

# Guru Gobind Singh Public School

## Sector V/B,B.S.City

Class: XII

Holiday Assignment 2019-20

Subject: English

**1. Read the passage given below and answer the questions that follow.**

I'm not alone. Insomnia affects several millions of people. The good news is that with proper diagnosis and discipline, insomnia is almost always treatable. There are some 90 different classified sleep disorders. Insomnia is the most prevalent, although technically it is considered not a condition but a symptom. It is a red flag for any number of things. Sleeping pills may seem like the fast and easy remedy. However, they are most effective for short-term use, and even then, should be administered only under a physician's guidance. The side effects of sleeping pills include dependence, rebound insomnia and the need for higher dosage.

Determined to help myself to a solid night's sleep without resorting to sleeping pills, I began by reducing my considerable coffee intake. Common sense also told me that nicotine and alcohol - one a stimulant, the other a sedative - were probably not conducive to a calm, centred self, so I gradually eliminated these substances as well to my benefit. I tracked in a notepad the worries and creative inspirations that present themselves larger-than-life in the middle of the night. And I started a sleep journal.

Although my overall sleep was improving, I still experienced difficult periods. So, I read more books and talked to therapists and sleep specialists. Although caffeine was an obvious no-no, I hadn't considered sugar as a culprit. Dr Albert explains in her book both the weird feeling of a sugar high and the panic reactions of a low may either prevent sleep or wake you up. Albert also points to excess salt, which she says stimulates the nervous system, and to spicy foods, which can disturb digestion. Foods and nutrients that Albert cites as promoting sleep include calcium, seaweed and dairy products; so go ahead and have that glass of warm milk. In addition to calcium, it contains L-tryptophan, an amino acid that may encourage drowsiness. Magnesium, which should be taken with calcium for proper absorption, and 13 vitamins are also listed as helpful. Many of the books I read talked about 'sleep hygiene,' a rather clinical sounding term for basic bedtime common sense. Here are some do's and don'ts: don't do your aerobic exercise just before jumping into bed. Avoid napping during the day. Don't eat a big meal late in the evening. Make sure you have a comfortable mattress, keep the temperature on the cool side and reserve your bedroom for sleep only. I also discovered that simply worrying about whether you're going to sleep can lead to self-perpetuating chronic insomnia.

**Answer the following questions:**

- (a) On the basis of your reading of the above passage, make notes on it using headings and sub-headings. Use recognisable abbreviations wherever necessary (minimum 4). Also suggest a suitable title.
  - (b) Write a summary of the above passage in about 80 words.
- 2.** You are Sangeeta/Shishir, the Editor of your school magazine. Draft a notice for your school bulletin board inviting articles, sketches etc from the students for your school magazine. You belong to KJ International School, Gangtok.

3. You are Shailesh, Son of AK Mathur of Circular Road, Jammu. Your father wants you to draft a formal invitation to be sent on the occasion of your sister Suvarsha's marriage. Prepare the invitation.
4. You are Parul/Pradeep of 16/48, MG Road, Bengaluru. You have seen an advertisement for the post of Marketing Manager in a reputed company in Pune. Write a job application for this post in 150 words and include your bio-data.
5. You are Bhavik/Bharti of class XII of SK International School, Vjay Nagar, Modinagar. Write a letter to the Manager of Sports Store, Meerut, complaining about a defective sports watch you purchased from their store. Write as Sports Secretary of your school.
6. You are Riya/Ritesh. You are concerned about the fact that the media today is giving a lot of coverage to frivolous news and not highlighting political, social and national issues. Write an article in 200 words for publication in your school magazine on "Dumbing of the media". Use the input given below.

frivolous news-clothes, food, house of celebrities - cheer leaders in PL-what is going on in serials of different channels-news-channels giving extensive coverage to comedians - sensationalising and adding mystery element to murders like Aarushi case.

7. A massive fire in a Mumbai restaurant killed 14 persons, mostly women, recently due to a short circuit. Write an eyewitness report for 'The Times of India' on the accident in 200 words. You are Ainit/Ainita, an employee of the restaurant.
8. Write a debate for or against the motion 'Boarding schools are better than day schools for all round education of a child' in 200 words.
9. On the occasion of the National Consumer's Day you have to speak on the topic 'Consumer Rights and their Protection.' Draft the speech in 200 words.
10. Answer the following questions:
  - (a) How different from usual was the atmosphere at the school on the day of the last lesson.
  - (b) What message does Stephen Spender convey through the poem 'An Elementary School Class Room in a slum.'
  - (c) Saheb is no longer his own master. Comment.
  - (d) What did Kamala Das think when she looked at her mother?

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## कक्षा 12वीं

## विषय: हिन्दी

1. आधुनिक काल के किन्ही पांच लेखकों के चित्र चिपका कर उनकी रचना तथा उनकी विशेषताओं के बारे में वर्णन कीजिए ।
2. चित्र के माध्यम से पतंग कविता का मूल भाव अपने शब्दों में स्पष्ट कीजिए।
3. पत्र - लेखन- आयुर्वेदिक औषधियों के विक्रेता को पत्र लिखकर विभिन्न दवाओं की जानकारी प्राप्त करें ।
4. NCERT में कंप्यूटर सहायक पद के लिए आवेदन पत्र लिखिए ।
5. आलेख लेखन 150 शब्दों में -
  - (1) गांव से शहर की ओर बढ़ रहा पलायन
  - (2) आंखों देखी सड़क दुर्घटना
  - (3) धर्मों में भाईचारा
6. परियोजना : जल ही जीवन है जल संरक्षण के विभिन्न स्रोत को चित्र के माध्यम से दर्शाएं।

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कक्षा :- द्वादश

विषय :- संस्कृतम्

1. अपठितं अनुच्छेदं पठित्वा प्रश्नान् उत्तरतः (कमपि द्वयम्)
2. पत्रे मंजुषायाः सहायतया रिक्त स्थानानि पूरयत। (कमपि द्वयम्)
3. अधोलिखितानां पंचवाक्येषु संस्कृते अनुच्छेदं लिखत - (कमपि द्वयम्)  
प्रातः भ्रमणम् / दीपोत्सवः / विद्यालयस्य वार्षिकोत्सवः / पर्यावरणस्य सुरक्षा" वा
4. संस्कृत-कवीनां परिचयः संस्कृते लिखत'
  - क) महाकविः कालिदासः
  - ख) विशाखदत्तः।
  - ग) महाकविः भासः।
  - घ) पण्डित विष्णु शर्मा।
5. उपपद विभक्ति - द्वितीया - सत्पमी वि० पर्यन्तम्  
नियमाः - उदाहरणानि-वाक्य प्रयोगाः च  
इति शुभम्

**RELATION AND FUNCTIONS**

Show that the number of equivalence relation in the set (1,2) and (2,1) is two

**CHAPTER 1**

Question 2, 3, 4

**Exercise 1.3**

Question 6, 8, 9, 13

**INVERSE TRIGONOMETRY FUNCTIONS**

**Exercise 2.2**

Question 4, 5, 8, 11, 15, 18

**Miscellaneous exercise chapter 2**

Question 9, 10, 11, 12, 13, 16

**Matrix**

**Exercise 3.2**

Question 7, 15, 17, 18

**Exercise 3.3**

Question 6, 8, 10(ii)

**Exercise 3.4**

Question 16, 17

**Miscellaneous examples chapter 3**

Question 1, 2, 3, 7, 8, 9

**Determinant**

**Exercise 4.5**

Question 4, 12, 13, 17

**Exercise 4.6**

Question 12, 13, 14, 15

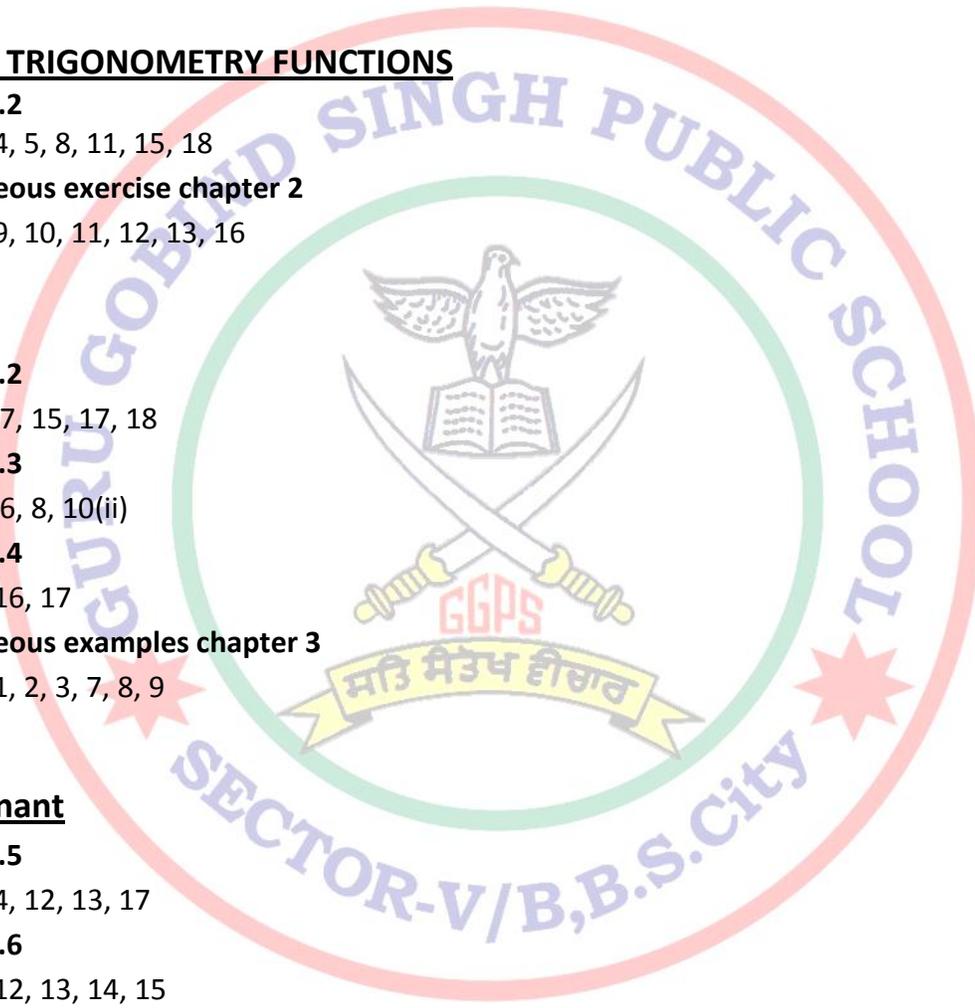
**Exercise 4.2**

Question 4, 5, 8, 10, 11, 12, 13, 14

Solved examples 30, 32, 33, 34

**Miscellaneous exercise chapter 4**

Question 11, 12, 14, 17



**Holiday Homework****Subject:-Physics****CHAPTER 1 : Electrostatics**

1. What is a dielectric? Why does the capacitance of a parallel plate capacitor increase on introduction of a dielectric in between its two plates? Derive an expression for the capacitance of such a capacitor having two identical plates each of area  $A$  and separated by distance  $x$ . The space between the plates has a medium of dielectric constant  $k$ .
2. Derive an expression for the energy stored in a parallel plates capacitor with air is a the medium between its plates.  
Air is now replaced by a dielectric medium of dielectric constant  $k$ . How does it change the total energy of the capacitor is  
(i) the capacitor remains connected to the same battery?  
(ii) The capacitor is disconnected from the battery?
3. Define the term electric field intensity. Write its SI unit. Derive an expression for the electric field intensity at a point on the axis of an electric dipole.
4. State Gauss' theorem in electrostatics. Use it to obtain an expression for the electric field intensity at a point near a uniformly charged infinite plate sheet.
5. A dielectric slab of thickness ' $t$ ' is kept in between the plates, each of area ' $A$ ', of a parallel plate capacitor separated by a distance ' $d$ '. Derive an expression for the capacitance of this capacitor for  $t \ll d$ .
6. (a) Explain briefly how a capacitor stores energy on charging. Obtain an expression for the energy thus stored.  
(b) A battery of 10 V is connected to a capacitor of 0.1 F. The battery is now removed and the capacitor is then connected to a second uncharged capacitor of same capacitance. Calculate the total energy stored in the system.
7. (a) Define the term 'electrostatic potential'. Give the dependence of electrostatic potential due to a small electric dipole at a far off point lying on (i) the axial line, and (ii) equatorial line.  
(b) Briefly explain the principle of a capacitor. Obtain the expression for the capacitance of a parallel plate capacitor.
8. Draw electric field lines between the plates of a parallel plate capacitor with (i) air and (ii) dielectric as the medium.  
A parallel plate capacitor with air as dielectric is connected to a power supply and charged to a potential difference  $V_0$ . After disconnecting from power supply, a sheet of insulating material is inserted between the plates completely filling the space between them. How will its (i) capacity, (ii) electric field and (iii) energy change? Given that the capacity of capacitor with air as medium is  $C_0$  and permittivity of air and medium are  $\epsilon_0$  and  $\epsilon$  respectively.
9. Derive an expression for the energy stored in a parallel plate capacitor, with air as the medium between the plates.  
A parallel plate capacitor of capacitance  $100 \mu\text{F}$  is charged to 200 V. After disconnecting it from the battery, using an insulated handle, the distance between the plates is doubled. Find  
(i). Potential difference between the plates, and  
(ii). Energy stored in the capacitor, after separation between the plates has been increased.

10. Give the principle of working of a Van de Graff generator. With the help of a labeled diagram, describe its construction and working. How is the leakage of charge minimized from the generator?
11. Obtain the expression for the capacitance of a parallel plate capacitor. Three capacitors of capacitance  $C_1$ ,  $C_2$  and  $C_3$  are connected (i) in series, (ii) in parallel. Show that the energy stored in the combination is the same as that in the parallel combination.
12. Derive an expression for the electric potential at a point along the axial line of an electric dipole. At a point due to a point charge, the values of electric field intensity and potential are 32 N/C and 16 J/C respectively. Calculate (i) magnitude of the charge and (ii) distance of the charge from the point of observation.
13. Derive an expression for the energy stored in a parallel plate capacitor. A parallel plate capacitor with air as dielectric is charged by a d.c. source to a potential ' $V$ '. Without disconnecting the capacitor from the source, air is replaced by another dielectric medium of dielectric constant 10. State with reason, how does (i) electric field between the plates and (ii) energy stored in the capacitor change.
14. Derive the relation  $C = \epsilon_0 A/d$  for the capacitance of a parallel plate capacitor, where symbols have their usual meanings. A parallel plate capacitor is charged to a potential difference ' $V$ ' and disconnected from the supply. If the distance between the plates is doubled, explain how does (i) electric field and (ii) energy stored in the capacitor change?
15. Define the term 'electric dipole moment'. Give its unit derive an expression for the torque acting on an electric dipole held in a uniform electric field. An electric dipole is placed in a uniform electric field and it is free to move. Explain what will happen when it is placed (i) parallel to the field and (ii) perpendicular to the field.
16. Derive the expression for capacitor of a parallel plate capacitor with a dielectric medium of dielectric constant ' $k$ ' between the plates. Obtain also the expression for the energy stored in the above case.
17. Derive an expression for the magnitude of electric field intensity at any point along the equatorial line of a short electric dipole. Give the direction of electric field intensity at that point. For a short dipole what is the ratio of electric field intensities at two equidistant points from the centre of dipole. One along the axial line and another on the equatorial line?

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SOLUTION HOME WORK

- Calculate the weight of water in 1 L of 2 M NaCl solution of density 1.12 g/ml.
- The mole fraction of glucose solution is 0.2. Calculate its molality.
- Calculate the molality of a solution containing 0.65 mol glucose in 250 g water.
- The vapour pressure of pure liquid solvent is 0.7 atm when a non volatile substance 'B' is added to the solvent is vapour pressure drops to 0.5 atm. Calculate mole fraction of 'B' in the solution.
- How much ethyl alcohol must be added 1 L of water so that the solution will not freeze at  $-20^{\circ}\text{C}$ . (Density of  $\text{H}_2\text{O} = 1\text{g/cc}$ )
- Arrange the following aqueous solution in order of increasing freezing points (lowest first).
  - 0.1 M urea
  - 0.1 M  $\text{K}_2\text{SO}_4$
  - 0.1 M  $\text{Al}_2(\text{SO}_4)_3$
  - 0.1 M  $\text{K}_4[\text{Fe}(\text{CN})_6]$
  - 0.5 M  $[\text{Co}(\text{NH}_3)_6]\text{Cl}_2$ .
- The freezing point of a solution composed to 10 g of NaCl in 100 g of water is  $-4.5^{\circ}\text{C}$ . Calculate the van't Hoff factor (i) for this solution.
- At  $45^{\circ}\text{C}$  the vapour pressure, in mm, of methyl alcohol-ethyl alcohol solution is represented by  $P = 120x + 145$ .  
Where x is mole fraction of methyl alcohol. What are the vapour pressures of pure components at this temperature?
- Vapour pressure of pure methyl and ethyl alcohol are 254 torr and 135 torr respectively. Given moles of methyl alcohol and ethyl alcohol are 1 and 2 respectively. Calculate the mole fraction of each component in vapour pressure.
- When 36.0 g of solute having the empirical formula  $\text{CH}_2\text{O}$  is dissolved in 1.2 kg of water the solution freezes at  $-0.93^{\circ}\text{C}$ . What is the molecular formula of the solute?
- A 250 ml water solution containing 48 g of sucrose at 300 K is separated from pure water by means of a semi permeable membrane. What pressure must be applied above the solution in order just prevent osmosis.
- A solution containing 1.23 g of  $\text{Ca}(\text{NO}_3)_2$  in 10 g of water boils at  $100.975^{\circ}\text{C}$ . Calculate the degree of ionisation of the nitrate ( $K_b = 0.82$ ).
- An aqueous solution containing 20% by weight of liquid 'X' (molecular weight = 140) has a vapour pressure 160 mm at  $60^{\circ}\text{C}$ . Calculate the vapour pressure of pure liquid 'X' if the vapour pressure of water is 150 mm at  $60^{\circ}\text{C}$ .
- A 0.05 M solution of monobasic acid had a freezing point of  $-0.12^{\circ}\text{C}$ . Calculate  $K_a$  of the acid  
 $K_f(\text{H}_2\text{O}) = 1.86$ .
- Benzoic acid associates partially in benzene 2 g of benzoic acid dissolved in 25 g of benzene produces a freezing point depression of  $1.8^{\circ}$ . Calculate the molecular weight and degree of association  $K_f(\text{C}_6\text{H}_6) = 5^{\circ}$ .

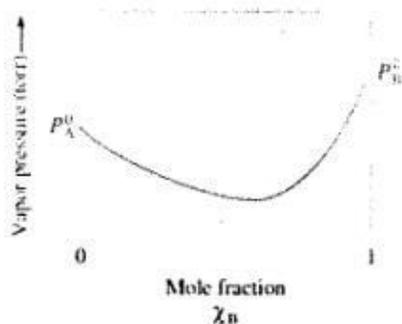
### ELECTROCHEMISTRY HOME WORK

1. How much quantity of a metal (in g) is deposited by 1 C and what it is called?
2. Name a method to measure molar conductance of a weak electrolyte at infinite dilution.
3. What are the products of electrolysis of (i) NaCl (aq) and (ii) NaCl molten?
4. What is  $\Delta_r G^\circ$  for (a) galvanic cell (b) Electrolytic cell?
5. How can we increase the reduction potential of a half cell  $M | M^{n+} (aq)$ ?
6. Which reduction reaction takes place in SHE (or NHE)?
7. What will be the products of electrolysis of  $CaSO_4 (aq)$  and  $CaSO_4$  (molten)?
8. Determine the quantity of  $Cu(s)$  deposited when current of 5 amp flows through an aqueous  $CuSO_4$  solution electrolyte for 30 minutes. (atomic weight  $Cu = 63.5$ ).
9. Differentiate between electron chemical and electrolytic cells.
10. Given that  $E_{Zn^{2+}/Zn}^\circ = -0.76 V$ ,  $E_{Cu^{2+}/Cu}^\circ = 0.34 V$ . Can aqueous solution of  $CuSO_4$  be stored in zinc vessel? Explain briefly
11. To protect iron from rusting we use either zinc or tin cover its surface. Which one is better and why?
12. Molar conductivity of acetic acid solution at infinite dilute is  $390.7 \text{ ohm}^{-1} \text{ cm}^2 \text{ mole}^{-1}$ . Calculate molar conductivity of 0.01 M acetic acid.  $K_a (CH_3COOH) = 1.8 \times 10^{-5}$ .
13. What are galvanic cells? Describe construction of Daniel – cell giving the reactions involved. How is the cell represented?
14.  $Cr_2O_7^{2-} + 14H^+ + 6e^- \longrightarrow Cr^{3+} + 7H_2O$ ;  $E^\circ = 1.33V$ .  
 $6I^- \longrightarrow 3I_2 + 6e^-$ ;  $E^\circ = -0.54V$

Find out equilibrium constant for the above cell and also find  $\Delta_r G^\circ$  for the same.

15. Define Kohlrausch's law of independent migration of ions.

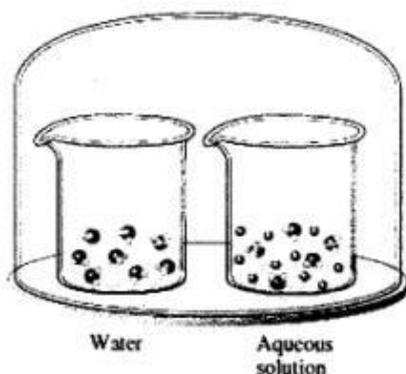
- (1) The following plot shows the vapor pressure of various solutions of components A and B at some temperature.



Which of the following statements is false concerning solutions of A and B?

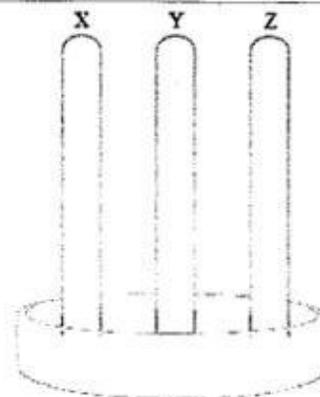
- The solutions exhibit negative deviations from Raoult's law.
- $\Delta H_{mix}$  for the solutions should be exothermic.
- The intermolecular forces are stronger in solution than in either pure A or pure B.
- Pure liquid B is more volatile than pure liquid A.
- The solution with  $\chi_B = 0.6$  will have a lower boiling point than either pure A or pure B.

- (2) The two beakers in the sealed container illustrated below contain pure water and an aqueous solution of a volatile solute.



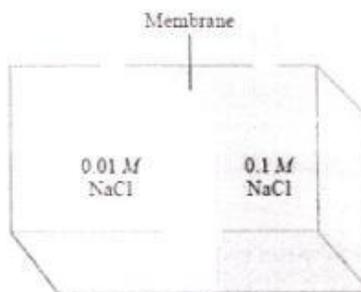
If the solute is less volatile than water, explain what will happen to the volumes in the two containers as time passes.

- (3) Consider the three mercury manometers shown in the diagram. One of them has 1 mL of water on top of the mercury, another has 1 mL of a 1 *m* urea solution on top of the mercury, and the third one has 1 mL of a 1 *m* NaCl solution placed on top of the mercury. Which of these solutions is in the tube labeled X, which is in Y, and which is in Z?



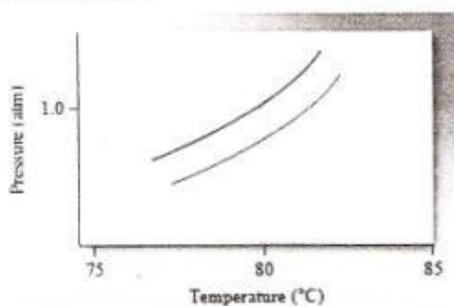
(4)

In the apparatus shown here, what will happen if the membrane is (a) permeable to both water and the  $\text{Na}^+$  and  $\text{Cl}^-$  ions, (b) permeable to water and  $\text{Na}^+$  ions but not to  $\text{Cl}^-$  ions, (c) permeable to water but not to  $\text{Na}^+$  and  $\text{Cl}^-$  ions?



(5)

The diagram here shows vapor pressure curves for pure benzene and a solution of a nonvolatile solute in benzene. Estimate the molality of the solution.



(6) The vapor pressure of a 1 M ionic solution is different from the vapor pressure of a 1 M nonionic solution. In both cases, the solute is nonvolatile. Which of the following sets of diagrams best represents the differences between the two solutions and their vapors?

Ionic solute      Nonionic solute

(a)

Ionic solute      Nonionic solute

(d)

● Solvent particles  
● Solute particles

Ionic solute      Nonionic solute

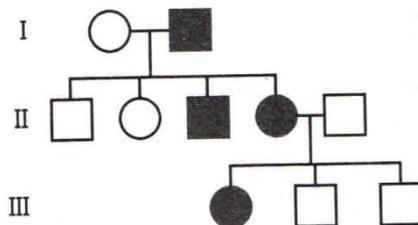
(b)

Ionic solute      Nonionic solute

(c)

## Biology Assignment – XII /2019-20

1. Which Mendel's Law of Inheritance is universally acceptable and without any exception? State the law:
2. Study the given pedigree chart and answer the questions that follow.



- (a) Is the trait recessive or dominant?
  - (b) Is the trait sex-linked or autosomal?
  - (c) Give the genotypes of the parents shown in generation I and their third child shown in generation II and the first grandchild shown in generation III.
3. AaBb was crossed with aabb. What would be the phenotypic ratio of the progenies? Mention the term to denote this type of cross.
  4. A non-haemophilic couple was informed by their doctor that there is possibility of a haemophilic child being born to them. Draw a checker board and find out the percentage of possibility of such a child among the progeny.
  5. A man with blood group 'A' married a women with 'B' group. They have a son with 'AB' blood group and a daughter with blood group 'O'. Workout the cross and show the possibility of such inheritance.
  6. How are dominance, Co-dominance and incomplete dominance patterns in inheritance different from each other?
  7. A true breeding pea plant, homozygous for inflated green pods is crossed with another pea plant with constricted yellow pods (ffgg). What would be the phenotype and genotype of F<sub>1</sub> and F<sub>2</sub> generation. Give the phenotype ratio of F<sub>2</sub> generation.
  8. A typical mammalian cell has 2.2 m long DNA molecule, where as the nucleus in which it is packed measures about 10-6m. Explain how such a long DNA molecule is packed within a tiny nucleus in the cell.

9. A pea plant with purple flowers was crossed with white flowers producing 50 plants with only purple flowers. On selfing, these plants produced 482 plants with purple flowers and 162 with white flowers. What genetic mechanism account account for the these resulut? Explain the condition under which a human female can be haemophilic.
10. Name a disorder ,give the karyotype and write the symptoms a human suffers from, as a result of monosomy of sex-chromosomes.
11. During his studies on genes in *Drosophila* that were sex linked T.H. Morgan found  $F_2$  population phenotypic rations deviated from expected 9:3:3:1. Explain the conclusion he arrived at.
12. Inheritance pattern of ABO blood groups in humans shows dominance, Co-dominance and multiple allelism. Explain each concept with the help of blood group genotypes.
13. The male fruit fly and female fowl are heterogametic while the female fruit fly and male fowl are homogametic. Why are they called so?
14. A pregnant human female was advised to undergo MTP. It was diagnosed by the doctor that the foetus she is carrying has developed from a zygote formed by a XX-egg fertilized by Y carrying sperm. Why was she advised to undergo MTP?
15. A relevant portion of  $\beta$ -chain of haemoglobin of a normal human is given below-
- The codon for the sixth amino acid is GAG. The sixth codon GAG mutates to GAA as a result of mutation 'A' and mutation 'B' result GUG. Haemolglobin structure did not change as mutation A but haemoglobin structure changed due to mutation B leading to sickle shapes RBCs. Explain giving reason how could mutation B change the structure of haemoglobin not mutation A.
16. (a) A garden pea plant bearing terminal, violet flowers when crossed with another pea plant bearing axial violet flowers, producing axial violet flowers and axial white flowers in the ratio of 3:1. Work out the cross showing the genotypes of parent pea plant and their progeny.

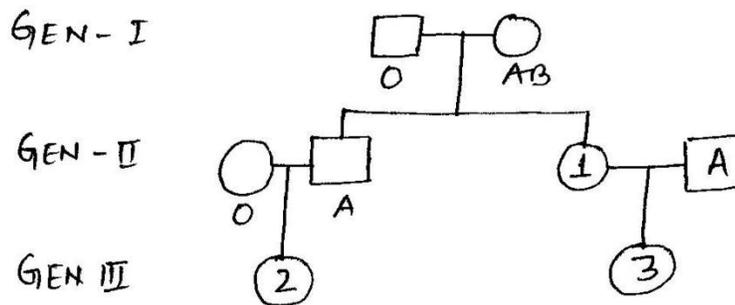
17. In a cross between a true breeding red flowered and true breeding white flowered snapdragon plant, the  $F_1$  plants produced pink flowers. Name and explain the types of inheritance.

18.(a) What do you mean by polygenic inheritance. How polygenic inheritance is different from monogenic inheritance.

(b) Differentiate between haemophilia and thalassemia.

(c) What is pleiotropy? How phenylketonuria is a good example of pleiotropy?

19. Study the following pedigree chart of a family, starting with mother with AB blood group and father with O – blood group.



(a) Mention the blood group as well as the genotype of the offspring numbered 1 in generation II.

(b) Write the possible blood groups as well as their genotypes of the offspring numbered 2 & 3 in generation III.

20. Draw the structure of DNA stand contains at list three nucleotides . Differentiate between RNA nucleotides and DNA nucleotides.

21. Why are thalassemia and haemophilia categorised as Mendelian disorders ? Write the symptoms of the diseases . Explain their pattern of inheritance in human.

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## Class-XII

## Subject: Economics

1. Explain with the help of an example, the basis of classifying goods into final goods and intermediate goods.
2. Distinguish between stocks and flows. Give an example of each.
3. Describe the four major sectors in an economy according to the macroeconomic point of view.
4. Between net investment and capital, which is a stock and which is a flow? Compare net investment and capital with water in a tank.
5. State whether the following is stock or a flow:
  - (i) Wealth
  - (ii) Cement production
  - (iii) Money supply or quantity of money in the nation and
  - (iv) Change in nation's money supply.
6. Distinguish between national income and domestic income.
7. What do you mean by domestic territory of a country?
8. What is meant by normal residents of a country?
9. Explain the concepts of nominal GDP and real GDP.
10. Write 20 MCQ from unit 1 macroeconomics.
11. Write past five years questions of CBSE exam, of unit 1 macroeconomics.

## CLASS- XII

## Business Studies

1. What is meant by management? Explain in brief its features.
2. "Management is a science like physics and chemistry." Do you agree with this statement? Give reasons in support of your answer.
3. "Management is a full-fledged profession." Comment.
4. "Co-ordination is not a separate function of management it is the essence of management." Explain with the help of suitable example.
5. Describe any five reasons which clarify that management is gaining importance day by day.
6. "Art is concerned with the personal application of knowledge." In the light of this statement compare all the features of art with management and prove that is an art.
7. What is meant by key principles of management? Explain the principles suggested by Fayol.
8. What do you mean by the term 'trading on equity'?
9. Explain in brief any five factors that should be taken into consideration while determining the dividend policy.
10. What is meant by investment decision? State the factors affecting the investment decision.

11. What is meant by financing decision? State the factors affecting the financing decisions.
12. "Sound financial planning is essential for the success of any enterprise." Explain this statement by giving any six reasons.
13. "Determination of capital structure of a company is influenced by a number of factors." Explain such factors.
14. What do you understand by working capital? Enumerate the factors affecting the working capital requirements.
15. You are a finance manager of a newly established company. The directors have asked you to determine the amount of fixed capital requirement for the company. Explain factors that you will consider while determining the fixed capital requirement for the company.
16. How are the shareholders likely to gain with a debt component in the capital employed? Explain with suitable example.
17. Aseema Textiles Ltd. Manufactures hosiery garments which are sold in India and abroad. The company has a purchase department which is responsible for purchasing raw materials. There are two plants: one manufacturing garments for Indian market and another for export. Lately, the marketing department has started complaining that on few occasions, the quality of garments has not been up to the mark. On enquiry by the Managing Director, Plant Managers explained that the quality of raw materials is not up to the mark in many cases because of purchase from local suppliers. On this episode, Purchase Manager opined that many a time, Plant Managers put requisition for raw materials on the same day on which these are required. This necessitates purchasing from local sources at a slightly higher cost but quality of raw materials is never compromised.
  - a) Identify the aspect of management which is missing in this case.
  - b) Explain any four features of this aspect of management.
18. Evergreen Ltd. Set up a project to extract oils from the seeds of fruits of trees which grow naturally in a forest. These oils have industrial use. The company set up its factory near the forest which is inhabited by disadvantaged people. It recruited local workers and trained them. The company inculcated the motto of efficiency among them so that the profitability of the company is reasonable which is to be shared by the company and employees. The company decided to pay substantial bonus to its employees every year. Identify the objectives of management which the company pursued and explain them briefly.
19. Evergreen Ltd. is in the business of manufacturing readymade garments. Its capital is ₹ 60,00,000 divided into 6,00,000 equity shares. During the previous year, its earning per share was ₹ 1.5. In order to expand its business, it issued 40,000; 12% Debentures of ₹ 100 each. During the current period, its profit was ₹ 10,00,000. It paid tax @ 30%.
  - a) State whether the shareholders gained or lost after issue of debentures by showing your calculation fully.
  - b) State any three factors that do not favor the issue of debentures.
20. Smart Ltd., a manufacturer of electronic items, has decided that additional funds to be raised for expansion should be based on sound financial planning so that funds are available at right time and there is optimum use of these funds. In order to make its financial plan realistic, the company formulates the plan after taking views of managers and key persons of other departments which are used in formulating the plan.

Identify the aspect of financial planning which is highlighted by the above practice and explain the other points of this aspect.

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**CLASS- XII/COMM**

**SUBJECT- ACCOUNTANCY**

1. Distinguish between Receipts and Payment Account and cash book.
2. Distinguish between Receipts and Payments Account and Income and Expenditure Account.
3. Distinguish between Income and Expenditure Account and Profit and loss Account.
4. Distinguish between Profit and Loss Account and Profit and Loss Appropriation Account.
5. Distinguish between Fixed Capital Account method and Fluctuating Capital Account method.
6. Explain the following:
  - a) Fund based accounting
  - b) Capital fund
  - c) Surplus
  - d) Deficits
  - e) Partnership and Partnership deed
  - f) Provisions of Partnership Act in the absence of partnership deed.
7. Solve the following problems from NCERT Book:

PAGE NO.	QUESTION NO.
51	1
53	4 and 5
54	7
55	9
57	11
58	12
60	16 and 17
101	1 and 2
103	7
104	12
105	14 and 15
106	19
109	34 and 35
111	41, 42 and 43

**Class: XII****Subject: Informatics Practices (065)**

1. In a database STUDENT, there is a table RESULT with the following contents:

Table: RESULT

Rengo	Name	Marks	Section	Classteacher	Admno
10004	Mohit	90	A	Ms.Nathni	Z101
10211	Mukta	85	B	Mr.Gokhle	Z109
10923	Mona	92	B	Mr.Gokhle	Z120
10313	Sana	80	A	Ms.Nathni	Z234

- (i) Identify the attributes, which can be chosen as Candidate Keys in the table RESULT.  
(ii) Write SQL Query to change the marks of Mukta to common to 95 in the table RESULT.  
(iii) Show the name and Admno of those student whose name starts with 'M'.  
(iv) Show the marks, Regno and section of that students whose classteacher name ends with 'e';
2. Write SQL query of following table structure ( Q.no. i to Q.no. v )

Relation : student

Code	Student Name	Department	Year	sex
FYBE45	Raman Verma	Computer Science	Final year	M
SYBE23	Rupa	Electronics	Second year	F
SYBE27	Tamim Mahmud	Mechanical	Second Year	M
TYBE76	Ysmin	Computer science	Third Year	F
TYBE74	Gurmeet Kaur	Electronics	Third Year	F

- (i) to display name and code of students of third year.  
(ii) to display name, code and year of students of computer science department.  
(iii) to display name, code department and year of all female students.  
(iv) to count number of final year students from table student.  
(v) to display details of all computer science female students.
3. Answer the question (i) and (v) based on following table:

Table: FACULTY

FNO	FNAME	AGE	DEPARTMENT	GRADE
111	Moksha	40	Biology	A
123	Malini	35	Maths	A
125	Akshit	43	English	B
130	Nishant	27	Maths	B

- (i) Identify the primary Key in the table Faculty.

- (ii) Write SQL Command to change the Grade of Nisant to "A".
- (iii) Show age and FNO of that whose age >36 and DEPARTMENT is English
- (iv) Write SQL command to add a field of marks in above table.
- (v) Delete the record of that whose grade is not belonging to 'A'

4. The Entertainment Paradise- A theater in Delhi wants to develop a computerized Booking System. The proposed Interface is given below. The theater offers different types of seats. The Ticket rates are- Stalls- Rs. 625/-, Circle- Rs.750/-, Upper Class- Rs.850/- and Box- Rs.1000/-. A discount is given 10% of total amount if tickets are purchased on Cash. In case of credit card holders 5% discount is given

5. Develop an application to compute the sum of digits for given number.

6. Rewrite the following fragment using switch:

```

if (ch== 'E')
    e++;
if (ch== 'W')
    w++;
if (ch== 'N')
    n++;
if (ch== 'S')
    s++;
else
    unknown++;

```

7. How many times the following loops will execute?

```

(a) x = 5 ; y = 50 ;
while(x <= y){
x = y/x ;

```

```

(b) int m = 10, n= 7;
while(m % n >= 0) {
.....

```

```
.....  
}
```

```
m = m + 1;  
n = n + 2;  
..... }
```

8 Given the following code fragment:  
i=2;  
do{  
System.out.println (""+i);  
i += 2;  
} while (i < 51);  
jOptionPane.showMessageDialog( null, "Thank you" );

9 Rewrite the above code using a while loop.  
Given the following code fragment :  
i = 100 ;  
while (i > 0)  
System.out.print ln( i--);  
jOptionPane.showMessageDialog( null, "Thank you" );

10 Rewrite the above code using a do...while loop.  
Rewrite following while loop into a for loop  
int stripes = 0;  
while (stripes <= 13) {  
if (stripes %2 == 2)  
System.out.print ln("Colour code Red");  
else  
System.out.print ln("Colour code Blue");  
stripes = stripes + 1;  
}

11 Find the output of the following code fragments ?

a) int s = 14;  
if(s<20)  
System.out.print("Under");  
else  
System.out.print("Over");  
System.out.print ln("the limit");

(b) int s = 14;  
if(s<20)  
System.out.print("Under");  
else {  
System.out.print("Over");  
System.out.print ln("the limit");  
}

(c) int s = 94;  
If (s < 20) {  
System.out.print("Under");  
}  
else {  
System.out.print("Over");  
}  
System.out.print ln("the limit");

12 Predict the output of following code fragments:

(a) int i, j, n;  
n=0; i=1;

(b) int i=1, j=0, n=0;  
while (i<4) {

```
do {
n++; i++;
} while (i<=5);
```

```
(c) int i=3, n=0;
while (i<4) {
n++; i--;
}
System.out.print ln(n);
```

```
for(j=1; j<=i; j++) {
n+=1;
}
i=i+1;
}
System.out.print ln(n);
```

```
(d) int j=1, s=0;
while(j<10) {
System.out.print(j+ "+");
s=s+j;
j=j+j%3;
}
System.out.print ln("="+s);
```

13 Find out errors if any;

```
(a) m=1;
n=0;
for(;m+n<19;+ +n)
System.out.print ln("Hello \n");
m=m+10; }
```

```
(b) while(ctr !=10) ; {
ctr=1;
sum=sum + a;
ctr=ctr + 1;
}
```

\*\*\*\*\*

**Class : XII**

**Subject : Computer Science**

**1. Explain Polymorphism.**

**2. Define a class Tour in C++ with the description given below :**

**Private Members :**

**TCode of type string**

**NoofAdults of type integer**

**NoofKids of type integer**

**Kilometres of type integer**

**TotalFare of type float**

**Public Members :**

• **A function AssignFare ( ) which calculates and assigns the value of the data member TotalFare as follows**

**For each Adult**

**Fare(Rs) For Kilometres**

<b>500</b>	<b>&gt;=1000</b>
<b>300</b>	<b>&lt;1000 &amp; &gt;=500</b>
<b>200</b>	<b>&lt;500</b>

For each Kid the above Fare will be 50% of the Fare mentioned in the above table

For example :

If Kilometres is 850, NoofAdults = 2 and NoofKids = 3

Then TotalFare should be calculated as

$\text{NumofAdults} * 300 + \text{NoofKids} * 150$

i.e.  $2*300 + 3*150=1050$

- A function EnterTour( ) to input the values of the data members TCode, NoofAdults, NoofKids and Kilometres; and invoke the Assign Fare( ) function.
- A function ShowTour( ) which displays the content of all the data members for a Tour.

3. Define a class in c++ with following description :

A data member Icode of type integer

A data member Item of type string

A data member Price of type float

A data member Qty of type integer

A data member Discount of type float

A member function FINDDISC() to find discount as per the following rule :

Qty

Discount

$\leq 50$

0

More than 50 and  $\leq 100$

5

More than 100

10

Public Members

A function buy() to allow user to enter values for Icode, item, price, Qty, and call function FindDisc() to calculate the discount.

A function SHOWINFO( ) to allow user to view the content of all the data members.

Define a class in c++ with following description :

A data member Flight number of type integer

A data member Destination of type string

A data member Distance of type float

A data member Fuel of type float

A member function CALFUEL() to calculate the value of fuel as per the following criteria :

Distance	Fuel
$\leq 1000$	500
More than 1000 and $\leq 2000$	1100
More than 2000	2200

Public Members

A function FEEDINFO( ) to allow user to enter values for Flight Number, Destination, Distance & call function CALFUEL( ) to calculate the quantity of Fuel.

A function SHOWINFO( ) to allow user to view the content of all the data members.

4a). Find the output of the following program :

```
#include<iostream.h>
struct play
{
    int score,bonus;
};
void calculate(Play &p, int N=10)
{
    p.score++; p.bonus+=5;
}
void main()
{ Play PL={10,5};
  calculate(PL,5);
  cout<<PL.score<<" : "<<PL.bonus<<endl;
  calculate(PL);
  cout<<PL.score<<" : "<<PL.bonus<<endl;
  calculate(PL,5);
  cout<<PL.score<<" : "<<PL.bonus<<endl;
}
```

(b) Which C++ header file(s) will be essentially required to be included to run/execute the following C++ code:

```
void main()
{
int Rno=24; char Name[] = "Amen Singhania";

cout<<setw(10)<<Rno<<setw(20)<<Name<<endl;

}
```

(c) Rewrite the following C++ program code after removing the syntax error(s) (if any). Underline each correction.

```
include <iostream.h>
class FLIGHT
{
long FlightCode;
char Description[25];
public
void AddInfo()
{
cin>>FlightCode; gets (Description) ;
}
void ShowInfo()
(
cout<<FlightCode<<":"<<Description<<endl;
}
};
void main()
{
FLIGHT F;
AddInfo.F(); ShowInfo.F();
}
```

(d) Find the output of the following program:

```
#include <iostream.h>
struct THREE_D
{int X,Y,Z;};
void MoveIn(THREE_D &T, int Step=1)
}
T.X+=Step;
T.Y-=Step;
T.Z+=Step;
}
void MoveOut(THREE_D &T, int Step=1)
{
T.X-=Step;
```

```

T.Y+=Step;
T.Z-=Step;
}
void main ()
{
THREE_D T1={10,20,5},T2={30,10,40};
MoveIn(T1);
MoveOut(T2,5);
cout<<T1.X<<" "<<T1.Y<<" "<<T1.Z<<endl;
cout<<T2.X<<" "<<T2.Y<<" "<<T2.Z<<endl;
MoveIn(T2,10);
cout<<T2.X<<" "<<T2.y<<" "<<T2.Z<<endl;
}

```

(e) Find. the output of the following program:

```

#include <iostream.h>
#include <ctype.h>
void MyCode (char Msg [], char CH)
{
for (int (Cnt=0;Msg[Cnt]!='\0';Cnt++)
{
if (Msg[Cnt]>='B' && Msg[Cnt]<='G')
Msg[Cnt]=tolower(Msg[Cnt]);
else
if (Msg[Cnt]=='A' || Msg[Cnt]=='a')
Msg[Cnt]=CH;
else
if (Cnt%2==0)
Msg[Cnt]=toupper(Msg[Cnt]);
else
Msg[Cnt]=Msg[Cnt-1];
}
}
void main ()
{
char MyText [] = " ApEACeDrIVE";
MyCode(MyText,'@');
cout<<"NEW TEXT:"<<MyText<<endl;
}

```

(f) The following code is from a game, which generates a set of 4 random numbers Praful is playing this game, help him to identify the correct option(s) out of the four choices given below as the possible set of such numbers generated from the program code so that he wins the game. Justify your answer.

```

#include <iostream.h>
#include <stdlib.h>
const int LOW=25;
void main ()
{
randomize();
int P01NT=5,Number;

```

```

for (int I=1;I<=4;I++)
{
Number=LOW+random(POINT);
Cout<<Number<<" ";
POINT--;
}
}

```

- (i) 29:26:25:28:  
(ii) 24:28:25:26:  
(iii) 29:26:24:28:  
(iv) 29:26:25:26:

2. (a) What do you understand by Data Encapsulation and Data Hiding ?' Also, give an example in C++ to illustrate both.

(b) Answer the questions (i) and (ii) after going through the following class:

```

class Exam
{
int Rno,MaxMarks,MinMarks,Marks;
public:
Exam() //Module 1
{
Rno=101;MaxMarks=100;MinMarks=40;Marks=75;
}
Exam(int Prno, int Pmarks) //Module 2
{
Rno=Prno;MaxMarks=100;MinMarks=40;Marks=Pmarks;
}
~Exam() //Module 3
{
cout<<"Exam Over"<<endl;
}
void Show () //Module 4
{
cout<<Rno<<" "<<MaxMarks<<" "<<MinMarks<<endl;
cout<<"[Marks Got]"<<Marks<<endl;
}
};

```

(i) As per Object Oriented Programming, which concept is illustrated by Module 1 and Module 2 together?

(ii) What is Module 3 referred as ? When do you think, Module 3 will be invoked/called?

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**STD XII**

**Subject: Panting**

1. Landscape: Pencil shading & Colour (2 painting)
2. Still Life" (Object): Any topic  
(i) Pencil Shading (ii) Water colour
3. Composition : Any festival  
1 painting or shading

\*\*\*\*\*

**Class : 12**

**Subject : Physical Education**

1. Introduction of Physical Education.
2. Draw a neat diagram of Standard Track with all its specifications. Mention all the Track and Field Events.
3. Explain any one jumping event .
4. Explain any one throwing event.
5. Fitness test administration : [1] Standing Broad Jump , [2] Zig-Zag Run , [3] Medicine Ball Put – For Boys and Girls, [4] 50 M Standing Start , [5] Shuttle Run , [6] 600 M Run/Walk.
6. Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle Disease.
7. Procedure for administering Senior Citizen Fitness Test on 5 elderly Family members.
8. Basketball, Football, Kabaddi , Kho-Kho, Volleyball , Handball , Hockey , Cricket and Unified Basketball [ CWSN ( Children With Special Needs-Divyang)]  
History of any one game of your choice out of the list above . Labelled diagram of field and equipment , Rules, terminologies and Skills.

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