

COMMERCE DEPARTMENT

<https://youtu.be/uqa0CdbPB8c> - ACCOUNTANCY

<https://www.youtube.com/watch?v=PbGuSPjuYGk> - BUSINESS STUDIES

<https://youtu.be/4SuBJNPkrhk> - ECONOMICS

SCIENCE DEPARTMENT

<https://www.youtube.com/watch?v=PU9-6GmVdPQ> - BIOLOGY

<https://youtu.be/jLfIH2x2I3M> – CHEMISTRY

<https://www.youtube.com/watch?v=SgVMTWPzCA8> - PHYSICS

HUMANITIES DEPARTMENT

<https://youtu.be/t4oNRPlbQrs> - LEGAL STUDIES

<https://www.youtube.com/watch?v=f5i59t0bjbg> - PSYCHOLOGY

<https://youtu.be/BVwOh1XVWvo> - GEOGRAPHY

<https://www.youtube.com/watch?v=ZQ6288-dJrQ> – HISTORY

ENGLISH

<https://www.youtube.com/watch?v=q2197KT1iNE>

MATHEMATICS

<https://youtu.be/EikH3Q3h8z4>

COMPUTER DEPARTMENT

STEPS FOR INSTALLING

<https://www.youtube.com/watch?v=oE4KeuVNqcQ>

DEMO OF PYPLOT PROGRAMS

https://www.youtube.com/watch?v=W_lkj01jReY ,

<https://www.youtube.com/watch?v=mMh7etgUsTo> –IP

<https://www.youtube.com/watch?v=do6Dk0CT3tc> ,

<https://www.youtube.com/watch?v=2o8wFecisko> -C++

OPTIONAL-II

https://youtu.be/Xf49fuP_0MY , <https://youtu.be/Qv51RI4DyGo> - PHYSICAL EDUCATION

<https://www.youtube.com/watch?v=xPEQEOtXge8> , <https://www.youtube.com/watch?v=Xfjy3YgjYC8> - FMM

<https://youtu.be/UZDTQe8XIkC> - HINDI

<https://www.youtube.com/watch?v=olQlAx8IXWE> - PAINTING

EAST POINT SCHOOL
ASSIGNMENT
ENGLISH

LITERATURE

1. Read the extracts given below and answer the questions that follow.

Far far from gusty waves these children's faces.

Like rootless weeds, the hair torn round their pallor.

The tall girl with her weighed-down head. The paper-

Seeming boy, with rat's eyes.

(a) Which children are referred here? What is peculiar about their face?

(b) What does the expression 'Far far from gusty waves' signify?

(c) Explain: 'Like rootless weeds.'

(d) How is the tall girl affected by her poverty?

(e) Explain: 'Weighed – down head.'

(f) Which literary device has been used in this stanza?

2. Read the extract given below and answer the questions that follow.

The stunted, unlucky heir

Of twisted bones, reciting a father's gnarled disease,

His lesson, from his desk. At back of the dim class

One unnoted, sweet and young. His eyes live in a dream,

Of squirrel's game, in tree room, other than this.

(a) Why is the boy referred to as 'unlucky heir'?

(b) Explain: 'reciting a father's gnarled disease.'

(c) Explain: 'His eyes live in a dream.'

3. Read the extract given below and answer the questions that follow.

On sour cream walls, donations. Shakespeare's head,

Cloudless at dawn, civilised dome riding all cities.

Belled, flowery, Tyrolese valley. Open – handed map

Awarding the world its world.

(a) Explain: 'On sour cream walls.'

(b) What does Shakespeare's head suggest?

(c) Explain: 'Belled, flowery, Tyrolese valley.'

(d) What does the reference to the 'map' imply?

Q4. What picture of the slum children does the poet draw?

Q5. What is it that these slum children receive as their inheritance?

Q6. What images and symbols has the poet used to describe the pathetic condition of the slum children?

ADVANCE WRITING SKILLS

Given below is the link to a video about how to write effective articles.

<https://www.youtube.com/watch?v=q2197KT1iNE>

(amendment in the video link – the **by line** should never come at the end of the article. Either write it on the right side or on the left side as mentioned in the video)

MATHEMATICS

Assignment on Differentiation

Differentiate the following functions with respect to x

1. Find $\frac{dy}{dx}$ if $ax^2+2hxy+by^2+2gx+2fy+c=0$

2. Find $\frac{dy}{dx}$ if $(x^2+y^2)^2=xy$

3. If $\sin y=x \cos(a+y)$ show that $\frac{dy}{dx} = \frac{\cos^2(a+y)}{\cos a}$

4. If $\log(x^2+y^2)=2 \tan^{-1}\frac{y}{x}$ show that $\frac{dy}{dx} \frac{x+y}{x-y}$

5. If $\cos^{-1}\left(\frac{x^2-y^2}{x^2+y^2}\right) = \tan^{-1}a$ show that $\frac{dy}{dx} = \frac{y}{x}$

6. If $y = \tan^{-1}\left\{\frac{\sqrt{(1+\sin x)} + \sqrt{(1-\sin x)}}{\sqrt{(1+\sin x)} - \sqrt{(1-\sin x)}}\right\}$, $0 < x < \pi$ then Find $\frac{dy}{dx}$

7. If $y = \sec^{-1}\left(\frac{\sqrt{x}+1}{\sqrt{x}-1}\right) + \sin^{-1}\left(\frac{\sqrt{x}-1}{\sqrt{x}+1}\right)$ then show that $\frac{dy}{dx} = 0$

8. Find $\frac{dy}{dx}$ if $y = \sin^{-1}[x\sqrt{(1-x)} - \sqrt{x}\sqrt{(1-x^2)}]$

9. Find $\frac{dy}{dx}$ If $y = \tan^{-1}\left(\frac{2^{x+1}}{1-4^x}\right)$

10 Differentiate the following functions with respect to x

$$\tan^{-1}\left(\frac{\cos x}{1+\sin x}\right), 0 < x < \pi$$

ACCOUNTANCY

1. Ramita and Yashika are in partnership with capitals of Rs. 80,000 and Rs. 60,000 respectively as on 31st March, 2020. During the year 2019-20, Ramita withdrew Rs. 10,000 from her capital and Yashika Rs. 15,000. Profit before charging interest on capital was Rs. 50,000. Ramita's and Yashika's drawings were Rs. 5,000 and Rs. 6,000 respectively. Ramita and Yashika shared profits in the ratio of 3:2. Calculate the amounts of interest on their capitals @ 12% p.a. for the year ended March 31, 2020.
2. Priya and Nisha are partners in a firm, sharing profits and losses in the ratio of 5:3. The balances in their fixed capital accounts, as on 31st March, 2020 were: Priya, Rs. 6,00,000 and Nisha, Rs. 8,00,000. During the year, Priya and Nisha withdrew Rs.10,000 each. The profit of the firm for the year ended March 31, 2020 is Rs. 1,26,000. Calculate their shares of profits: (a) when there is no agreement in respect of interest on capital, and
(b) when there is an agreement that the interest on capital will be allowed @ 12% p.a.
3. From the following balance sheet of X and Y, calculate interest on capitals @ 10% p.a. payable to X and Y for the year ended 31st March,2020.

Liabilities	Amount	Assets	Amount
X's Capital	50,000	Sundry Assets	1, 00,000
Y's capital	40,000	Drawings X	10,000
P& L appropriation A/c (2019-20)	20,000		
	1,10,000		1,10,000

During the year ended 31st March, 2020, X's drawings were Rs. 10,000 and Y's Drawing were Rs. 3,000. Profit during the year was Rs. 30, 000.

4. From the following balance sheet of A and B, calculate interest on capitals @ 10% p.a. payable to A and B for the year ended 31st March,2020.

Liabilities	Amount	Assets	Amount
A's Capital A/c	50,000	Sundry Assets	1, 60,000
B's Capital A/c	40,000		
A's Current A/c	30,000		
B's Current A/c	20,000		
P& L appropriation A/c (2019-20)	20,000		
	1,60,000		1,60,000

During the year ended 31st March, 2020, A's drawings were Rs. 5,000 and B's Drawing were Rs. 2,000. Profit during the year was Rs. 30, 000.

BUSINESS STUDIES

Consumer Protection

Time allowed : 1 hour.

Maximum Marks : 25

- Q.1** Under which consumer right does a business firm set up consumer grievance cell?
(Choose the correct alternative) (1 mark)
- (a) Right to safety (b) Right to be heard
(c) Right to seek redressal (d) Right to consumer education
- Q.2** State, giving reason, whether the following statement is true or false. (1 mark)
A complaint can be made to a District Commission when the value of the good or service does not exceed ₹20 lakhs.
- Q.3** Your mother purchased a washing machine for ₹ 10,000 from an authorised dealer of the manufacturer with an oral guarantee that the machine will be replaced with a new one if any of its parts becomes defective within 3 months from the date of purchase. The motor of the machine was burnt within 15 days of its purchase. On complaining, the seller refused to replace the machine. Name the redressal agency under the Consumer Protection Act where your mother can file the complaint. (1 mark)
- Q.4** Pankaj purchased a car from Abhishek Motors for ₹ 50 lakh. The company offered many attractive gifts to Pankaj, like free insurance for two years, free pick-up and drop facilities for free servicing up to 20,000 km, etc. But after a few days Pankaj noticed that the pick-up of the car was not good and there was some problem in the engine. The company serviced the car free of cost but even then Pankaj was not satisfied with its performance and Abhishek Motors was not giving him due response. So he filed a complaint in the State Commission but was not satisfied with its decision also. He was very much disturbed and after two months decided to appeal against it.
Can Pankaj appeal against the decision of the State Commission? Give reason in support of your answer. (1 mark)
- Q.5** Suman bought a box of cheese of a reputed brand from a local shopkeeper. On opening the box she found a piece of stone in the cheese. She reported the matter to the shopkeeper who forwarded her complaint to the concerned company. Within a week the representative of the company visited Suman's residence with an apology and as a replacement offered her a new cheese pack with four other varieties of cheese as compensation for the inconvenience to her. Identify and explain the consumer right which Suman exercised. (3 marks)
- Q.6** Deepak purchased a book from a book-seller and got the cash memo of ₹ 400 which he paid for the book. Later, he found that the actual price of the book is ₹ 380 but the book-seller had put a sticker of ₹ 400 on the original price. Can Deepak recover the extra money that he paid? What other options are available to him against book-seller if he is refused to give the extra money he paid? (3 marks)
- Q.7** Tanya purchased some household goods from a 'General store'. After reaching home she found a face cream which she had not billed for. After checking the date of expiry and other details, she started using it. Her face burnt due to the use of the cream. Where should Tanya file a complaint? Justify. Under Consumer Protection Act, 2019 who can file a complaint? (4 marks)
- Q.8** State any five responsibilities of a consumer after purchasing a product. (5 marks)
- Q.9** Indian Youth Organisation (IYO) organised a visit of its members to an old age home to inculcate the habit of social work among them. The visit revealed that the living conditions of the inmates of the old age home were not hygienic. So, the IYO members decided to clean the premises. During their cleanliness drive, they realised that the old age home also required pest control. But some of the inmates of old age home were reluctant for it because they believed that the pest control may create health problems for them. IYO, therefore decided to provide ethical, safe and odourless pest control. They showed to inmates of old age home a pamphlet of the proposed pest control product which promised easy, inexpensive and long lasting pest control. The inmates happily agreed and the pest control was carried out. It worked for a fortnight but to their dismay the effect started wearing off. IYO contacted the pest control company which kept on postponing their visit. After waiting for a month, IYO filed a case in the consumer court.
The consumer court was satisfied about the genuineness of the complaint and issued necessary directions to the pest control company.
State any six directions that might have been issued by the court. (6 marks)

Consumer Protection

Time allowed : 1 hour.

Maximum Marks : 25

- Q.1** Mamta bought a branded computer for ₹ 50,000 from an authorised dealer but does not take a receipt. She was given oral guarantee of one year on the computer. When she used the computer at home, she detected that DVD writer was not functioning properly. What remedy can seek from the company? (1 mark)
- Q.2** The certification mark used for agricultural products is _____. (1 mark)
- Q.3** The component of product mix that helps the consumer to exercise the right to information is _____. (1 mark)
- Q.4** FSSAI (Food Safety and Standards Authority of India) has made a proposal for hotels and other food outlets to declare the kind of oil/fat used in cooking each of the food items on their menus. The Consumer Right being reinforced by this proposal is _____. (1 mark)
- Q.5** Vivek purchased a bike from Saranath Automobiles with a written guarantee to repair or replace, if necessary, within six months or 5,000 kms of distance travelled whichever is earlier. After covering the distance of 400 kms in two months, the gears of the bike started giving problems. Vivek took the bike to the dealer who refused to listen to his complaint. He was confused about what he should do.
Identify and explain the rights that Vivek may exercise in the above case. (3 marks)
- Q.6** Bhavya visited his friend, Raghav. On his returning from Raghav's home, Raghav booked a taxi for Bhavya from 'Ganga Travels'. The taxi driver drove UBAR Co. car very fast and his behaviour was rude with Bhavya. Bhavya told about this to Raghav who in turn complained to the proprietor of 'Ganga travels'.
(a) Can Raghav file a complaint against UBAR Co.? Give reason.
(b) Can Bhavya file a complaint against UBAR Co.? Give reason.
(c) Can Ganga travels file a complaint against UBAR Co. ? Give reason. (3 marks)
- Q.7** Explain the role of consumer organisations and NGOs in protecting and promoting consumers' interests by given four points. (4 marks)
- Q.8** Suman wanted to purchase a sandwich toaster. She checked about the various sandwich toasters available online and compared the prices so that an intelligent and wise choice could be made. Then she went to a nearby market to buy the sandwich toaster. Being an informed consumer, she looked for the correct standardisation mark. The shopkeeper showed her different toasters but was quoting higher price than the price she had checked online. After negotiating with the shopkeeper, she was able to bring the price down. As a responsible consumer, she asked for a cash memo against the amount paid for the product and took the toaster home. On opening the package, she found an instruction booklet, which she read carefully. Then she followed all instructions step by step and made nicely toasted paneer sandwiches for her family.
(a) State the consumer responsibilities, which have been discharged by Suman besides asking for a cash memo. (any two)
(b) Explain the three rights being discussed in the above case. (5 marks)
- Q.9** Explain any three points importance of consumer protection from the point of view of a business and a consumer. (6 marks)

ECONOMICS

Q1. While estimating National Income which of the following item is not included?

- (a) Rent
- (b) Mixed income
- (c) Fixed investment
- (d) Undistributed profits

Q2. Net market value of all the final goods and services produced by normal resident of a country during an accounting year is called :

- (a) GDP at FC
- (b) NNP at FC
- (c) NNP at MP
- (d) GDP at MP

Q3. Which of the following is not a component of Domestic income :

- (a) Compensation of employees
- (b) Operating input
- (c) Mixed income
- (d) NFIA

Q4. Which of the following is also a part of National income:

- (a) Old age pension
- (b) Unemployment allowance
- (c) Scholarships
- (d) Profit

Q5. Factor cost is = ?

- (a) Market price- indirect tax
- (b) Market price- net indirect tax
- (c) Market price+ indirect tax
- (d) Market price+ nit

Q6. Distinguish between Domestic Income and National Income

Q7. Define : (a) GNP at FC (b) NDP at MP (c) GNP at FC

Q8. Calculate Depreciation :

Items	Rs
NDP at Fc	2000
NFIA	150
NIT	250
GNP at Mp	3000

Q9. Calculate NFIA :

Items	Rs
GDP at Fc	4000
Depreciation	100
NIT	300
NNP at Mp	4500

Q10. Calculate (a) NNP at MP (b) NNP at FC (c) NDP at FC

Items	Rs
GNP at MP	10000
Depreciation	200
Indirect tax	300
Subsidies	250
NFIA	150

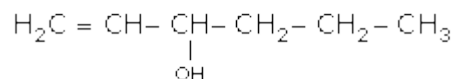
BIOLOGY

- Describe through a flow chart, the process of foetal ejection reflex.
- How placenta acts as an endocrine tissue?
- What is the fate of inner cell mass?
- Describe the events of growing foetus during gestation period.
- Explain what prevents polyspermy?
- What are the Mendelian laws of inheritance? (Prove them with crosses)
- Differentiate between co-dominance and incomplete dominance.
- What is meant by a test cross? Explain with the help of crosses.
- For a particular rodent, black fur (B) is dominant over brown fur (b), and a long tail (L) is dominant over a short tail (l). Create a Punnett square that shows the genotypes of all the possible offspring that could result from the breeding of two of the rodents that are heterozygous for both traits.
- For the same type of rodent as in question 2, consider a cross between a male heterozygous for both black fur and a long tail, with a female homozygous for black fur and a short tail:
 - What ratio of genotypes would result? Show your work.
 - What ratio of phenotypes might be produced? Show your work.

CHEMISTRY
ALCOHOL PHENOL ETHERS
QUESTION BANK

Question 1

Give the IUPAC name of the following compound:

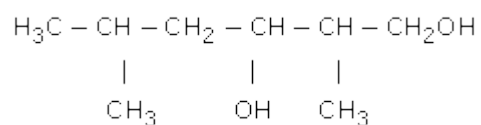


Ans.

Hexen-3-ol

Question 2

Write the IUPC name of the following compound:

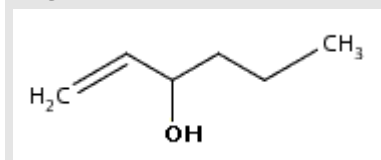


Ans.

2,5-Dimethylhexane -1,3-diol.

Question 3

Ans.



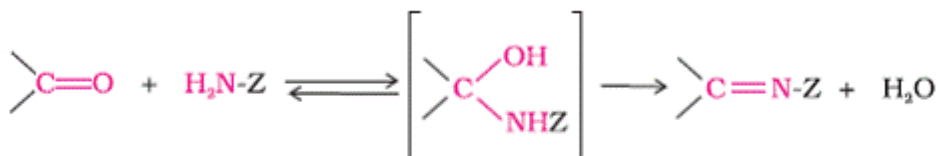
Question 4

How semicarbazide adds to carbonyl group?

Ans.

Semicarbazide adds to carbonyl group to form semicarbazone. $-\text{C}=\text{O} + \text{NHCONH}_2$
The reaction is catalysed by acids.

In the reaction $\text{Z}=\text{C}=\text{O} + \text{NHCONH}_2$



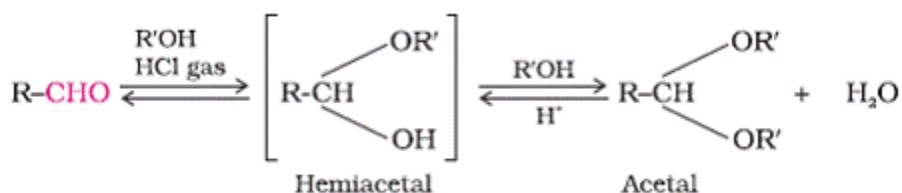
Z = Alkyl, aryl, OH, NH₂, C₆H₅NH, NHCONH₂,

Question 5

Write the mechanism of acetal formation in aldehyde?

Ans.

Aldehydes react with alcohol in the presence of dry HCl gas to form acetal. Hemiacetal is first formed by the addition of one mole of alcohol to the carbonyl group. This being unstable quickly reacts with another mole of alcohol to form acetal.



Question 6

What happens when methanal is treated with hydroxyl amine?

Ans.

Methanal reacts with hydroxyl amine to give methanal oxime.

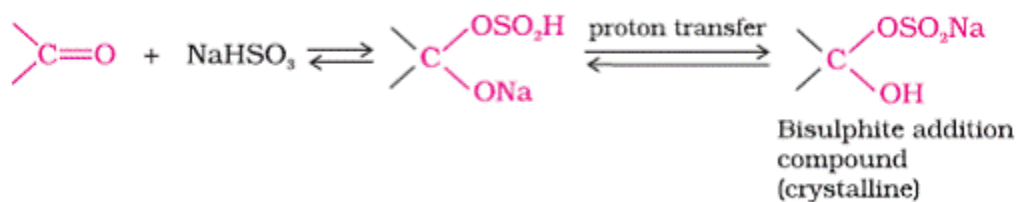


Question 7

What happens when NaHSO₃ is added to carbonyl compound?

Ans.

When NaHSO₃ is added to carbonyl compound bisulphite addition product is formed.

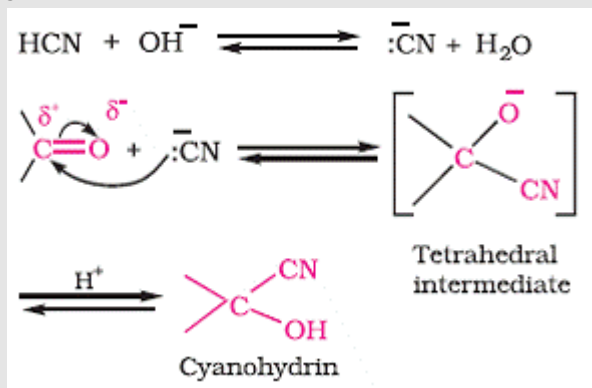


Question 8

What happens when HCN is added to aldehyde or ketone? Give the mechanism of the addition reaction.

Ans.

Both aldehyde and ketone add a molecule of HCN to form cyanohydrin. Base acts as a catalyst in the reaction



Question 9

Which one among the following is more reactive and why?

CH₃CHO, C₆H₅CHO, C₆H₅COC₆H₅, C₆H₅COCH₃

Ans.

Aromatic aldehydes and ketones are less reactive than aliphatic. This is because the resonance effect (+R) of the benzene ring decreases the electron density on the carbonyl carbon and thus the aromatic aldehydes and ketones are less reactive than the corresponding aliphatic aldehydes and ketones.

$\text{CH}_3\text{CHO} > \text{C}_6\text{H}_5\text{CHO} > \text{C}_6\text{H}_5\text{COCH}_3 > \text{C}_6\text{H}_5\text{COC}_6\text{H}_5$

Question 10

How will you distinguish C=O bond from C=C bond ?

Ans.

C=O bond is polar in nature but C=C bond not. Secondly C=O bond undergoes nucleophilic addition reactions but the ethylenic double bonds undergoes electrophilic addition reactions.

Question 11

What is the nature of carbonyl group in aldehydes and ketones?

Ans.

The carbonyl group in aldehydes and ketones are polar in nature. The oxygen atom in the carbonyl group is far more electronegative than the carbon atom. So the atom attracts the electron cloud of the pi bond towards itself. Hence oxygen have little negative charge and carbon slightly positive. Thus the carbonyl group is polar in nature and is represented as a resonance hybrid of the two structures.



Question 12

Give the IUPAC name of $\text{CH}_3\text{CH}_2\text{COCH}_2\text{CH}_3$?

Ans.

The IUPAC name of $\text{CH}_3\text{CH}_2\text{COCH}_2\text{CH}_3$ is 3-Pentanone.

Question 1

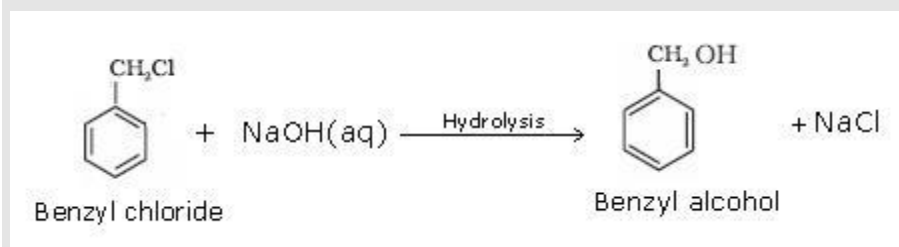
How are the following conversions carried out?

(i) Benzyl chloride to benzyl alcohol,

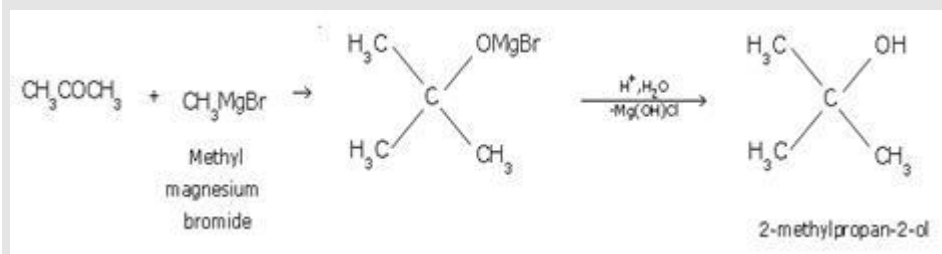
(ii) Methyl magnesium bromide to 2-methylpropan-2-ol.

Ans.

(i) Benzyl chloride to benzyl alcohol



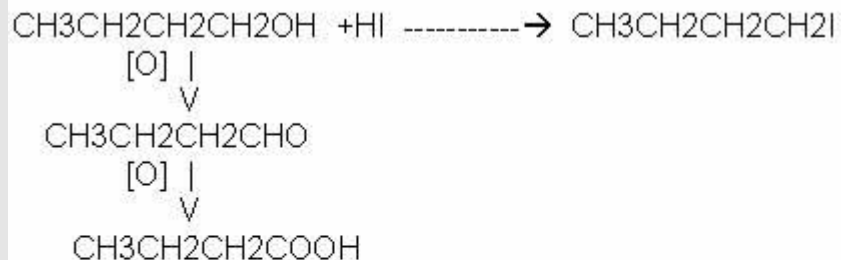
(ii) Methyl magnesium bromide to 2-methylpropan-2-ol



Question 3

An organic compound A ($\text{C}_4\text{H}_{10}\text{O}$) reacts with HI giving a compound B ($\text{C}_4\text{H}_9\text{I}$) which on reduction gives n-butane. On oxidation A gives a compound C ($\text{C}_4\text{H}_8\text{O}$) and then an acid D ($\text{C}_4\text{H}_8\text{O}_2$). Deduce the structures of A, B, C and D.

Ans.



A is $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$

B is $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{I}$

C is $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$ and D is $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$

Question 4

What is absolute alcohol and how it is prepared?

Ans.

Absolute alcohol is 100% ethanol which is prepared from rectified spirit.

Absolute alcohol is prepared by Azeotropic distillation method. Rectified spirit is mixed with a suitable amount of benzene and subjected to fractional distillation. The last fraction at 351 K b.p is absolute alcohol.

Question 5

How will you distinguish primary, secondary and tertiary alcohols by Lucas test?

Ans.

Alcohol is treated with an equimolar mixture of concentrated HCl and anhydrous ZnCl_2 (called Lucas reagent). The alcohols get converted into alkyl halides. Since the alkyl halides are insoluble in water, their formation is indicated by the appearance of turbidity in the reaction mixture. Since the order of reactivity of alcohols with halogen acids is tertiary > secondary > primary, Therefore, the time required for the appearance of cloudiness will be different in different alcohols and this test helps in distinguishing them.

Question 6

How will you convert ethanol to acetic acid?

Ans.

Ethanol can be converted to acetic acid by oxidation.



Question 7

The order of reactivity of alcohols towards dehydration forming alkenes is Tertiary > Secondary > Primary alcohol. Explain?

Ans.

The formation of alkene depends on the stability of the intermediate carbonium ions formed during the dehydration reaction.

Since the stability of the intermediate carbonium ion is Tertiary > Secondary > Primary, the ease of dehydration of alcohols also follows the order.

Question 8

Why the alcohols boil at high temperature than alkanes?

Ans.

In alcohols a large number of molecules are joined by hydrogen bonding. Hence, energy is required to break the H-bonds for separating the individual molecules. Thus association through H-bonding reduces the volatility which causes an increase in the boiling point. Thus, alcohols boils at higher temperature than alkanes.

Question 9

Alcohols are said to be soluble in water but why n-Decyl alcohol is insoluble?

Ans.

The lower members of alcohols are highly soluble in water but the solubility decreases with increase in molecular weight. As the size of the molecule increases, the alkyl group becomes larger it prevents the formation of hydrogen bonds with water molecule and hence solubility decreases as there is increase in length of carbon chain.

Question 10

Why alcohols are miscible with water.

Ans.

The solubility of alcohols in water is due to the association of alcohol molecules with water molecules by hydrogen bonding. The hydrogen atom of alcohol molecule gets attracted by the electronegative oxygen atom of water molecule, in the same way the hydrogen atom of water molecule is attracted by the oxygen atom of alcohol molecule.

Question 11

State any two uses of methanol and ethanol.

Ans.

1. Ethanol and Methanol can be used to fuel internal combustion motor vehicles, either as sole fuels or, more usually, when mixed with petrol (gasoline).
2. Ethanol is of a dangerously high proof and contains additives which make it poisonous (it is referred to as denatured alcohol). Methanol is well known to be a dangerous poison and a generic sources of biofuels.

Question 12

How will you get ethane from ethanol?

Ans.

Ethane can be obtained from ethanol the dehydration alcohols. Mechanism for the acid catalysed dehydration of a simple alcohol like ethanol to give an alkene like ethene.

Ethanol can be dehydrated to give ethene by heating it with an excess of concentrated sulphuric acid at about 170°C. Concentrated phosphoric (V) acid, H₃PO₄, can also be used.

In the first stage, one of the lone pairs of electrons on the oxygen picks up a hydrogen ion from the sulphuric acid. The alcohol is said to be protonated.

The protonated ethanol loses a water molecule to give a carbocation (a carbonium ion). Finally, a hydrogensulphate ion (from the sulphuric acid) pulls off a hydrogen ion from the carbocation.

Question 1

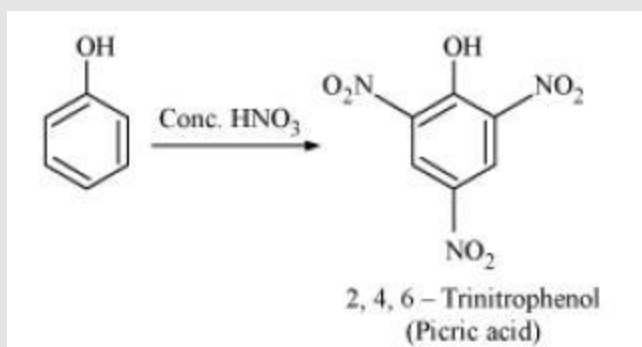
How would you obtain:

(i) Picric acid (2, 4, 6-trinitrophenol) from phenol,

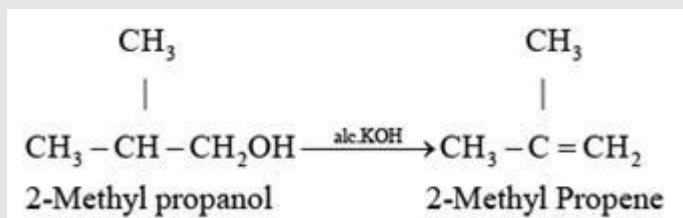
(ii) 2-Methylpropene from 2-methylpropanol?

Ans.

(i) Phenol on reaction with concentrated HNO_3 results in the formation of picric acid.



(ii) 2-Methyl propene can be obtained from the reaction of 2-methyl propanol with alc. KOH.



Question 2

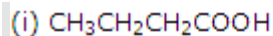
Draw the structure and name the product formed if the following alcohols are oxidized. Assume that an excess of oxidizing agent is used.

(i) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$

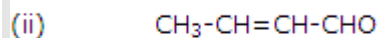
(ii) 2-butenol

(iii) 2-methyl-1-propanol

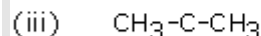
Ans.



Butanoic acid



But-2-en-1-al



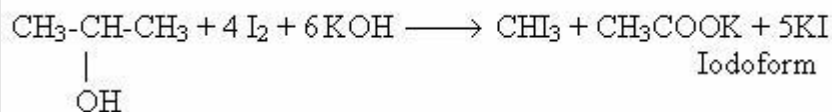
Acetone

Question 3

What happens when Propan-2-ol is heated with I_2 and KOH ?

Ans.

When Propan-2-ol is heated with I_2 and KOH iodoform is



obtained. Propan-2-ol

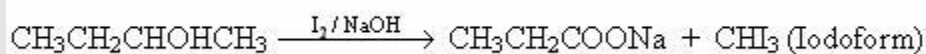
Iodoform

Question 4

How will you distinguish between butanol-1 and butanol-2?

Ans.

Out of butanol-1 and butanol-2 only butanol-2 gives positive iodoform test.



Question 5

How will you distinguish between phenol and cyclohexanol?

Ans.

Phenol gives violet colour with neutral FeCl_3 solution while Cyclohexanol does not.

Also Phenol decolourises bromine water and Cyclohexanol does not change the color of bromine

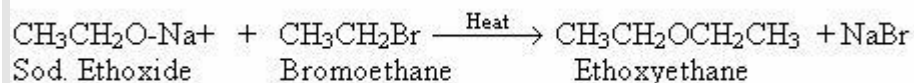
Phenol reacts with bromine water to give 2, 4, 6- Tribromo phenol which causes decolouration of Bromine water, this happens due to the unsaturation whereas in case of cyclohexanol as there is no unsaturation so it cannot decolourise Bromine water.

Question 6

Write the Williamson's synthesis reaction.

Ans.

Sodium or potassium alkoxides and phenoxides on treatment with alkyl halides form ethers. This is Williamson's synthesis reaction.

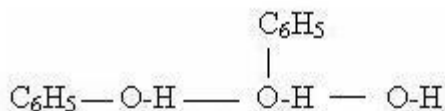


Question 7

Why the boiling point of phenol is higher than the corresponding aromatic hydrocarbons and haloarenes?

Ans.

Phenols form intermolecular H-bonds like



And phenol exists as associated molecules.

Therefore, phenols have higher boiling point than aromatic hydrocarbons and haloarenes.

Question 8

Which among methanol and phenol is most soluble and why?

Ans.

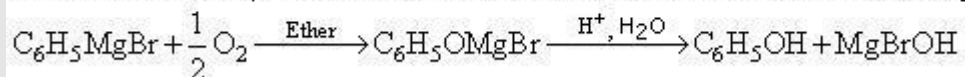
Larger the hydrocarbon part in the molecule lesser is the solubility. Since in methanol only -CH₃ group is attached to -OH it is easily soluble but in case of phenol due to the larger hydrocarbon part (benzene ring) in the molecule which decreases its reactivity.

Question 9

What happens when oxygen is bubbled through an ethereal solution of Phenylmagnesium bromide?

Ans.

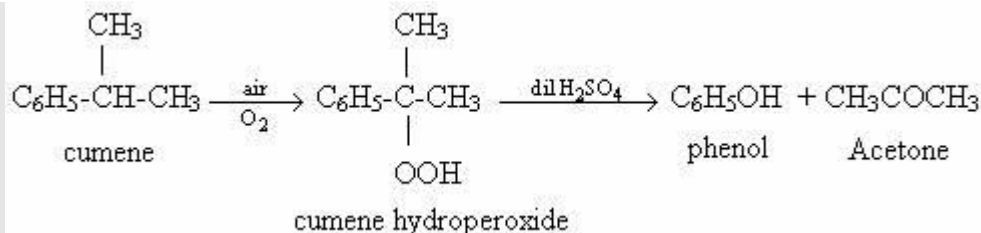
When oxygen is bubbled through an ethereal solution of phenylmagnesium bromide it forms an addition product which on treatment with dilute mineral acids gives phenol.



Question 10

Phenols give coupling reaction whereas Alcohols. Explain.

Ans.



Phenols give coloured dye in ice cold solution with Benzene diazonium chloride. Whereas alcohols do not form any dye with Benzene diazonium chloride because the Benzene ring is not there in alcohols which is there in phenols which causes stabilization of diazonium salt.

Question 11

Alcohols undergoes a number of reactions involving cleavage of C-OH bond, same is not true for phenols. Why?

Ans.

Alcohols undergoes a number of reactions involving cleavage of C-OH bond, same is not true for phenols because phenols are more acidic than alcohols and thus do not undergo protonation easily, hence no cleavage of C-OH bond.

Question 12

How will you convert chlorobenzene to phenol?

Ans.

When aryl halide is heated with 6-8% NaOH solution, at 623 K under 300 atm pressure we get sodium phenoxide, which on treatment with HCl we get Phenol.

Question 1

Explain the following observations:

i. The boiling point of ethanol is higher than that of methoxymethane.

ii. Phenol is more acidic than ethanol.

iii. o- and p- nitrophenols are more acidic than phenol.

Ans.

(i) Hydrogen bonding in ethanol causes the boiling point of ethanol to be higher than that of methoxymethane.

(ii) Phenol on releasing a proton forms phenoxide ion which is resonance stabilised. So, phenol is more acidic than ethanol.

(iii) NO₂ group has -I effect or electron withdrawing inductive effect making it easier for the release of proton.

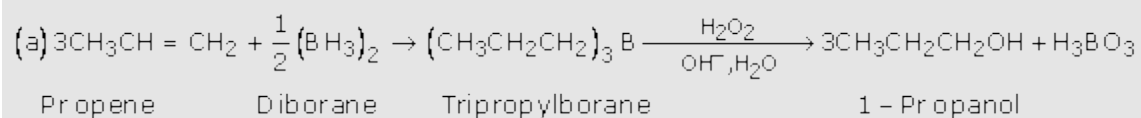
Question 2

Write the reactions and the conditions involved in the conversion of :

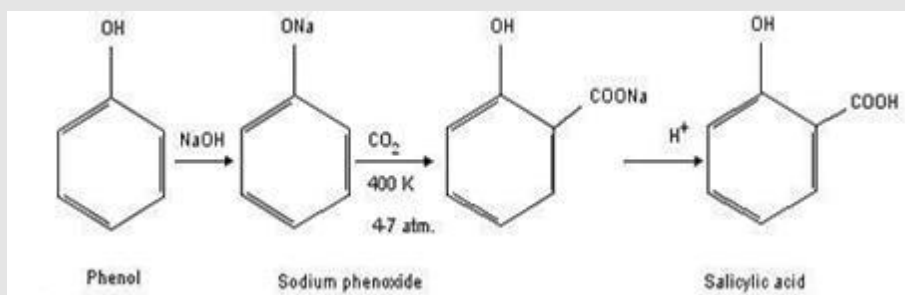
(a) Propene to 1- Propanol

(b) Phenol to Salicylic acid

Ans.



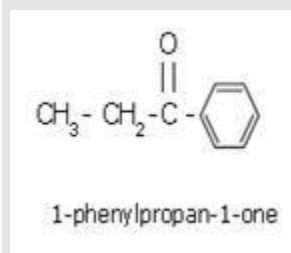
(b)



Question 3

Draw the structural formula of 1-phenylpropan-1-one molecule.

Ans.



Question 4

Name the reagents which are used in the following conversions:

(i) A primary alcohol to an aldehyde

(ii) Butan -2 - one to butan-2-ol

(iii) Phenol to 2, 4, 6-tribromophenol

Ans.

(i) PCC (Pyridinium chlorochromate), KMnO₄ (any one)

(ii) LiAlH_4 , NaBH_4 (any one)

(iii) Aqueous Br_2

Question 5

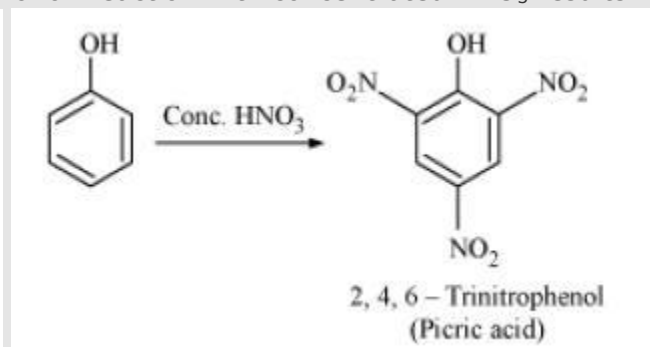
How would you obtain:

(i) Picric acid (2, 4, 6-trinitrophenol) from phenol,

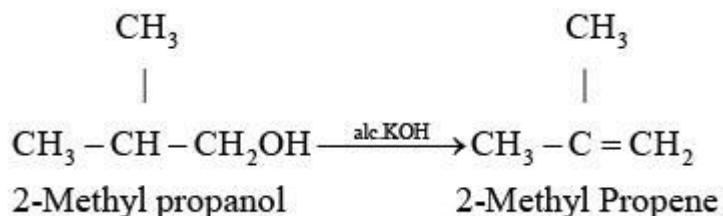
(ii) 2-Methylpropene from 2-methylpropanol?

Ans.

(i) Phenol on reaction with concentrated HNO_3 results in the formation of picric acid.



(ii) 2-Methyl propene can be obtained from 2-methyl propanol by the reaction of the later with alc. KOH



Question 6

Explain the following giving one example for each:

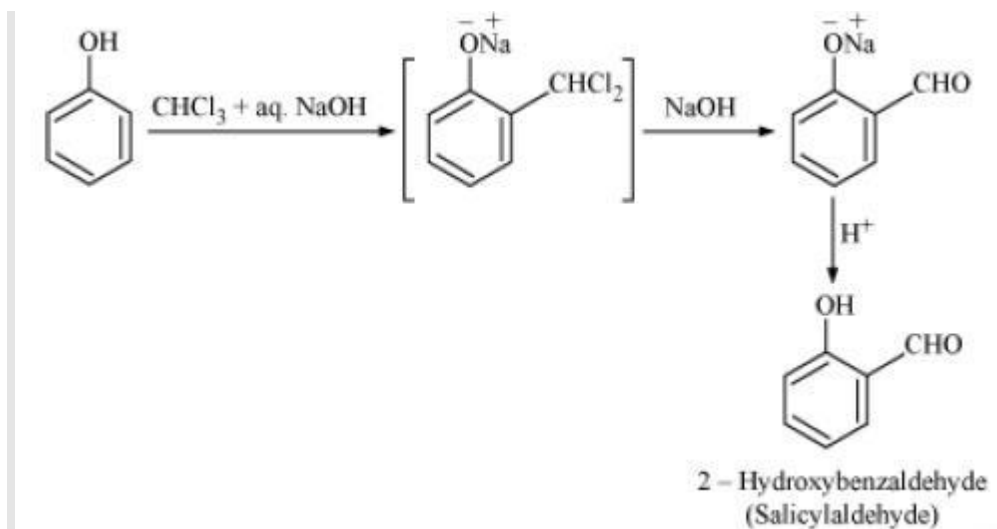
(i) Reimer-Tiemann reaction

(ii) Friedel Craft's acetylation of anisole

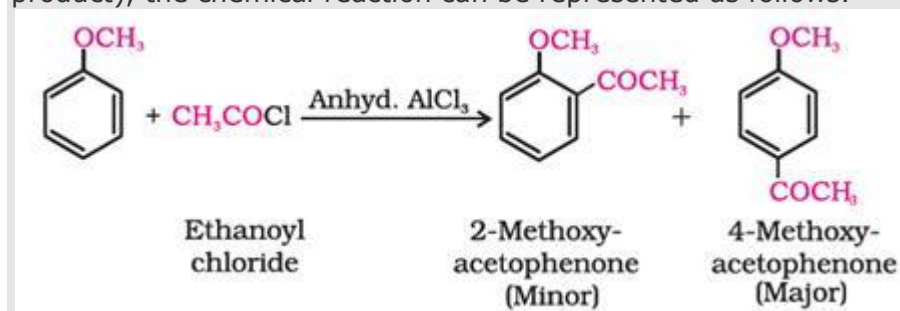
Ans.

Reimer-Tiemann reaction: Reimer-Tiemann reaction involves the treatment of phenol with chloroform in the presence of aqueous sodium hydroxide at 340 K followed by hydrolysis of the resulting product to give 2-hydroxybenzaldehyde (salicylaldehyde). The chemical reaction can be represented as follows.

(i)



(ii) Friedel-Crafts acetylation of anisole: Friedel-Crafts acetylation of anisole involves the treatment of anisole with either acetyl chloride or acetic anhydride to give 2-methoxyacetophenone (as a minor product) and 4-methoxyacetophenone (as a major product), the chemical reaction can be represented as follows.



Question 7

What type of drug Phenacetin is?

Ans.

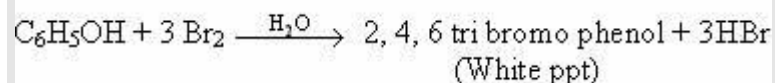
Phenacetin is anti-pyretics i.e. it is used to bring down the body temperature.

Question 8

What happens when phenol is treated with bromine water?

Ans.

When Phenol is treated with bromine water gives polyhalogen derivatives in which all the H-atoms present at the o- and the p- positions with respect to the -OH group are replaced by Bromine.

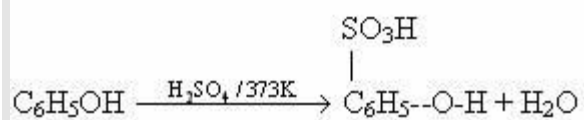


Question 9

What happens if sulphonation of phenol is carried out at a high temperature?

Ans.

If sulphonation of phenol is carried out at a high temperature 4-phenol sulphonic acid is obtained. i.e. the para isomer is the major product.

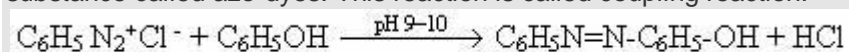


Question 10

How azo-dyes are obtained?

Ans.

Benzenediazonium salts condense with phenol in slightly alkaline medium at 273-278 K giving coloured substance called azo-dyes. This reaction is called coupling reaction.

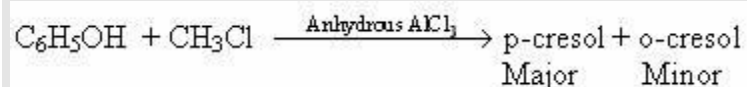


Question 11

How can you get p-cresol from Phenol?

Ans.

Phenols when treated with alkyl halides in presence of anhydrous AlCl_3 , undergoes Friedel-Crafts Reaction to form alkyl substituted phenols i.e. majorly p-cresol in which $-\text{CH}_3$ group is in p-position of phenol.



Question 12

What happens when phenol is heated with Phthalic anhydride in presence of conc H_2SO_4 ?

Ans.

When Phenol is heated with Phthalic anhydride in presence of conc H_2SO_4 Phenolphthalein is formed.

Question 13

Write a short note on Reimer Tiemann reaction.

Ans.

Treatment of Phenol with Chloroform in presence of aq NaOH at 340 K followed by hydrolysis of the resulting products gives Salicylaldehyde i.e. 2-hydroxy Benzaldehyde.

Question 14

State the general uses of phenol.

Ans.

- 1) Phenol is used in the manufacture of drugs like aspirin, phenacetin.
- 2) In the manufacture of bakelite.
- 3) In the manufacture of picric acid i.e. used in making explosives.
- 4) In the manufacture of phenolphthalein used as an indicator in the acid-base titration.
- 5) In the manufacture of azo - dyes.

6) As an antiseptic and disinfectants in soaps and lotions.

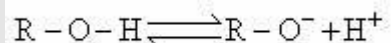
Question 15

Which one among alcohols and phenols are more acidic and why?

Ans.

Phenoxide is better stabilized than phenol as it carries only a negative charge and phenol has a strong tendency to form more stable phenoxide ion by the release of proton.

But, in case of alcohol both the alcohol molecule and the alkoxide ion are represented by one structure each and there is no resonance.



Also the alkoxide ion due to presence of a formal negative charge has greater energy and is less stable than the alcohol molecule. Thus alcohol has negligible tendency to form less stable alkoxide ion by releasing a proton.

Thus Phenols are stronger acids than alcohol because in case of phenol the phenoxide ion left after the release of a proton is stabilized by resonance

Question 16

How phenol is used in the manufacture of drugs like aspirin?

Ans.

Phenol is used as a starting material for the manufacture of drugs like Aspirin.

1) Phenol first needs to be treated with NaOH that will give sodium phenoxide.

2) Sodium phenoxide when treated with CO₂ at 400K under 4-7 atm pressure followed by acidification gives 2-hydroxy benzoic acid (salicylic acid as the main product)

Question 1

Illustrate the following reactions giving a chemical equation for each:

(i) Kolbe's reaction.

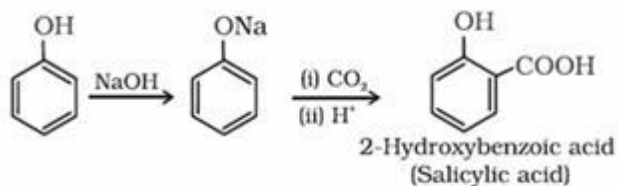
(ii) Williamson synthesis

Ans.

(i) Kolbe's reaction:

In this reaction, phenol is reacted with sodium hydroxide to form sodium phenoxide.

Sodium phenoxide formed reacts with carbon dioxide to form ortho hydroxy benzoic acid or salicylic acid as the main product.



(ii) Williamson synthesis:

It is an important laboratory method for the preparation of symmetrical and unsymmetrical ethers. In this method, an alkyl halide reacts with sodium alkoxide to form ether.



Question 2

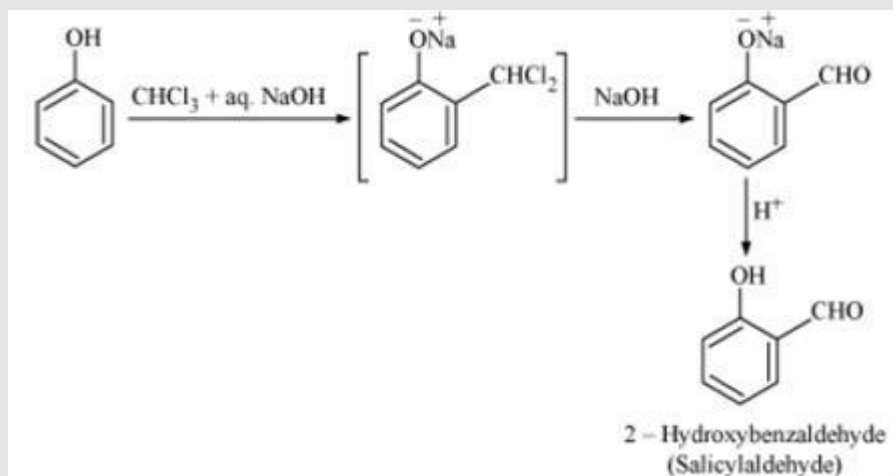
Explain the following giving one example for each:

(i) Reimer-Tiemann reaction.

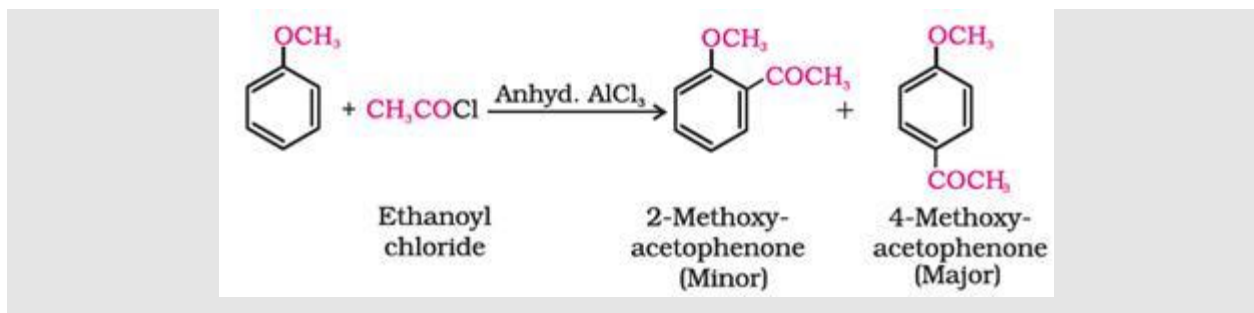
(ii) Friedel Craft's acetylation of anisole.

Ans.

(i) Reimer-Tiemann reaction: Reimer-Tiemann reaction involves the treatment of phenol with chloroform in the presence of aqueous sodium hydroxide at 340 K followed by hydrolysis of the resulting product to give 2-hydroxybenzaldehyde (salicylaldehyde). The chemical reaction can be represented as follows:



(ii) Friedel-Crafts acetylation of anisole: Friedel-Crafts acetylation of anisole involves the treatment of anisole with either acetyl chloride or acetic anhydride to give 2-methoxyacetophenone (as a minor product) and 4-methoxyacetophenone (as a major product), the chemical reaction can be represented as follows:



Question 3

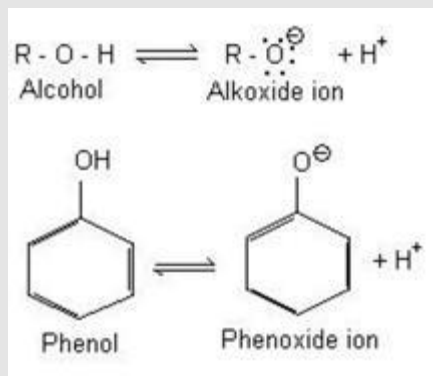
How would you account for the following:

(i) Phenols are much more acidic than alcohols.

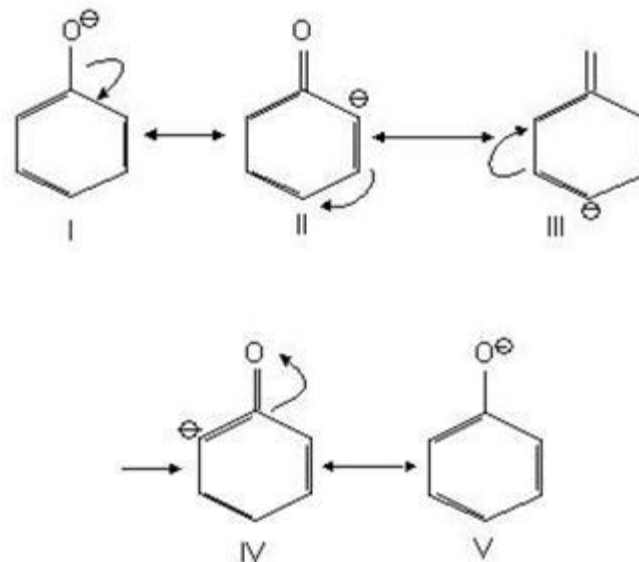
(ii) The boiling points of ethers are much lower than those of the alcohols of comparable molar masses.

Ans.

(i) Phenols are more acidic than alcohols. It can be explained on the basis that alcohol on losing H^+ ion forms alkoxide ion and phenol forms phenoxide ion.



The greater acidity of phenol is due to the stability of the phenoxide ion, which is resonance stabilized as shown below.



(ii) The boiling points of ethers are much lower than those of alcohols of comparable molar masses because unlike alcohols, they cannot form intermolecular hydrogen bonds.

Question 4

Illustrate the following reactions giving a chemical equation for each:

(i) Kolbe's reaction.

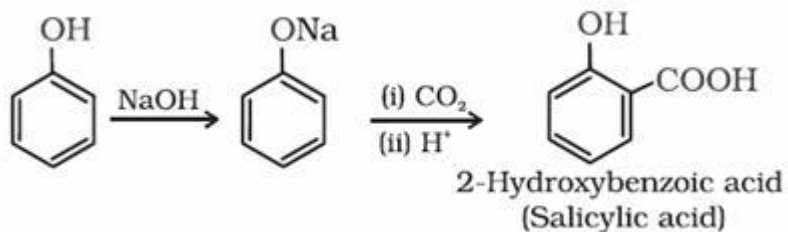
(ii) Williamson synthesis.

Ans.

(i) Kolbe's reaction:

In this reaction, phenol is reacted with sodium hydroxide to form sodium phenoxide.

Sodium phenoxide formed reacts with carbon dioxide to form orthohydroxy benzoic acid or salicylic acid as the main product.



(ii) Williamson synthesis:

It is an important laboratory method for the preparation of symmetrical and unsymmetrical ethers. In this method, an alkyl halide reacts with sodium alkoxide to form ether.

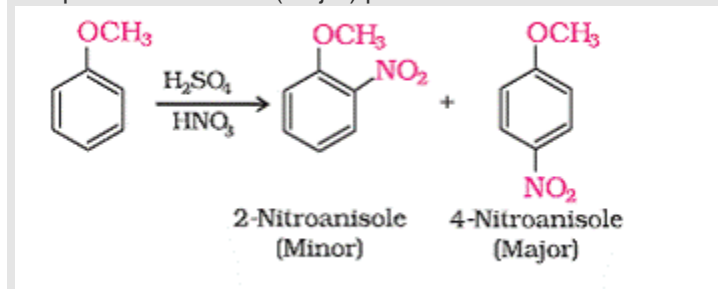


Question 5

What happens when anisole is nitrated?

Ans.

When anisole is nitrated with a mixture of conc. HNO_3 and H_2SO_4 it gives mixture of ortho-Nitroanisole and para-Nitroanisole (major) products.

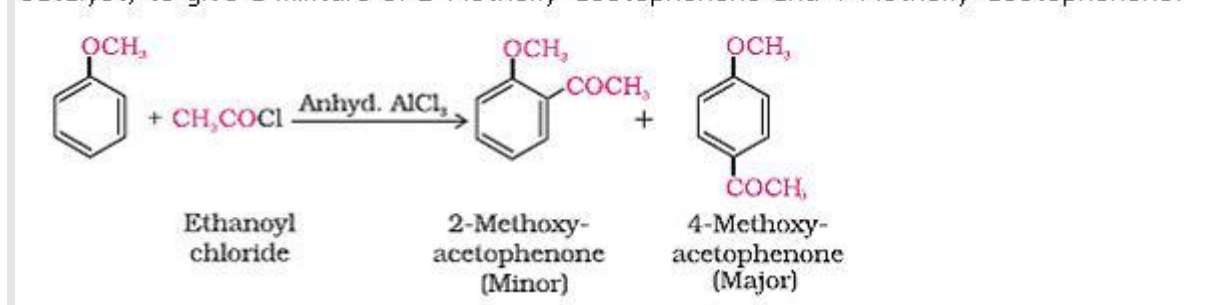


Question 6

What happens when anisole is treated with ethanoyl chloride?

Ans.

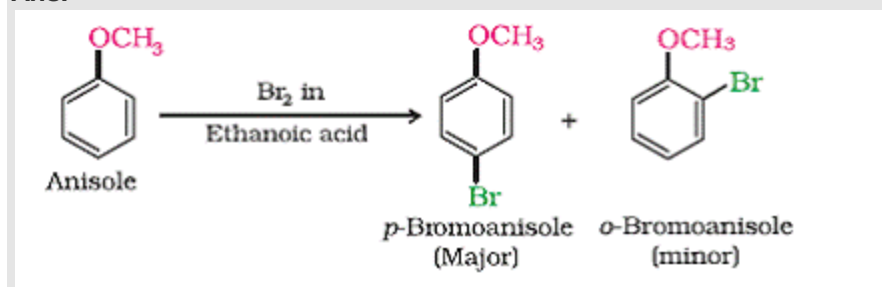
Anisole undergoes Friedel-Crafts reaction with acyl halide in presence of Lewis acid AlCl_3 as catalyst, to give a mixture of 2-Methoxy-acetophenone and 4-Methoxy-acetophenone.



Question 7

When anisole is brominated, what are the products obtained?

Ans.



Question 8

Why there is a large difference in boiling point between butanol and ethoxy ethane?

$C_2H_5-O-C_2H_5$	$CH_3(CH_2)_3-OH$
Ethoxyethane	Butan-1-ol
307.6	390

Ans.

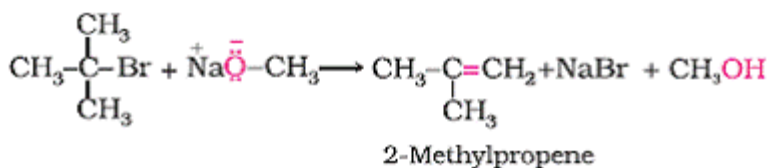
There is a large difference in boiling point between butanol and ethoxyethane due to presence of hydrogen-bonding in alcohols it has a high boiling point.

Question 9

Why substitution is not the correct way to get t-butyl ethyl ether?

Ans.

Substitution is not the correct way to get t-butyl ethyl ether as sodium ethoxide acts as a strong nucleophile and a strong base, so we get elimination product.

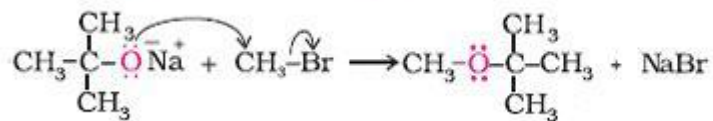


Question 10

How ethers are made by Williamson's method?

Ans.

Alkyl halide is treated with sodium alkoxide to get the corresponding ether
The reaction involves S_N2 attack of an alkoxide ion on the primary alkyl halide.

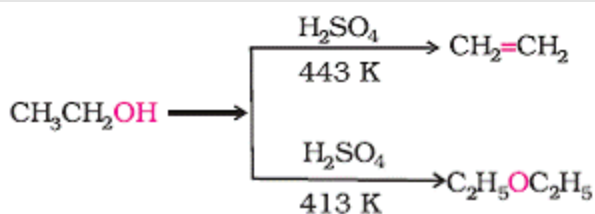


Question 11

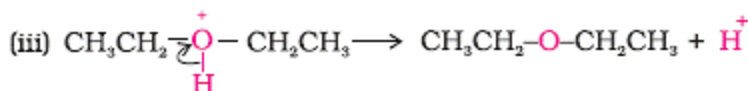
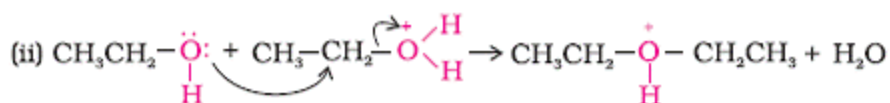
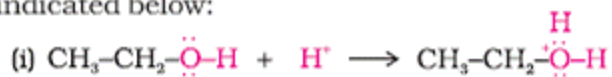
How the ethers are obtained by the dehydration of alcohols? Give the mechanism of action.

Ans.

When alcohol (say ethanol) is treated with conc. H_2SO_4 at 413 K we get ethoxy ethane.

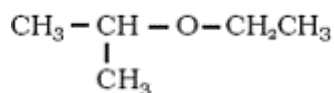


The formation of ether is a nucleophilic bimolecular reaction ($\text{S}_{\text{N}}2$) involving the attack of alcohol molecule on a protonated alcohol, as indicated below:



Question 12

What is the IUPAC name of



Ans.

The IUPAC name of the compound is 2-Ethoxypropane

Question 13

What is the IUPAC name of $\text{C}_6\text{H}_5\text{OCH}_3$?

Ans.

IUPAC name of $\text{C}_6\text{H}_5\text{OCH}_3$ is methoxy benzene.

Question 14

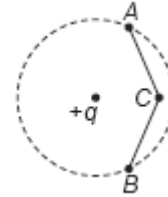
How the ethers are classified? Give example.

Ans.

Ethers are classified as symmetrical and unsymmetrical. If the alkyl or aryl groups attached to the oxygen atom are same then it is symmetrical ether and if the groups are mixed then the ether is unsymmetrical. For example: $\text{C}_2\text{H}_5\text{OC}_2\text{H}_5$ is an example of symmetrical ether and $\text{C}_2\text{H}_5\text{OCH}_3$ is an example of unsymmetrical ether.

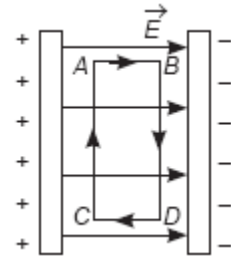
PHYSICS

- 1 Work done in taking an electron around a proton in a circular loop is zero. Should the proton necessarily be at the centre of the circular loop?
- 2 An uncharged insulated conductor A is brought near a charged insulated conductor B . What happens to charge and potential of B ?
- 3 While defining the electrostatic potential energy, why do we bring a unit positive charge from infinity?
- 4 What is the work done in moving a test charge q through a distance of 1 cm along the equatorial axis of an electric dipole?
- 5 A metal sphere is surrounded by an uncharged concentric thin spherical shell with a charge q and the potential difference between them is V . What is the new potential difference between them, if the shell is now given an additional charge q ?
- 6 Why is electrostatic potential constant throughout the volume of the conductor and has the same value (as inside) on its surface?
- 7 A and B are two conducting spheres of the same radius, A being solid and B hollow. Both are charged to the same potential. What will be the relation between the charges on the two spheres?
- 8 If a point charge $+q$ is taken first from A to C and then from C to B of a circle drawn with another point



charge $+q$ at centre, then along which path more work will be done?

- 9 A uniform electric field E exists between two charged plates as shown in figure. What would be the work



done in moving a charge q along the closed rectangular path $ABCD$?

- 10 "For any charge configuration, equipotential surface through a point is normal to the electric field." Justify.
- 11 What is the geometrical shape of equipotential surfaces due to a single isolated charge?
- 12 Why is there no work done in moving a charge from one point to another on an equipotential surface?

13 Can two equipotential surfaces intersect each other? Justify your answer.

14 Why is electrostatic potential energy of a pair of like point charges positive?

15 In the expression $W = pE (\cos \theta_0 - \cos \theta_1)$, why is θ_0 is taken as $\pi/2$ for obtaining expression for the potential energy of electric dipole?

16 Why should electrostatic field be zero inside a conductor?

17 Why can the interior of a conductor have no excess charge in the static situation?

18 Why does the electric field inside a dielectric decrease when it is placed in an external electric field?

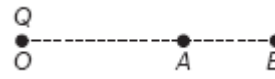
19 For what position of an electric dipole in a uniform electric field its potential energy is (i) minimum and (ii) maximum?

20 If the electric potential equals to zero at a point, must the electric field be zero at that point?

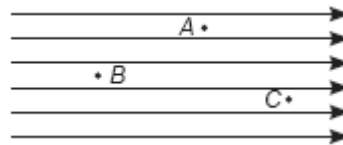
21 If electric field at a point equals to zero, must the electric potential at that point be zero?

22 A hollow metal sphere of radius 5 cm is charged such that the potential on its surface is 10 V. What is the potential at the centre of the sphere?

23 A point charge Q is placed at point O as shown in the figure. Is the potential difference $V_A - V_B$ positive, negative or zero, if Q is (i) positive (ii) negative?



24 Figure given below shows three points A , B and C in a uniform electrostatic field. At which of the points

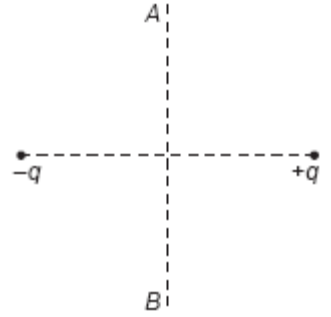


will the electric potential be maximum ?

25 Why is the potential inside a hollow spherical charged conductor constant and has the same value as on its surface?

26 Define dielectric strength of a medium. What is its value for vacuum?

27 A charge q is moved from a point A above dipole of dipole moment P to a point B below the dipole in



equatorial plane without acceleration. Find the work done in the process.

28 If the plates of a charged capacitor be suddenly connected to each other by a wire, what will happen?

29 Name the physical quantity whose SI unit is $F\ m^{-1}$ (farad/metre).

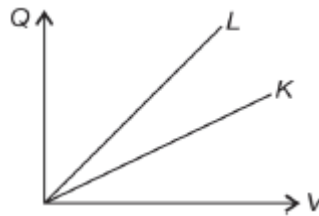
30 Where does the energy of a capacitor reside?

31 Why is it necessary that the field lines from a point charge placed in the vicinity of a conductor must be normal to the surface of the conductor at every point?

32 A metal plate is introduced between the plates of a charged parallel plate capacitor. What is its effect on the capacitance of the capacitor?

33 How is dielectric constant expressed in terms of capacitance of a capacitor?

34 The following graph shows the variation of charge Q , with voltage V , for two capacitors K and L . In which



capacitor is more electrostatic energy stored?

35 In which orientation, a dipole placed in a uniform electric field is in (i) stable, (ii) unstable equilibrium?

36 A $500\ \mu C$ charge is at the centre of a square of side 10 cm. Find the work done in moving a charge of $10\ \mu C$ between two diagonally opposite points on the square.

HISTORY

Chapter: 2 King Farmers and Towns

Write the answer of following questions in 30 words (carry 1 marks)

1. Who was James Prinsep?
2. What do you mean by inscription ?
3. Name the new kingdom that emerged in the Deccan and further south ?
4. Who was Harisean ?
5. Who were Dhamma Mahamattas?
6. In which languages and script , Ashokan script were written ?
7. How many titles did Ashoka adopted?
8. Who was Magasthenes?
9. What function did Pativedakas perform?
10. Why is the lion capital considered important today ?
11. Who was Prabhavati Gupta ?
12. Why did king donate land ?
13. Who carried the title of divine king in Ist century CE ?
14. Punch marked coins were made of and used.
15. Write one differences between Gupta ruler coins and Kushan ruler coins ?
16. Write the meaning of Agrahara?
17. What was Murals?
18. Who carry the title of Uzhavar ?
19. What is palaeography?

East abolished trader were called in Tamil andand in prakrit?

GEOGRAPHY

1. Who maintained land use records?
2. Define
 - i) Barren and wasteland
 - ii) Culturable waste land
 - iii) Current fallow land
 - iv) Net area sown
3. How would you distinguish between net sown area and gross cropped area?
4. Land use in a region, influenced by the nature of economic activities change over time. Justify the statement.
5. CPR comes under which of the land use?
6. Name the land use categories.
7. Explain two reasons for the increase pressure on agricultural land in India.
8. Diagram based question...fig 5.1....page 42 book2
 - A. Name 3 categories of land use in which there was an increase in 2002-03.
 - B. Name 3 categories of land use in which there was decrease in 2002-03.
 - C. Land resource is more important for those who directly depend on it for their livelihoods.

PSYCHOLOGY

(VERY SHORT QUESTION: 1 MARKS)

1. Personality characteristics of Type A _____.
2. Personality characteristics of Type B _____.
3. Type C personality is more prone to develop _____.
4. _____ personality is more prone to depression.
5. Traits that are highly generalized dispositions are called _____.
6. Examples of secondary traits are _____.
7. Source traits are _____.
8. Surface traits are _____.
9. In denial a person _____.
10. In _____ a person defends against anxiety by adopting behaviors opposite to his true feelings.

(SHORT QUESTION TYPE I: 3 MARKS)

11. What is familial self?
12. How is ego different from superego?
13. Give features of phallic Stage
14. What do you mean by collective unconsciousness?
15. What did Maslow mean by self-actualization?

(SHORT QUESTION TYPE II: 4 MARKS)

16. What are projective techniques? What are the advantages and limitations of projective techniques?
17. What are the different levels of consciousness proposed by Freud? Explain using diagram.
18. What did Maslow mean by self-actualization?
19. Discuss the role of unconscious in determining personality.
20. What are projective techniques? What are the advantages and limitations of projective techniques?

(LONG QUESTION: 6 MARKS)

21. What are the broad dimensions of Personality proposed by Eysenck?
22. What are defense mechanisms? Differentiate between repression and projection with the help of examples.
23. Compare Indian and western perspective of self.
24. Differentiate between type and trait.
25. Discuss advantages and limitations of self-report measures.

LEGAL STUDIES

- Q1. Define the term property and mention its various kinds. Which act regulates the property law?
- Q2. Write a short note on immovable property. Give examples for movable and immovable property.
- Q3. What are the essential features for a valid transfer?
- Q4. Name the parties to a transfer under the property Law?
- Q5. To fulfill the transfer, a person needs to be qualified to make a valid transfer. What are those essentials and who can transfer?
- Q6. What do you understand by a conditional transfer?
- Q7. Distinguish between movable and immovable property?

INFORMATICS PRACTICES

SAME AS PREVIOUS

C++

SAME AS PREVIOUS

OPTIONAL II

HINDI

Question 1:

'पत्थर' और 'चट्टान' शब्द किसके प्रतीक हैं?

ANSWER:

तोड़ो कविता में 'पत्थर' और 'चट्टान' बंधनों तथा बाधाओं के प्रतीक हैं। बंधन और बाधाएँ मनुष्य को आगे बढ़ने से रोकती हैं इसलिए कवि मनुष्य को इनको हटाने के लिए प्रेरित करता है। उसके अनुसार यदि इनसे पार पाना है, तो इन्हें तोड़कर अपने रास्ते से हटाना पड़ेगा। तभी मंजिल पायी जा सकती है।

Page No 39:

Question 2:

कवि को धरती और मन की भूमि में क्या-क्या समानताएँ दिखाई पड़ती हैं?

ANSWER:

कवि के अनुसार धरती और मन में बहुत प्रकार की समानताएँ विद्यमान हैं। वे इस प्रकार हैं-

(क) धरती में मिट्टी विद्यमान होती है। उसमें पत्थर और चट्टानें व्याप्त हो तो वह बंजर हो जाती है, जिससे उसमें किसी भी प्रकार की फसल पैदा नहीं हो सकती है। इसी प्रकार मन की भूमि बंधनों और बाधाओं के कारण बंजर हो जाती है अर्थात् बंधन और बाधाएँ उसकी सृजन शक्ति को कमजोर बनाते हैं।

(ख) धरती के भीतर पत्थर और कठोरता का समावेश है, ऐसे ही मन में ऊबाउपन और खीझ विद्यमान हैं।

(ग) धरती के भीतर यदि पत्थर और चट्टान विद्यमान होंगे, तो उसकी पैदावार शक्ति घट जाएगी। इसी तरह यदि मन में शंकाएँ तथा खीझ विद्यमान रहेगी, तो उसकी सृजन शक्ति घट जाएगी।

(घ) धरती में हल चलाकर उसके भीतर व्याप्त चट्टानों और पत्थरों को बाहर निकाला जाता है तथा उसे कृषि योग्य बनाया जाता है, वैसे ही मन में व्याप्त शंकाओं, बाधाओं तथा खीझ को निकालकर उसकी सृजन शक्ति को बढ़ाया जा सकता है।

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Question 3:

भाव-सौंदर्य स्पष्ट कीजिए-

मिट्टी में रस होगा ही जब वह पोसेगी बीज को
हम इसको क्या कर डालें इस अपने मन की खीज को?
गोड़ो गोड़ो गोड़ो

ANSWER:

भाव यह है कि मिट्टी का उपजाऊपन ही बीज का पोषण करता है और उसे फसल रूप में आकार देता है। मिट्टी में यदि उपजाऊपन (रस) नहीं होगा, तो वह बीज का पोषण नहीं कर पाएगी। ऐसे ही मन की स्थिति भी होती है। जब तक उसके अंदर खीझ विद्यमान रहेगी, उसकी सृजन शक्ति उससे प्रभावित होती रहेगी। अतः सृजन के लिए खीझ को मन से बाहर निकाल करना होगा। इन पंक्तियों में कवि धरती के माध्यम से मनुष्य की खीझ को बाहर निकालने के लिए प्रेरित करता है।

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Question 4:

कविता का आरंभ 'तोड़ो तोड़ो तोड़ो' से हुआ है और अंत 'गोड़ो गोड़ो गोड़ो' से। विचार कीजिए कि कवि ने ऐसा क्यों किया?

ANSWER:

ऐसा करने के पीछे कवि का विशेष उद्देश्य है, 'तोड़ो तोड़ो तोड़ो' से कविता आरंभ करके कवि मनुष्य को विघ्न, बाधाएँ, खीझ इत्यादि को चकनाचूर करने के लिए प्रेरित करता है। इस तरह मनुष्य संकट से बाहर आ जाता है और उसके मन की सोचने-समझने की शक्ति का विकास होता है। विघ्न-बाधाएँ तथा खीझ मनुष्य के विचारों को प्रभावित किए रहती हैं और वह कुछ भी करने में असमर्थ होता है। 'गोड़ो गोड़ो गोड़ो' से वह मन को मज़बूत बनाकर सृजन शक्ति को बढ़ाने के लिए प्रेरित करता है। जैसे धरती के अंदर व्याप्त चट्टान और पत्थरों को तोड़ने से उसका बंजरपन समाप्त होता है तथा गुड़ाई करके उसे खेती करने योग्य बनाया जाता है। ऐसे ही इन शब्दों के द्वारा कवि मन को विशेष बल देने का प्रयास करता है ताकि वह अपने सम्मुख खड़ी कठिनाइयों से लड़ सके तथा सृजन शक्ति को और बलशाली बना सके। इस प्रकार ही मनुष्य का विकास संभव है।

Page No 39:

Question 5:

ये झूठे बंधन टूटें

तो धरती को हम जानें

यहाँ पर झूठे बंधनों और धरती को जानने से क्या अभिप्राय हैं?

ANSWER:

कवि का निम्नलिखित पंक्ति में झूठे बंधनों से अभिप्राय है कि झूठे बंधन मनुष्य को अपने मार्ग से विचलित करते हैं। उसकी शक्ति को जकड़ देते हैं। जैसे धरती में व्याप्त पत्थर तथा चट्टानें उसे बंजर बना देते हैं, वैसे ही मन में व्याप्त झूठे बंधन उसकी सृजन शक्ति को विकसित नहीं होने देते।

धरती को जानने से अभिप्राय है कि धरती में इतनी शक्ति होती है कि वह समस्त संसार का भरण-पोषण कर सके। परन्तु उसमें व्याप्त पत्थर और चट्टानें उसे बंजर बना देती हैं। अतः हमें उसकी शक्ति तथा उसके महत्व को समझकर उसे खेती योग्य बनाने की आवश्यकता है। मनुष्य का मन भी इसी धरती के समान है, यदि वह शंकाओं, झूठे बंधनों के जाल में फँसा रहेगा, तो अपनी सृजन शक्ति का नाश ही करेगा। अतः अपने मन का अवलोकन कर उसे अपनी शक्ति को पहचानना चाहिए और सभी प्रकार की बाधाओं को उखाड़ फेंकना चाहिए।

Page No 39:

Question 6:

'आधे-आधे गाने' के माध्यम से कवि क्या कहना चाहता है?

ANSWER:

'आधे-आधे गाने' के माध्यम से कवि कहना चाहता है कि मनुष्य जब तक अपने मन में व्याप्त खीझ तथा ऊब को बाहर निकाल नहीं करता, तब तक उसका गान अधूरा ही रहेगा। मन जब उल्लास तथा आनंद को महसूस करेगा तभी वह पूरा गाना गा सकता है। यह इस बात की ओर संकेत करता है कि मन के अंदर खीझ तथा ऊबाउपन नहीं होगा, तो वह सृजन करने में सक्षम होगा। इस तरह ही उसका कल्याण संभव है।

PHYSICAL EDUCATION

Chapter II

Sports and Nutrition

Multiple Choice Questions

Q1. What is another name of riboflavin?

- (a) Vitamin B (b) Vitamin B5 (c) Vitamin B2 (d) Vitamin C

Q2. Who discovered vitamin A?

- (a) Theo Haimann
(b) Elmer MacCollum
(c) O'Donnell
(d) None of these

Q3. Which of the following vitamin is insoluble in fats?

- (a) A (b) E (c) K (d) C

Q4. Deficiency of which of the following leads to rickets?

- (a) Iron (b) Iodine (c) Calcium (d) Chromium

Q5. What is the calorific value of water?

- (a) 10 joules/calorie
(b) 0 joule/calorie
(c) 25 joules/calorie
(d) 10 joules/calorie

Short Answer Type Questions

Q1. Define balanced diet and mention the elements of diet.

Q2. How is nutrition different from food?

Q3. Write briefly about minerals as an important nutritive component.

Q4. Write a short note on vitamins and their types.

Q5. What are the different forms of vitamin B complex? Explain any one of them.

Q6. Explain the role of fibre in diet.

- Q7. What do you understand by micronutrients? Explain the sources and role of any two macronutrients.
- Q8. Discuss any three macro minerals and their importance.
- Q9. Discuss any three micro minerals and their importance.
- Q10. Why is water important even though it is non-nutritive?
- Q11. How would you differentiate between colour compounds and flavour compounds?
- Q12. How does protein act as a nutritive component of diet?
- Q13. Discuss water soluble vitamins briefly.
- Q14. Explain the cause and management of food intolerance.
- Q15. What do you understand by food myths? Discuss briefly about various food myths.

Long Answer Type Questions

- Q1. What is balanced diet? Elucidate its any four constituents.
- Q2. Explain macronutrients and their role in our diet.
- Q3. Discuss micronutrient in detail.
- Q4. "Vitamins are essential for our metabolic process". What happens if our diet is devoid of vitamins?
- Q5. How do minerals contribute to our health? Explain citing at least four examples of each type of minerals.
- Q6. What are fats? Write a detailed note on its types. Also mention its importance in the proper functioning of the body.
- Q7. Write a note on nutritive components of diet.
- Q8. Write a note on non-nutritive components of diet.
- Q9. Explain any five essential elements of diet.
- Q10. How can healthy weight be maintained? Explain.
- Q11. What are the various pitfalls of dieting?

PAINTING

CHAPTER 2 – THE RAJASTHANI SCHOOL OF MINIATURE PAINTING MULTIPLE CHOICE QUESTIONS

- Q.1) The period of rajput painting is from :
- A. Later half of 16th century to 19th century.
 - B. Later half of 14th century to 15th century.
 - C. Later half of 17th century to 19th century.
 - D. Later half of 13th century to 19th century.
- Q.2) Rajasthani school covered the areas of :
- A. Basohli, Kangra.
 - B. Mewar, Jaipur, Kishangarh, Jodhpur and Bikaner.
 - C. Ahmadnagar, Hyderabad and Golconda.
 - D. None of the above.
- Q.3) The Rajasthani art is characterized by:
- A. Fine outline and brilliant colours.
 - B. Bold outline and dull colours.
 - C. Fine outline and dull colours.
 - D. Bold outline and brilliant colours.

SHORT ANSWER TYPE QUESTIONS

Q.1) Write a short note on origin and development of rajasthani paintings.

Q.2) What are the main features of rajasthani paintings.

LONG ANSWER TYPE QUESTIONS

Q.1) Write an essay on rajasthani school of miniature painting.

CHAPTER 8 ENVIRONMENT AND **NATURAL RESOURCES**

HIGHLIGHTS OF THE CHAPTER

- Environmental concerns in global politics
- Role of United Nations in environmental issues-
summits, protocols, agreements signed.
- What is global commons, need to protect it.
- Common but differentiated responsibilities.(Kyoto
protocol)
- Common property resources- India's stand on
environmental issues.
- Resource geopolitics – special reference to oil and water.
- Indigenous people- their rights, problems faced by
them.

ENVIRONMENTAL CONCERNS IN GLOBAL POLITICS

- ❖ Cultivable area is reducing.
- ❖ overgrazing of the grasslands.
- ❖ No access to safe drinking water.
- ❖ No sanitation resulting into deaths of the children.
- ❖ Loss of flora and fauna.
- ❖ Depletion of ozone layer.
- ❖ increase in the coastal pollution.

ROLE OF UNITED NATIONS

- ✓ United Nations Environment Programme (UNEP) began holding international conferences and promoting detailed studies to get a more coordinated and effective response to environmental problems.
- ✓ Earth Summit/Rio Summit held in 1992 at Rio de Janeiro, attended by 170 states discussed the growing concern over environmental issues.
- ✓ Agenda 21-Rio summit produced conventions dealing with climate change, biodiversity, forestry and recommended a list of development practices called AGENDA 21

Difference between Global North and Global South

- Global North- First world or the developed nations, concerned with the depletion of ozone layer.
- Global South- Third world or the developing or underdeveloped nations. They were anxious to address the relationship between economic development and environmental management.

GLOBAL COMMONS

- Resources that are not owned by anyone like earth's atmosphere, Antarctica, the ocean floor and outer space.
- Various treaties signed to protect the global commons are- Antarctic Treaty , The 1987 Montreal Protocol, and the 1991 Antarctic Environmental Protocol.

COMMON BUT DIFFERENTIATED RESPONSIBILITIES

- ❑ The declaration at the Earth Summit in 1992 is called the principle of ‘common but differentiated responsibilities.’
- ❑ It says that ‘states shall cooperate in the spirit of global partnership to conserve, protect and restore the health and integrity of the earth’s ecosystem.’
- ❑ The UNFCCC also provided that the parties should act to protect the climate system on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.

KYOTO PROTOCOL

- An international agreement setting targets for industrialised countries to cut their greenhouse gas emissions, certain gases like Carbon dioxide, methane, hydro-flouro carbons etc. are considered at least partly - responsible for global warming.

COMMON PROPERTY RESOURCES

- The property or resources that are common to all and have to be shared, protected, looked after by all.

INDIA'S STAND ON ENVIRONMENTAL ISSUES

- Did not signed Kyoto Protocol on the grounds that its share in the environmental issues causing harm was not significant as compare to the developed nations.
- Following the principle of common but differentiated responsibilities, India is of the view that the major responsibility of curbing emission rests with the developed countries, which have accumulated emissions over a long period of time.

STEPS TAKEN BY INDIA TO ENSURE ENVIRONMENTAL UPGRADATION

- India's National Auto-fuel policy mandates cleaner fuels for vehicles.
- The energy conservation Act, passed in 2001, outlines initiatives to improve energy efficiency.
- The Electricity Act 2003 encourages the use of renewable energy.
- The efforts in encouraging the adoption of lean coal technologies show that it is making an effort.
- India is of the view that the SAARC countries should adopt a common position on major global environment issues, so that the region's voice carries greater weight.

RESOURCE GEOPOLITICS

- Deals with who gets what, when, where and how.
- There are two main resource in global politics strategy- **OIL AND WATER.**

OIL:-

- a) Portable and indispensable fuel.
- b) it generates political struggles to control it.
- c) West Asia, specifically the Gulf region, accounts for about 30 per cent of global oil production.

WATER

1. Another crucial resource relevant to global politics.
2. Increasing water scarcity of the fresh water is the reason.
3. There might be a possibility of water wars also in the coming time.
4. Countries that share water might disagree over many things.
5. For eg:- a typical disagreement is a downstream state's objection to pollution, excessive irrigation, or the construction of dams by an upstream state.
6. States have used force to protect or seize freshwater resources

INDIGENOUS PEOPLES AND THEIR RIGHTS

- Defined as population comprising of the descendants of people who inhabited the present territory of a country at the time when persons of a different culture or ethnic origin arrived there from other parts of the world and overcame them.

PROBLEMS FACED BY INDIGENOUS PEOPLES

- ❖ Not recognised by anyone.
- ❖ Loss of home, livelihood, culture.
- ❖ Economically dependant
- ❖ No recognition, no rights.
- ❖ Their issues, rights are always neglected.
- ❖ The World Council Of IP was formed in 1975.