

19. What means of transport you will use and why?

20. Draft a social message for your label.

21. What cost effective techniques will you follow for your product.

22. What cost effective techniques will you follow for your promotion plan.

At this stage the students will realise the importance of the concept of marketing mix and the necessary decision regarding the four P’s of marketing.
PRODUCT
PRODUCT
PLACE
PRICE
PROMOTION

On the basis of the work done by the students the project report should include the following:
1. Type of product /service identified and the (consumer/industries) process involve there in.
2. Brand name and the product.
3. Range of the product.
4. Identification mark or logo.
5. Tagline.
6. Labelling and packaging.
7. Price of the product and basis of price fixation.
8. Selected channels of distribution and reasons thereof.
10. Promotional techniques used and starting reasons for deciding the particular technique.
11. Grading and standardisation.

PRESENTATION AND SUBMISSION OF PROJECT REPORT.
At the end of the stipulated term, each student will prepare and submit his/her project report.
Following essentials are required to be fulfilled for its preparation and submission.
1. The total length of the project will be of 25 to 30 pages.
2. The project should be handwritten.
3. The project should be presented in a neat folder.
4. The project report should be developed in the following sequence-
   - Cover page should include the title of the Project, student information, school and year.
   - List of contents.
   - Acknowledgements and preface (acknowledging the institution, the places visited and the persons who have helped).
   - Introduction.
   - Topic with suitable heading.
   - Planning and activities done during the project, if any.
- Observations and findings of the visit.
- Conclusions (summarised suggestions or findings, future scope of study).
- Photographs (if any).
- Appendix.
- Teacher’s observation.
- Signatures of the teachers.
- At the completion of the evaluation of the project, it should be punched in the centre so that the report may not be reused but is available for reference only.
- The projects will be returned after evaluation. The school may keep the best projects.

## HOLIDAY HOMEWORK TERM -I
### 2013-14

<table>
<thead>
<tr>
<th>Sl.no.</th>
<th>Subject</th>
<th>Grade</th>
<th>Topic</th>
<th>Where it has to be done</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>English</td>
<td>XII</td>
<td>Write about yourself a paragraph.</td>
<td>A4 size sheets.</td>
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<td>2.</td>
<td>Biology</td>
<td>XII</td>
<td>Complete the Practical Record</td>
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<td>Completing Practical Record and Investigatory projects</td>
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Note: W.S: Work Sheet

HOLIDAY HOMEWORK

(2013-14)

Grade : XII
Subject : Mathematics
Prepared by: K.Ramesh Kumar

Date of Distribution:4/10/13
Date of Submission :17/10/13

Topic: Inverse Trigonometric Functions
1. Solve for x:
   i. \[ \tan^{-1} \left( \frac{2x}{1-x^2} \right) + \cot^{-1} \left( \frac{1-x^2}{2x} \right) = \frac{2\pi}{3} \]
   ii. \[ \cos (2\sin^{-1} x) = \frac{1}{9} \]
   iii. \[ 2\tan^{-1}(\sin x) = \tan^{-1}(2\sec x) \]
   iv. \[ \tan^{-1}(x+2) + \tan^{-1}(x-2) = \tan^{-1}(8/79) \]
   v. \[ \tan^{-1} \left( \frac{x}{2} \right) + \tan^{-1} \left( \frac{x}{3} \right) = \frac{\pi}{4} \]
   vi. \[ \tan^{-1} \left( \frac{1-x}{1+x} \right) - \frac{1}{2}\tan^{-1} x = 0 \]
   vii. \[ \cos^{-1} x + \sin^{-1} \frac{x}{2} = \frac{\pi}{6} \]
   viii. \[ \tan^{-1} \left( \frac{x-1}{x+1} \right) + \tan^{-1} \left( \frac{x+1}{x+2} \right) = \frac{\pi}{4} \]
   ix. \[ \tan^{-1} x + 2\cot^{-1} x = \frac{2\pi}{3} \]
   x. \[ \tan^{-1} \left( \frac{x+1}{x-1} \right) + \tan^{-1} \left( \frac{x}{x-1} \right) = \tan^{-1}(-7) \]
   xi. \[ \tan^{-1} 2x + \tan^{-1} 3x = \frac{\pi}{4} \]
   xii. \[ \sin^{-1} (1-x) - 2\sin^{-1} x = \frac{\pi}{2} \]

2. Write the principal values of the following:
   i. \[ \cos^{-1} \left( \frac{1}{2} \right) - 2\sin^{-1} \left( -\frac{1}{2} \right) \]
   ii. \[ \tan^{-1} \left( \sqrt{3} \right) - \sec^{-1} \left( -2 \right) \]
   iii. \[ \sin^{-1} \left( -\frac{1}{2} \right) \]
   iv. \[ \sin^{-1} \left( -\frac{\sqrt{3}}{2} \right) \]
   v. \[ \cos^{-1} (\cos \frac{2\pi}{3}) + \sin^{-1} (\sin \frac{2\pi}{3}) \]
   vi. \[ \cos^{-1} (\cos \frac{5\pi}{3}) \]
   vii. \[ \cos^{-1} \left( -\frac{\sqrt{3}}{2} \right) \]
   viii. \[ \cos^{-1} (\cos \frac{13\pi}{6}) \]
   ix. \[ \tan^{-1} (\cot \frac{\pi}{3}) \]
   x. \[ \sin^{-1} \left( -\frac{1}{2} \right) + \cos^{-1} \left( -\frac{1}{2} \right) \]
3. Write the value of

i. \[ \sin\left(\frac{\pi}{3} - \sin^{-1}\left(-\frac{1}{2}\right)\right) \]

ii. \[ \tan^{-1}\left(\tan\frac{3\pi}{4}\right) \]

iii. \[ \tan^{-1}\frac{x}{y} - \tan^{-1}\frac{x-y}{x+y} \]

iv. \[ \sin\left(\frac{\pi}{3} - \sin^{-1}\left(-\frac{1}{2}\right)\right) \]

4. Find x, if

i. \[ \tan^{-1}4 + \cot^{-1}x = \frac{\pi}{2} \]

ii. \[ \sin^{-1}\left(\frac{1}{3}\right) + \cos^{-1}x = \frac{\pi}{2} \]

iii. \[ \sec^{-1}2 + \cosec^{-1}x = \frac{\pi}{2} \]

iv. \[ \tan^{-1}\sqrt{3} + \cot^{-1}x = \frac{\pi}{2} \]