DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Computer Science**

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1. **How is a Compiler different from interpreter?**
2. **Why is binary language often termed as machine language? Why is machine language required?**
3. **Convert the following:**

(i)	$(A13\ B)_{16}$	$= (\ldots\ldots\ldots)_{10}$	**(ii)**	$(2352)_{10}$	$= (\ldots\ldots)_{16}$
(iii)	$(7FD6)_{16}$	$= (\ldots\ldots\ldots)_{8}$	**(iv)**	$(3527)_{8}$	$= (\ldots\ldots)_{2}$
(v)	$(1101100001)_{2}$	$= (\ldots\ldots\ldots)_{8}$	**(vi)**	$(101.1101)_{2}$	$= (\ldots\ldots)_{10}$
(vii)	$(3777)_{8}$	$= (\ldots\ldots\ldots)_{10}$	**(iv)**	$(65535)_{10}$	$= (\ldots\ldots)_{8}$

4. **State the features of Object Oriented Programming?**
5. **What are the disadvantages of OOP?**
6. **What do you mean by Abstraction and Encapsulation?**
7. **What is the difference between an object and a class?**
8. **What is the difference between a keyword and an identifier?**
9. **What is the purpose of a header file in a program?**
10. **Point out errors in the following program:**

```
Void main ( )
{
Cout>> "Enter variable";
Cin>>var;
Sqrs=var*var;
Cout<< "The square is "<<Sqrs;
```

11. **Write a C++ program that inputs a student's marks in three subjects (out of 100) and prints the percentage marks.**
12. **Differentiate between the post-increment and pre-increment operators.**
13. **Evaluate the following expressions:**

(y) &&(y-z) || ! (2y+z-x)

If x=13, y = 14 and z=5

14. Suppose A,B,C are integer variables A=3, B=3, C= − 5 and X,Y,Z are floating point variables where X=8.8, Y=3.5, Z= -5.2 Determine the value of the following expressions:

(a) A%C (b) A*B/C (c) (A*C) % B (c) X/Y (e) X/(X+Y)

15. Write a program to input three integers and print largest of three.

16. WAP to input principal amount and time. If time is more that 10 years, calculate the simple interest with rate 8%. Otherwise calculate it with rate 12% per annum.

17. Differentiate between 'nested if' and 'switch' statement.

18. What is the purpose of using 'break' in switch statement?

19. What are the drawbacks of 'switch' statement.

20. Correct the following code so that it is functional:

```
Value=4;
Do;
{
   total+=value;
cout<<total ;
while value<=8;
```

21. What will be the output of the following code fragment:

```
for(i=10; i<=50; i+=10)
j= i /2;
cout<<j<< "   ";
```

22. Generate the following series using C++ code:

(a) 1 2 4 8 16 32 64 128

(b) $1^2 + 3^2 + 5^2 + \ldots\ldots n^2$

(c) $1 + \frac{1}{1!} + \frac{1}{2!} + \frac{1}{3!} + \cdots + \frac{1}{n!}$

23. WAP to print the multiplication table of any number.

24. WAP to enter a year and check whether it is a leap year or not.

25. WAP to display Fibonacci series 0 1 1 2 3 5 8 ……..

26. WAP to enter a number and check whether it is palindrome or not.

27. WAP to generate Armstrong number within the range 1 to 100.

28. WAP p using nested loops to produce the following design.

(i)

```
A
A B
A B C
A B C D
A B C D
```

(ii)

```
          &
        &   &
      &       &
    &           &
  &               &
```

(iii)

```
        1
      1 2 3
    1 2 3 2 1
  1 2 3 4 3 2 1
```

(iv)

```
          *
        * A *
      * A * A *
    * A * A * A *
```

29. WAP to convert a lowercase character to uppercase.

30. WAP to check whether square root of a number is prime or not?

31. WAP to convert any decimal number to its binary equivalent.

32. WAP to enter a sentence and count number of vowels present in it.

33. WAP to find the sum of the following series:

(a) $x - \frac{x^2}{2!} + \frac{x^3}{3!} - \frac{x^4}{4!} + \frac{x^5}{5!} - \frac{x^6}{6!}$

(b) $x + \frac{x^2}{2} + \frac{x^3}{3} + \cdots + \frac{x^n}{n}$

(c) $1+x+x^2 + \cdots + x^n$

34. WAP to print every integer between 1 and n divisible by m. Also report whether the number that is divisible by m is even or odd?

35. Write a program to find whether the given character is a digit or a letter.

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Engineering Graphics**

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1. **Construct hexagon about a circle of 60 mm diameter.**
2. **Construct a square in a circle of 60 mm diameter.**
3. **A point 'B' is 20 mm in front of the V.P. and 30 mm above the H.P Draw the Projections.**
4. **A point 'C' is in the H.P and V.P draw the projections.**
5. **Draw in a square, the same number of equal circle as the sides of the square, each circle touching one side of the square and two of the other circle.**
6. **A line PQ 90 mm long in the H.P and makes an angle of 30° with the V.P., its end P is 25 mm in front of V.P. Draw the Projections.**
7. **The length of the top view of a line, parallel to the V.P. and inclined at 45° to the H.P. is 50 mm one end of the line is 12 mm above H.P. and 25 mm in front of the V.P. Draw the projection and determine its true length.**
8. **To construct an ellipse when the distance of the focus from the directrix is equal to 50 mm and eccentricity is $\frac{2}{3}$.**
9. **Draw an equilateral triangle of 50 mm side has its V.T. parallel to and 25 mm above XY. It has no H.T. Draw its projections when one of its sides is inclined at 45° to the V.P.**
10. **A regular pentagon of 25 mm side has one side on the ground; its plane is inclined at 45° to H.P and perpendicular to V.P. Draw its projections and show its traces.**
11. **Draw the projections of a circle of 50 mm diameter having its plane vertical and inclined at 30° to V.P. Its centre is 30 mm above the H.P and 20 mm infront of V.P Also show its traces.**
12. **Draw the projection of cylinder 40 mm diameter. It is resting on the grand of its base Axis is vertical. Give the dimension height 60 mm.**
13. **Draw the Projection of cone of base diameter 40 mm height 60 mm, resting on the ground of its base axis is vertical.**
14. **A hexagonal prism of base side 30 mm, height 60 mm base side parallel to V.P. It is resting on the ground of its base axis is vertical. Draw the projections.**
15. **A square pyramid of base side 40 mm, height 55 mm. base side parallel to V.P. It is resting on the ground of its base. Axis is vertical.**

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Business Studies**

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1. **State the distinguish factors between business profession and employment on the following basis –**

   (a) Mode of establishment **(b) Nature of work**

   (c) Qualification **(d) Reward or return**

   (e) Capital Investment **(f) Risk**

   (g) Transfer of Interest **(h) Code of conduct**

2. **What is Business Risk? Discuss with suitable examples various types of business risks.**

3. **How does trade removes hindrances of persons, place, information, finance, risk, time and consumer ignorance. Explain each one with a suitable example.**

4. **Anamika joined her father's business. She received a monthly salary. Her elder brother is an established lawyer and helps his father whenever needed. Their mother is a house wife and supervises house work. She sets pocket money from her husband. Name the activities in which Anamika, her father, her mother and her brother are engaged in and differentiate them on the basis of –**

   (i) Reward / Return

   (ii) Capital Invested

   (iii) Risk

5. **Ramneek works as a Sales Manager in Sell Well Ltd. He has authority to meet customers, offer them various schemes and finalise orders. He has three executives working under him. He enjoys good salary and company appreciates his efforts in the form of additional incentives based on his annual performance. The Director ensures that Ramneek has full information about prices so that he can work efficiently. Ramneek's employment contract clearly mentions that no employee will work for competitors, appoint any relative as company distributor or sell company products to anyone without informing the owner. Despite signing the contract and agreeing to all terms and conditions, Remneek appointed medicheck (Pvt.) Ltd. as company's distributor and did not disclose to company that director of medicheck is his real brother.**

   (a) State the values Sell Well Ltd. follows with respect to employees.

(b) State the values Ramneek as a company employee has ignored.

6. Best Products Ltd. manufactures consumer products. One of their shampoos has gained good market demand. The owner decided to increase its price by 30% to earn higher profits. In order to retain its customers he offered a face cream free with every purchase of shampoo bottle. This face cream did not have demand, so to get rid of huge stock of the company, it decided to offer it as free. They advertised that the cream is useful for Sunburns but it was not actually true. State the values Best Products Ltd. is ignoring.
7. Why does business need multiple objectives? Explain all the objectives.
8. State the different types of Cooperative Societies and specify their respective purpose.
9. State and explain the various factors to be considered while starting a business.
10. Shalini is teaching in a coaching centre. She is not happy with the remuneration and has plans to start her own coaching centre. She is an excellent mathematics tutor but cannot take science. Most students look for a centre which can provide both science and mathematics tuitions. Advise what should Shalini do.
11. Rohan, Sohan and Mohan are partners of a business or publishing books. They have adopted three villages which are educationally backward. Every year they distribute books to schools established in these villages for free to promote education. Identify the values followed by the partnership firm.
12. Explain the following terms:-
    (a) Perpetual Succession
    (b) Common Seal
    (c) Karta
    (d) Artificial Person
13. List the documents required for the incorporation of a company.
14. The business assets of an organization amounts to Rs. 50,000 but the debts remain unpaid to the tune of Rs, 80,000. What course of action can the creditors take if-
    (a) the organization is a sole proprietorship firm
    (b) the organization is a partnership firm with Anthony and Akbar as partners? Which of the two partners can the creditors approach for repayment of debt?
15. Kiran is a sole-proprietor. Over the past decade her business has grown from operating a neighbourhood corner shop selling accessories such as artificial jewellery, girls hair clips and nail art to a retail chain with three branches in the city. Although she looks after the

varied functions in all the branches, she is wondering whether she should form a company to manage her business better. She also has plans to open branches all over the country.

(a) Explain two benefits of remaining as a sole-proprietors.

(b) Explain two benefits of converting to a joint stock company.

(c) What role will her decision play in going nation wide in the choice of form of the organization.

(d) What legal formalities will she have to undergo to operate business as a company?

16. Differentiate between "Memorandum of Association" and "Articles of Association".

17. Discuss in detail the various factors which must be considered while selecting a form of organization before starting a business.

18. If registration is optional why do partnership firms willingly go through this legal formality and get themselves registered? Explain.

19. What is meant by the term "Promotion"? Discuss the legal position of promoters with respect to a company promoted by them.

20. Discuss the distinctive features of a public limited company.

21. Name the form of public sector enterprise, which is constituted as an autonomous unit by the Act of Parliament. Explain any five features of such an organization.

22. Government of India established public sector enterprises to meet the post-independence challenges of poverty, employment, illiteracy and regional imbalance. However, with time, government reduced the number of industries reserved under public sector and promoted disinvestment. Why , in your opinion , govt. promoted disinvestment?

23. Multinational companies establish themselves in developing countries to enjoy huge profits by selling consumer goods or luxury items. They start business by offering wide variety of goods at prices cheaper than local retailers offer. But once they are established they increase prices.

(a) State the values the government of a developing country ignores while allowing MNCs to establish in their country.

(b) What value do the MNCs violate?

24. Describe the Industrial policy 1991. Towards the public sector.

25. List out the various benefits of entering into joint ventures.

26. What is the difference between bearer cheque and a crossed cheque?

27. Explain the following with relevance to insurance:-

1. **Utmost good faith**
2. **Insurable Interest**
3. **Indemnity**
4. **Subrogation**
5. **Proximate Cause**
6. **Contribution**
7. **Mitigation**

28. Sahil took a fire insurance policy of Rs. 15 Lakhs for his factory at an annual premium of Rs. 18500. In order to avoid higher premium, he did not disclose that highly explosive chemicals are being manufactured in his factory. Due to a fire his factory is severely damaged. The insurance company refused to make the payment for claim as they come to know that the highly explosive chemicals were manufactured. Is Sahil entitled to receive the claim? Explain the principle of insurance violated by Sahil.

29. Every year, lot of agricultural production is spoilt during rainy season due to lack of proper storage facilities in villages. Government has decided to construct a warehouse in radius of every 100 km so that necessary goods can be stored. This will reduce wastage and goods will be available even during bad weather condition. What values is government trying to achieve?

30. Rekha Garments Ltd. has a loan of Rs. 25,00,000 to pay. They are short of funds so they are trying to find means to arrange funds. Their manager suggested to claim from insurance company against stock lost due to fire in the warehouse. He actually meant that they can put their warehouses on fire and claim from insurance company against stock insured. They can use the claim money to repay loan.

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Physical Education**

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1. **What do you mean by Strength?**
2. **What is the meaning of physical fitness?**
3. **What is meant by life style?**
4. **What do you mean by integrated physical Education?**
5. **Write down the Oath of Special Olympic Bharat?**
6. **What do you mean by 'CITIUS, ALTIUS and FORTIUS?**
7. **What do you mean by IPC?**
8. **What is Pranayama?**
9. **What do you mean by elements of yoga?**
10. **What do you mean by Prohibited Substances?**
11. **What are ergogenic aids?**
12. **Discuss about any three components of wellness?**
13. **Discuss about teaching career in physical education in brief.**
14. **Elucidate the objectives of modern Olympic Games.**
15. **Discuss the physiological benefits of 'Asanas'.**
16. **What are the side effects of anabolic steroids? Explain in brief.**
17. **Do the Components of positive life style help in leading a healthy life? Discuss in details.**
18. **What do you mean by the concept of adapted physical education? Explain its Principles?**
19. **Explain about Rajiv Gandhi Khel Ratna Award in details.**
20. **Discuss " yoga as an Indian Heritage."**
21. **What is doping? Explain the side effects of Prohibited Substances in detail.**

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Entrepreneurship**

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1. **How does the spirit of entrepreneurship help?**
2. **What are the myths about entrepreneurs?**
3. **"Only people born with entrepreneurial competencies can become entrepreneurs". Do you agree?**
4. **What are the pros of entrepreneurship?**
5. **Explain the process of setting up an enterprise.**
6. **"Innovation is the key to success of any entrepreneur." Explain why?**
7. **How does Joseph Schumpeter differentiate between inventor and innovator?**
8. **What is attitude? Differentiate between positive and negative attitude.**
9. **Explain the difference between an entrepreneur and an employee.**
10. **Explain Maslow's need hierarchy.**
11. **"A young boy is working hard to earn his living. He save some part of his earning for basic education." Which needs is it satisfying according to Maslow need hierarchy theory?**
12. **" An ethical entrepreneur, who is fulfilling his moral responsibilities towards society is an asset for society". Explain.**
13. **Ratan Tata shifted the project of Nano Car from West Bengal to Gujarat. Which type of competency is shown here. Explain.**
14. **State the four core values found in the entrepreneur.**
15. **What qualities are required for a successful entrepreneur?**
16. **What are common idea fields?**
17. **"Spending money on evaluating idea is a waste." Do you agree with this? Give reason to justify your answer.**
18. **No one knows you or your ideas better than you do. It is the process of seeking the answers to important questions about your enterprise that are important as you try to realize the dream of owning your own business.**
19. **Women entrepreneurs have braved the world and carved a niche for themselves. Name any two women entrepreneurs and what barriers did they face in their journey?**

20. **Give difference between feasibility study and business plan.**

21. **Bill Wagner, entrepreneur can be divided into seven types ……Explain.**

22. **Explain different types of risks.**

23. **What do you mean by incubator and business centre?**

24. **How does entrepreneur act as a problem solver?**

25. **What does the word 'cloud' denote?**

26. **Explain barriers to the growth of entrepreneurship.**

27. **Explain the role of technology for growth of business.**

28. **A social entrepreneur most unique ability is to see a problem in the world and have the passion and belief that he can solve it. Sometimes thinking that he change the world feels impossible but a small act of kindness add up to big changes. Write about 5 entrepreneurs who made a change to some one's life through their efforts.**

29. **Use the following questions to make decisions about a business idea of your choice. Be sure to write out your answers ……to remember your decisions and build on them.**

    (a) How can you describe the business ……..

    (b) What is your product, or service?

    (c) How can you attract customers ?

    (d) How will you organize the managers or workers of the business?

    (e) How will you make the business grow in the future?

30. **What is the process of perceiving an opportunity?**

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Accountancy**

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1. **What is meant by Accountancy?**
2. **What are the objectives of Accounting?**
3. **What are the branches of Accounting?**
4. **State advantage of accounting?**
5. **Define Book Keeping.**
6. **What are the limitations of Accounting?**
7. **List the internal users of Accounting.**
8. **List the external users of Accounting.**
9. **What do you mean by window dressing Financial Statement?**
10. **What is the difference between Book Keeping and Accounting?**
11. **What do you mean Double Entry System?**
12. **Explain the following Accounting terms:-**

(a) Business transaction	**(b) Account**
(c) Capital	**(d) Drawings**
(e) Liabilities	**(f) Current Liabilities**
(g) Non-current Liabilities	**(h) Assets**
(i) Current Assets	**(j) Non Current Assets**
(k) Fixed Assets	**(l) Fictitious Assets**
(m) Receipts	**(n) Expenditure**
(o) Revenue	**(p) Expenses**
(q) Income	**(r) Profit**
(s) Gain	**(t) Loss**
(u) Debit	**(v) Credit**
(w) Voucher	**(x) Bad Debts**
(y) Proprietor	**(z) Solvent**

13. **What do you mean by accounting concept?**
14. **Explain Going Concern Concept.**
15. **Explain Money Measurement Concept.**
16. **Explain Business Entity Concept.**
17. **Explain the following –**

    (a) Dual Aspect Concept **(b) Cost Concept** **(c) Matching Concept**

    (d) Realization Concept **(e) Accrual Concept.** **(f) Accounting Period Concept.**
18. **What do you mean Accounting Equation? On which principle it is based?**

19. **Mention one example of the following cases -**
    (a) Increase in one Asset and Decrease in Other Assets
    (b) Decrease in an Asset and Decrease in Capital.
    (c) Decrease in an Asset and Decrease in Liabilities.
20. **What do you mean by Voucher?**
21. **Name any two source documents?**
22. **What is Cash Memo?**
23. **What is Invoice?**
24. **What do you mean by Accounting Voucher?**
25. **What is a pay in slip?**
26. **What is Debit note?**
27. **What is Credit note?**
28. **What is Journal?**
29. **What is Compound Journal Entry? Give an example.**
30. **What is the meaning of Leader?**
31. **Distinguish between Cash Discount and Trade Discount?**
32. **Discuss the concept of Opening Entry with the help of an example?**

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

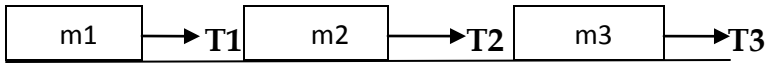
Assignment (2016-17)

Class:-XI **Subject:- Physics**

Answer the following questions:-

1. **The length covered by a body is found to be directly proportional to the square of time. What is the nature of acceleration?**
2. **It is easier to maintain the motion of a body than to start it. Why?**
3. **The magnitude of displacement $\vec{a}$ and $\vec{b}$ are 3m and 4m respectively and $\vec{c} = \vec{a} + \vec{b}$. considering various orientation of $\vec{a}$ and $\vec{b}$ what is**
   (a) the maximum possible magnitude for $\vec{c}$
   (b) the minimum possible magnitude for $\vec{c}$
4. **Keeping the angle of projection same. What is the effect on horizontal range of a particle when its velocity is doubled?**
5. **The distance s along z. axis varies with time as $S=2t^3+3t^2+6t+8$. Find the time t after which acceleration becomes zero.**
6. **Two particles A and B. Start moving towards each other with velocities 10 m/sec and 15 m/sec respectively from the separation of 500m. What is the displacement of A wr.t B after 4 sec?**
7. **A ball is dropped from a height of h metre above the ground and at the same instant another ball is projected upwards from the ground. The two balls meet when the upper ball falls through a distance $\frac{h}{3}$. Prove that velocities of the two balls when they meet are in the ratio 2:1.**
8. **Define:**
   (a) Velocity time equation **(b) Displacement time equation and**
   (c) Velocity displacement equation graphically
9. **A stone released from a certain height h reaches the ground in time T. When will it be at.**
   (a) $\frac{h}{2}$ **(b) $\frac{3h}{4}$** **(c) $\frac{5}{6}\ h$** **below the point of release.**
10. **Three blocks are connected as shown on a horizontal frictionless table and pulled to the right with a force of T_3 = 60 N. If m1= 10 kg; m2= 20kg and m3= 30 kg.**

Prove that $\frac{T1}{T2} = \frac{1}{3}$



11. **Define angle of repose. Derive the relation between angle of repose and angle of friction.**
12. **A body travelling under uniform acceleration "a" cover distances X_1 and X_2 in consecutive time intervals t1 and t2 respectively. Prove that a=$\frac{2\left(\frac{x2}{t2}-\frac{x1}{t1}\right)}{t1+t2}$**
13. **State the law of conservation of momentum. Establish the same for a "n" body system.**
14. **If two resistances of values R1= (2.0 $\pm$ 0.1) Ω and R2 = (12.3 $\pm$ 0.2) Ω are put in**
    (i) series (ii) parallel , find the errors is the equivalent resistance.
15. **The number of particles crossing per unit area perpendicular to x-axis in unit time N is given by N= $\frac{-D(n2-n1)}{(x2-x1)}$ where n1 and n2 are the number of particles per unit volume at X_1 and X_2 respectively. Derive the dimensional formula for D.**
16. **Can the relative velocity of two bodies be greater than the absolute velocity of either?**
17. **A hundred metre sprinter increases his speed from rest uniformly at the rate of 1m/sec^2 for three quarter of the length and covers the last quarter with a uniform speed. How long does he take to cover the first half and second half of the run?**
18. **A balloon with mass M is descending down with an acceleration a when a<g. What mass m of its contents must be removed so that it starts moving up with acceleration a?**
19. **A bomb at rest explodes into three parts of the same mass, The momentum of the two parts is -2pi and pj. What will be the momentum of the third part?**
20. **A string of length L and mass m is lying on a horizontal table. A force F is applied at one of its end. What is the tension in a string at a distance x from the end at which force is applied?**
21. **Consider a mass m attached to a string of length "l" performing vertical circle. Find an expression for the**
    (i) velocity at any point
    (ii) tension at any point
    (iii) velocity minimum at the lower-most point for a vertical circle.
22. **Prove the following :-**
    (a) For two angles of projection θ and (90- θ) with velocity v
    (i) Range is same
    (ii) Heights are in the ratio of tan^2 θ :1
    (b) If the range and maximum height are equal, the angle of projection is tan^{-1} (4)

23. **The position of c particle is given by $\vec{r}$ = 3.0t $\hat{\imath}$-2.0t^2 $\hat{\jmath}$+4.0 $\hat{k}$m**
where t is in second and the co-efficient have the proper units for r to be in metres
(a) Find $\vec{v}$ and $\vec{a}$ of the particle.
(b) What is the magnitude and direction of velocity of the particle at t- 2 sec?

24. **$\hat{\imath}$ and $\hat{\jmath}$ are unit vectors along x and y axis respectively what is the magnitude and direction of the vectors $\hat{\imath}$ +$\hat{\jmath}$ and $\hat{\imath}$-$\hat{\jmath}$? What are the components of a vector $\vec{A} = 2\hat{\imath} + 3\hat{\jmath}$ along the direction of ($\hat{\imath}$+$\hat{\jmath}$) and ($\hat{\imath}$-$\hat{\jmath}$)?**

25. **A fighter plane is flying horizontally at an altitude of 1.5 km with speed 720 km/hr. At what angle of sight (wr.t) horizontal) when the target is seen, should the pilot drop the bomb in order to attack the target?**

26. **To man walking due east at the rate of 2 km /hr rain appears to fall vertically. When he increases his speed to 4km/hr, it appears to meet him at an angle of 45°. Find the real direction and speed of rain.**

27. **Prove that $(\vec{a} - \vec{b})$ x $(\vec{a} + \vec{b})$ = 2 $(\vec{a}x\vec{b})$**

28. **A particle moves from position vector $(3\hat{\imath} + 2\hat{\jmath} - 6\hat{k})$ to the position vector $(14\hat{\imath} + 13\hat{\jmath} + 9\hat{k})$ in metre under the action of constant force of $(4\hat{\imath}+\hat{\jmath}+3\hat{k})$ N. Calculate the work done by the force.**

29. **Alok wants to hit a target. He does not know in what direction should he points the rifle (higher, lower or is same direction as the target.) He asked the same from his friend Rakesh also was senior to him. Rakesh explained the whole the whole phenomenon to Alok.**
(a) What would be the answer of Rakesh?
(b) Why does a projectile fixed along the horizontal not follow a straight line path?
(c) What values are displayed by Rakesh?

30. **Mohan drived a car at a speed of 70 km/hr along a straight road for 8.4 km. Then the car suddenly ran out of petrol. Mohan did not lose his cool. Instead he walked for 30 min. to reach a petrol pump at distance of 2km.**
(a) What were the values displayed by Mohan?
(b) What was the average velocity from the beginning of his drive till he reached the petrol Pump.

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Chemistry**

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1. **The density of water at room temperature is 1.0 g/ml. How many molecules are there in a drop of water if its volume is 0.05 ml.**
2. **Two oxides of a metal contain 27.6 and 30.0 percent oxygen respectively. If the formula of the first oxide is M_3O_4, what is the formula of the second oxide?**
3. **The reaction $2C+O_2 \longrightarrow 2CO$ is carried out by taking 24 g of carbon and 96 g of O_2. Find out**
   (a) Which reactant is left in excess?
   (b) How much of it is left?
   (c) How many grams of the other reactant should be taken so that nothing is left at the end of the reaction?
4. **What volume of 36 M and 1 M sulphuric acid must be mixed to get 1L of 6M sulphuric acid?**
5. **29.2 % (W/W) HCl stock solution has a density of 1.25 gml^{-1}. The molecular mass of Hcl Is 36.5 g/mol. What is the volume (ml) of stock solution required to prepare 200ml of solution of 0.4 M HCl?**
6. **When is the law of definite proportions not obeyed? Carbon and oxygen combine to form monoxide and carbon –dioxide. Which law of chemical combination governs their formation.**
7. **Out of 1 M H_2SO_4 and 1N H_2SO_4, Which is more concentrated and why?**
8. **Why is the value of Avogadro's number $6.022x10^{23}$ and not any other value?**
9. **What transition in a hydrogen spectrum would have the same wavelength as in the Balmer transition n=4 to n=2 of He^+ spectrum?**
10. **The electronic configuration of a dispositive ion M^{2+} is 2,8,4, and its atomic mass is 56. What is the number of neutrons in its nucleus?**
11. **How many protons are present in 5.6 L of oxygen at S.T.P using 0-16 isotope only?**
12. **A near ultra violet photon of wavelength 300 nm is absorbed by a gas and then remitted as two photons. One photon is of red light with wavelength 760 nm. What would be the wavelength of the second photon?**

13. **(a) How many electrons can be filled in all the orbitals with n+l=5?**

    (b) Which of the two is paramagnetic , V(IV) or V (V) and why? (atomic number of v=23)

    (c) How many unpaired electrons are present in Pd (Z=46)?

    (d) The ion of an element has configuration [Ar] $3d^4$ in +3 oxidation state. What will be the electronic configuration of its atom?

14. **Write down all the four quantum numbers of**

    (i) 19th electron of 24^{cr} (ii) 21st electron for $_{21}Sc$

15. **Calculate the energy and frequency of the radiation emitted when an electron jumps from n=3 to n=2 in a hydrogen atom.**

16. **The effect of uncertainty principle is significant only for motion of microscopic particles and is negligible for the macroscopic particles. Justify this statement with the help of a suitable example.**

17. **The formation of F^- (g) from F(g) is exothermic whereas that of O^{2-} (g) from O (g) is endothermic. Explain.**

18. **Why is fluorine (F_2] more reactive than chlorine (cl_2)?**

19. **Fourth period has 18 and not 32 elements. Explain.**

20. **Lanthanoids and actinoids are present in separate rows at the bottom of the periodic table. Assign reason for the same.**

21. **First ionization enthalpy of carbon is more than that of Boron but the reverse is not true for the second ionisation enthalpy. Explain.**

22. **Arrange the following ions in order of increasing size.**

    Be^{2+}, Cl^-, S^{2-}, Na^+, Mg^{2+}, Br^-

23. **The element 119 has not been discovered. What would be the IUPAC name and symbol for this element. On the basis of the periodic table predict the electronic configuration of this element and also the formula of its most stable chloride and oxide.**

24. **Both NH_3 and NF_3 have identical shapes and same state of hybridisation. Both N-H and N-F bonds have almost same electronegativity difference. But still, the two molecules have different dipole moment values. How will account for it?**

25. **Give reasons for the following.**

    (i) Covalent bonds are directional but ionic bonds are non-directional.

    (ii) Water molecular has bent structure whereas carbon dioxide molecule is linear.

    (iii) Ethyne molecule is linear.

26. **Explain why CO_3^{2-} ion cannot be represented by a single Lewis-structure. How can it be best represented?**
27. **Nacl gives a white precipitate with $AgNO_3$ solution but CCl_4 does not. Why?**
28. **Bond angle in NH_3 is more than in PH_3. Explain.**
29. **O - nitrophenol is steam volatile while p-nitrophenol is not. Discuss.**
30. **Write the complete sequence of energy levels in the increasing order of energy in the molecule. Compare the relative stability and the magnetic behavior of the following species.**

    N_2 N_2^+ N_2^- N_2^{2+}
31. **Describe hybridization in the case of pcl_5 and SF_6. The axial bonds are longer as compared to equatorial bonds in PCl_5 whereas in SF_6, both axial bonds and equatorial bonds have the same bonds length. Explain.**

DELHI PUBLIC SCHOOL

SAIL Township, Ranchi

Assignment (2016-17)

Class:-XI **Subject:- Biology**

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1. **What is Binomial Nomenclature?**
2. **What is the unique feature of Euglena?**
3. **What is the difference between parthenogenesis and parthenocarpic?**
4. **What is a radula?**
5. **How is phylloclade different from phyllode?**
6. **Give one functional difference between phellogen and phelloderm.**
7. **What are plasmodesmata?**
8. **List the advantages of scientific name.**
9. **In a given habitat we have twenty plant species and twenty animal species. Should we call this as 'diversity' or 'biodiversity'? Justify your answer.**
10. **Why blue green algae are not true algae?**
11. **Explain briefly alternation of generation in Bryophytes.**
12. **What are waterblooms? How are they formed?**
13. **How can you identify a male and a female ascaris?**
14. **What is metagenesis? Mention an example which exhibits this phenomenon?**
15. **Some plants are found in nitrogen deficient habitats and they have deficiency of proteins. How do these plants compensate for protein deficiency and what are they called?**
16. **What are medullary rays? State their function.**
17. **What are the mesosomes? What is its function?**
18. **Why viruses are not classified with any of the five kingdoms?**
19. **Do you consider a person in coma living or dead? Explain.**
20. **Why Bryophytes are considered to be ecologically more important? How Bryophytes thrive on hills where large quantity of water is lost as run off.**
21. **Neurospora an Ascomycetes fungus has been used as a biological tool to understand the mechanism of plant genetics much in the same way as Drosophila has been used to study animal genetics. What makes Neurospora so important as a genetic tool?**

22. **The heterosporous petridophytes show certain characteristics which are precursor to the seed habit in gymnosperms. Explain.**
23. **Give the differences between:**
    - **(a) Open and Closed circulatory system.**
    - **(b) Direct and indirect development.**
    - **(c) Chondrichthyes and Osteichthyes**
24. **Give the function of.**
    - **(a) Interfascicular cambium**
    - **(b) Sieve tube**
    - **(c) Collenchyma**
25. **Name the mouth parts of cockroach. Which mouth part of cockroach is comparable to our tongue?**
26. **Mention the different types of cell junctions and write their function.**
27. **Water is essential for fertilization in bryophytes and petridophytes. How gymnosperms cope without the use of water in fertilization? Justify.**
28. **Explain the digestive system of cockroach with the help of a labeled diagram.**
29. **What are endomembranous cell organelles? Differentiate between any two endo-membranous cell organelles.**
30. **Distinguish between the following:**
    - **(a) Position of protoxylem in exarch and endarch condition**
    - **(b) Stele and Vascular bundle**
    - **(c) Interfascicular cambium and Intrafascicular cambium**
    - **(d) Protoxylem and metaxylem**
    - **(e) Open and closed vascular bundle**

fnYyh ifCyd Ldy] jkph

vH;kl i=&2 (2016-17)

कक्षा–एकादश fo"k;&fgUnh

वितान लता मंगेश्कर

1. fp=iV lxhr {k= dh yrk vufHkf"kDr lekKh gA
2. fp=iV lxhr dh c<rh yksdfi;rk dk vk/kkj D;k g\
3. fp=iV lxhr u ykxksa d dku fcxkM fn, gA i{k ;k foi{k e rd nA
4. *jtdrk* d vk/kkj ij 'kkL=h; vkj fp=iV lxhr e vrj crk,A
5. संगीत विषयक अभिरूचि जगाने में लता मंगेशकर का क्या योगदान था।
6. Ykrk मंगेश्कर के गानों की विशेषताएँ बताएँ।

jktLFkku dh jtr cn

7. fVIi.kh fy[k

(i) ptkjk **(ii)** [kfM;k iVVh **(iii)** ikyj ikuh

8. “;gk fc[kj jgu e gh lxBu gA” dFku d vk/kkj ij e:Hkfm की विशेषताएँ बताएँ।
9. djbd fuek.k dh ifØ;k crk,A
10. ty lj{k.k d lnHk e jktLFkku dh jtr cn ikB dh ikfxdrk crk,A

vkjkg ued dk nkjksxk

11. मुंशी वंशीधर के पिता की चारित्रिक विशेषताएँ बताएँ।
12. ikB e *ekrh* 'kCn dk i;kx fdld fy, fd;k x;k g vkj D;k\
13. i0 vykinhu d lkFk ?kVh ?kVuk dh funk lkj cbeku Hkh dj jg FkA bll lekt dh fdl ekufldrk dk irk pyrk gA
14. किस आधार पर मुंशीवंशीधर को नौकरी से मुअत्तल किया गया\ Li"V djA
15. ikB d vk/kkj ij वर्तमान न्याय व्यव्स्था पर प्रकाश डालें।
16. /ke vkj /ku dh yMkbZ dc vkj dl Buh\
17. ifMr vykihnhu vyx ifjfLFkfr;k e vyx pfj= d Lokeh fn[kr gA ikB d vk/kkj ij crk,A

fe;k ulh:)hu

18. *elhgk* 'kCn dk ulh:)hu dk fy, i;kx dh lkFkdrk crk,A
19. jkfV;k idkuk Hkh bYe gA ikB dk vk/kkj ij iekf.kr djA
20. fe;k ulh:)hu dh ihMk D;k g\ *mrj x, o teku* ls o D;k dguk pkgr g\ *iFkj ikpkyh*
21. ikB dk vk/kkj ij crk,a ml le; fQYe fuekZ.k ls tqMh dfBukb;k D;k Fkh\
22. *vli* ik= dk p;u djus esa y[kd dk D;k dfBukbZ;k gbZ vkj mUgksaus mldk D;k lkek/kku fudkyk\
23. lkmM fjdkfMx esa D;k leL;k,a vkbZ \
24. fQYedkj vkj dykdkj dk :Ik esa lR;ftr jk; dk ifjp; nsA

fonkbZ lHkk"k.k

25. लॉर्ड कर्जन के जाने की खबर मिलने पर भारतीय खुश थे या दुखी\

26. लॉर्ड कर्जन का कौन सा तानाशाही रवैया ठीक नहीं था\ D;k\

dchj

27. ईश्वर की सर्वव्यापकता पर प्रकाश Mkyk A

28. ckg; vkMcj fujFkd dc gks tkrs g\ lkeqgj.k crk,a

ehjk

29. d"k HkfDr gsrq lei.k Hkko vfuok;Z gA dSls\

30. vejRo dh ikfIr dc vkj dSls gks ldrh g\ ehjkckbZ dk lanHkZ esa crk,a

ifFkd

31. ikB dk vk/kkj ij lkxj rV dk ikRkdkyhu] lk;adkyhu ,oa jkf=oyk dk ikdfrd lkSan;Z dk o.kZu viuh 'kCnksa esa djsA

32. idfr dk ise lokifj isa gA dSls\ Li"V djsA

o vk[k

33. ikB dk vk/kkj ij d"kd lekt dh विसंगतियों पर प्रकाश डालें।

34. fdlku dh lkekftd] ikfjokfjd ,oa o;fDrd n[kk dk o.kZu djsA

35. स्वाधीन भारत में भी किसान व्यवस्था की उपेक्षा के शिकार हैं। कैसे\ ikB dk vk/kkj ij crk,a

?kj dh ;kn

36. ikB dh eY lonuk l{ki e crk,A

37. fucU/k fy[k

(i) Hkkjrh; fdlku **(ii)** efgyk lj{kk

(iii) vkrdokn **(iV)** vkt dk fo|kFkh

38. i= fy[k

(i) Lkekpkj i= d liknd dk fpfdRlk lfo/kkvk d vHkko l lcf/kr i= fy[kA

(ii) *d'प्यूटर शिक्षक पद हेतु* आवेदन करते हुए राज्य के शिक्षा&निर्देशक को पत्र लिखें।

39. Qhpj fy[kA

(i) Hk"Vkpkj dk nkuo

(ii) ngt dk nhed

(iii) vljf{kr cpiu

(iv) b&cktkj

40. vfHk0;fDr vkj ek/;e

(i) lpkj
(ii) Qhpj D;k g\
(iii) MM ykbu fdl dgr g\
(iv) lpkj d fofo/k ek/;ek d fo"k; e crk,A
(v) ehfM;k ykdr= dk pkFkk LrHk gA dl\
(vi) dku l ddkj lekpkji= e vr e fy[k tkr gA
(vii) fdUgh nk lekpkj puy d uke fy[kA
(viii) ihr i=dkfjrk D;k g\
(ix) loknnkrk fdl dgr g\
(x) Vh0oh0 lekpkj jfM;k dh ryuk e T;knk ykdfi; g D;k\
(xi) [kktijd i=dkfjrk D;k g\
(xii) lekpkj y[ku e mYVk fijkfeM l vki D;k le{kr g\
(xiii) lekpkj fdl dgr g\
(xiv) jfM;k lekpkj dh Hkk"kk dlh gkuh pkfg,\
(xv) lpuk ikIr dju d nk L=kr crk,A
(xvi) tulpkj fdl dgr g\