



English

1. Our country is prone to disasters like floods, drought, cyclones or earthquakes. Adhoc measures are adopted to cope with every disaster. The slow result in loss of human life and property. Write an article for a newspaper giving suggestions about disaster management. You may suggest having special equipment, trained personnel, better transport and communication, quick decisions and speedy implementation. Your article should be of 150-200 words.
2. Ritu, a student of XI class of St. Mary's Convent, Kanpur is shocked by the communal disturbance and riots in the city. She discusses the issue with her teacher, who tells her about India's secularism, democracy and socialism and the efforts of religious fanatics to spread communal hatred which cripples economy and hinder development. Motivated by the discussion, Ritu writes an article on the '*Bane of Communalism*' for her school magazine. Write the article for her.

Economics

1. How the education plays a key role in the development of an individual?
2. What is infrastructure? How does it help in the growth & Development of an Economy? What are the types of Infrastructure? State briefly?
3. How is infrastructure related with development?
4. What are the different types of inflation. How increase in Black marketing increase the level of inflation.
5. Give some measure with your own through which inflation can be controlled.
6. Assignment: a) Make a assignment on unemployed persons in your locality with complete information data.

Accountancy

1. Purchase Machinery for Rs 200,000 on 1/4/10 paid carriage Rs 50,000. Second machine was purchased on 1 July 2012. First machine was sold on 1/12/13 for Rs 70,000. Depreciation is charged 10% on Reducing balance method, Account is closed on 31 march every year Prepare Machinery A/C, Depreciation A/C, provision for Depreciation A/C up to 31/3/13.
2. X draw a bill on Y for Rs 60,000 for 4 months on 1/01/14. X endorsed the bill to Z on same date. Z discounted with bank on 4/02/14 @ 12% P.A. on due date the bill was dishonored Z draw a bill on X including interest 2000. On due date bill was met. Pass journal entry in books of X, Y & Z.
3. An accountant found that credit side of Trial balance exceed by Rs. 3100 so he put innot suspense A/C. the following errors are also discorsured pass journal entry and prepare suspense A/C.
 - a) Bought goods from Hari Rs 500 recorded in sales book but Hari's A/C is correctly credited.
 - b) Sale of goods to Ram Rs. 2100 is credited to him Rs. 1200.
 - c) Sale of old furniture Rs 3000 was entered in sales book.
 - d) Goods costing Rs 1000 withdraw for personal use credited to sale A/C Rs 1400.
 - e) Paid Rent Rs 2000 to landlord, Gopal was debited to him Rs. 1600.
 - f) Repair to Plant Rs 1200 is debited to plant A/C Rs 3200.
4. Compute operating profit

Net profit	Rs. 80,000
Loss by fire	Rs. 7000
Interest received	Rs. 4000
Charity	Rs. 2500
Interest in Loan	Rs. 6500
Loss on sale of machine	Rs. 8000
Profit on slae of Investment	Rs. 9000

5. Pass Journal entry.
 - a) Purchased goods for Rs. 100,000 paid VAT 10%
 - b) Purchased goods for Rs. 200,000 paid GST 10%
 - c) Sold goods for Rs. 150,000 VAT collected 10%
 - d) Sold goods for Rs. 300,000 GST collected 10%
 - e) Interest on capital Rs. 1000.
 - f) Interest on drawing Rs. 500.
 - g) Depreciation on furniture Rs. 2000.
 - h) Goods costing Rs. 50,000 destroyed by fire insurance company accept claim Rs. 45000.
 - i) Paid salary Rs. 20,000 of which 1/5 is prepaid
 - j) Paid wages Rs. 10,000 and wages o/s is Rs 20,000.

Physics

1. What does the slope of stress-strain graph indicate?
2. A wire of length 2.5 m has a percentage strain of 0.012% under a tensile force. Determine the extension in the wire.
3. Two wires made of same material are subjected to forces in the ratio 1:4. Their lengths are in the ratio 2:1 and diameter's in the ratio 1:3. What is the ratio of their extensions?
4. Can Bernoulli's equation be used to describe the flow of water through a rapid in a river? Explain.
5. On what factors does the critical speed of fluid flow depend?
6. A Hot liquid moves faster than a cold liquid. Why?
7. At what speed will the velocity head of stream of water be 40cm?
8. What should be the average velocity of water in a tube of radius 0.005m so that the flow is just turbulent? The viscosity of water is 0.001 Pa-S.
9. State and Prove Bernoulli's Theorem.
10. Steel is more elastic than Rubber. Why?

Mathematics

1. For any two sets A and B prove that $A \cup B = A \cap B \iff A=B$
2. For any three set A, B and C. prove that $A \times (B-C) = (A \times B) - (A \times C)$
3. Prove that
4. $\cos 2a \cos 2b + \sin^2(a-b) - \sin^2(a+b) = \cos 2(a+b)$.
5. For any complex number $Z_1, Z_2,$ and Z_3 . Show that $Z_1 \cdot (Z_2 + Z_3) = Z_1 \cdot Z_2 + Z_1 \cdot Z_3$.
6. Solve the following system in equation graphically
 $2x+y \geq 8,$ $x+2y \geq 8,$ $x+y \leq 6$
7. How many 3 digit number can be formed using the digit 1 to 9 if no digit is repeated.
8. How many four letter word can be formed using the letter of the word INEFFECTIVE
9. Find the coefficient of x^n in the expansion of $(1+x)(1-x)^n$.
10. If a,b,c are in AP prove that
 $A^3+b^3+6abc=8b^3$
11. Find the equation of the line which is parallel to $3x-2y+5=0$ and passes through the point (5,-6).

Biology

1. Difference between a simple leaf and compound leaf.
2. How a phylloclade differ from a phyllode?
3. In what way top root differs to that of adventitious root.
4. Which is most highly evolved recemose and it is representation of which family?
5. Describe the descending imbricate or vexillary aestivation.
6. Name the types of flower based on position of ovary and also the names given to such ovaries.
7. How many types of sessile flower are aggregated in hypanthodium inflorescence?
8. Give the floral formula of family Solanaceae.

9. Describe the term Syngenesious and Synandrous.
10. What do you understand by the term Syncarpous and apocarpous? Do you find apocarpous condition in any of the families studied by you?

Business studies

Prepare any of the following projects

Project one: Field visit

- Suitable places for a field visit could be:-
 - i) Handicraft unit
 - ii) Factory/Manufacturing Unit
 - iii) Department store
 - iv) Mall / Chain store.
- The visit must focus on the following:-
 - i) Nature and scope of business
 - ii) Type of business org.
 - iii) Different stakeholders in the business org.
 - iv) Organizational Structure
 - v) Levels of Management and managerial hierarchy etc.

Project two : Case Study on a product.

- Suitable products for project could be:-
Any product of your daily use on product you better know about.
- Students may focus on the following:
 - i) Main sources to procure the products.
 - ii) Main markets where the products and sold.
 - iii) Climate for growth of products. Production technique of product.
 - iv) Marketing of product.
 - v) Research on change in wholesale and retail prices over last decade.
 - vi) Role of auxiliaries on prices for the product.

हिंदी

१. अपने शहर में हुई किसी सड़क दुर्घटना से उत्पन्न जनक्रोध पर एक रिपोर्ट लेखन कीजिए ।
२. पित्रसत्तात्मक समाज में स्त्रियों की दशा विषय पर एक आलेख लिखिए ।

I.P.

1. Make a list of all functions of MySQL .
2. Make a table by using primary, foreign, not null constraints .