

12th Science Lesson 2 Questions in English

2] Chemistry in everyday life

1. In which domain Vladimir Prelog won the noble prize?

- a) Nuclear chemistry
- b) Stereo chemistry**
- c) Organic chemistry
- d) Organisation of elements

Explanation

Prof. Vladimir Prelog was a Swiss Chemist who shared **1975 Nobel Prize for Chemistry with John W Cornforth for his work on Stereo Chemistry.**

2. Which of the following statement about Vladimir Prelog is correct?

- 1) He has done wide ranging research on alkaloids, antibiotics, enzymes and other natural compounds
 - 2) He was distinguished for his contribution to the development of modern stereo chemistry
 - 3) Prelog worked on problems of stereo chemistry like adamenline, boromycin analoids and rifamycins
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above**

Explanation

Prof. Vladimir Prelog has done wide ranging research on **alkaloids, antibiotics, enzymes and other natural compounds.** He was distinguished for his contribution to the development of modern stereo chemistry. **Prelog synthesized many natural products** and worked on problems of stereo chemistry like adamenline, boromycin analoids and rifamycins.

3. What does the French word drogue mean?

- a) Herb
- b) Dry herb**
- c) Dip
- d) None

Explanation

The word drug is derived from the **French word "drogue" meaning "dry herb"**. A drug is a substance that is used to modify or explore physiological systems or pathological states for the benefit of the recipient.

4. Which of the following statement about Drug is incorrect?

- 1) Drug is used for the purpose of diagnosis, prevention, cure/relief of a disease.
 - 2) The drug which interacts with macromolecular targets such as proteins to produce a therapeutic and useful biological response
- a) 1 alone

- b) 2 alone
- c) 1, 2
- d) None**

Explanation

A drug is used for the purpose of diagnosis, prevention, cure/relief of a disease. A drug which interacts with macromolecular targets such as proteins to produce a therapeutic and useful biological response is called medicine.

5. Which of the following features of ideal drug?

- 1) Non- toxic
 - 2) Bio-compatible
 - 3) Bio- degradable
 - 4) Should have no side effects
- a) 1, 2
 - b) 1, 3
 - c) 2, 3, 4
 - d) All the above**

Explanation

An ideal drug is the one which is **non-toxic, bio-compatible and bio-degradable**, and it **should not have any side effects**.

6. The specific treatment of a disease using medicine is known as_____

- a) Hormone therapy
- b) Chemotherapy**
- c) Targeted therapy
- d) Precision therapy

Explanation

The **specific treatment of a disease using medicine is known as chemotherapy**. The drug which interacts with macromolecular targets such as proteins to produce a therapeutic and useful biological response is called medicine.

7. Which of the following statement is correct?

- 1) Most of the drug molecules that are used now a days have the above properties at lower concentrations
 - 2) At higher concentrations, they have side effects and become toxic
- a) 1 alone
 - b) 2 alone
 - c) 1, 2**
 - d) None

Explanation

Generally, most of the drug molecules that are used now a days have the above properties at lower concentrations. However, at higher concentrations, they have side effects and become toxic.

8. Higher the value of therapeutic index, ___ is the drug

- a) Safer**

- b) Less-safer
- c) Not-safer
- d) None

Explanation

The medicinal value of a drug is measured in terms of its therapeutic index. Higher the value of therapeutic index, **safer is the drug**.

9. Drugs are classified based on_____

- 1) Chemical structure
 - 2) Pharmacological effect
 - 3) Target system
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Drugs are classified based on their properties such as **chemical structure, pharmacological effect, target system, site of action**, etc.

10. Which of the following medicines are classified under the group Penicillin?

- 1) Amoxicillin
 - 2) Ampicillin
 - 3) Methicillin
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

In this classification, drugs with a common chemical skeleton are classified into a single group. For example, **ampicillin, amoxicillin, methicillin**, etc. all have similar structure and are classified into a single group called penicillin.

11. Which of the following drug groups have same biological action?

- a) **Penicillin**
- b) Steroids
- c) Barbiturates
- d) All the above

Explanation

Compounds having similar chemical structure are expected to have similar chemical properties. However, their biological actions are not always similar. For example, all drugs belonging to **penicillin group have same biological action**, while groups such as barbiturates, steroids etc. have different biological action.

12. Which of the following is not Antihypertensive drug?

- a) Atenolol

- b) Metoprolol Succinate
- c) **Erythromycin**
- d) Amlodipine

Explanation

Antibiotic drugs: amoxicillin, ampicillin, cefixime, cefpodoxime, **erythromycin**, tetracycline etc.

Antihypertensive drugs: propranolol, atenolol, metoprolol succinate, amlodipine etc.

13. _____ prevents the incorporation of new amino acids to the protein

- a) Atenolol
- b) Metoprolol Succinate
- c) **Erythromycin**
- d) Streptomycin

Explanation

Streptomycin inhibits the initiation of protein synthesis, while **erythromycin prevents the incorporation of new amino acids** to the protein.

14. Which of the following statement is correct?

- 1) In all living systems, the biochemical reactions are catalysed by enzymes
 - 2) These enzyme actions are highly essential for the normal functioning of the system
 - 3) If their normal enzyme activity is inhibited, then the system may be affected
- a) **1, 2**
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

In all living systems, the biochemical reactions are catalysed by enzymes. Hence, these enzyme actions are highly essential for the normal functioning of the system. If their normal enzyme activity is inhibited, then the **system will be affected**. This principle is usually applied to kill many pathogens.

15. Which of the following statement is correct?

- 1) If we want to block a message, a drug that binds to the receptor site should inhibit its natural function.
 - 2) Such drugs are called agonists.
 - 3) Agonists are used when there is lack of chemical messenger.
- a) 1, 2
 - b) **1, 3**
 - c) 2, 3
 - d) All the above

Explanation

If we want to block a message, a drug that binds to the receptor site should inhibit its natural function. Such drugs are called antagonists. In contrast, there are drugs which mimic the natural messenger by switching on the receptor. These types of drug are called agonists and are used when there is lack of chemical messenger.

16. Which of the following have been used to treat acidity?

- 1) Aluminium hydroxide
 - 2) Calcium hydroxide
 - 3) Magnesium hydroxide
- a) 1, 2
 - b) 1, 3**
 - c) 2, 3
 - d) All the above

Explanation

To treat acidity, we have been using **weak bases such as aluminium and magnesium hydroxides**. But these can make the stomach alkaline and trigger the production of much acid.

17. Which of the following statement about Tranquilizers is correct?

- 1) They are neurologically active drugs.
 - 2) Haloperidol, clozapine are major tranquilizers
 - 3) Acts on the central nervous system by blocking the neurotransmitter dopamine in the brain
- a) 1, 2
 - b) 1, 3**
 - c) 2, 3
 - d) All the above

Explanation

Tranquilizers:

They are neurologically active drugs. Acts on the central nervous system by blocking the neurotransmitter dopamine in the brain. It is used in treatment of stress, anxiety, depression, sleep disorders and severe mental diseases like schizophrenia.

Minor tranquilizers: Diazepam (Valium), alprazolam

Major tranquilizers: Haloperidol, clozapine

18. Which of the following statement about Analgesics?

- 1) Analgesics reduce the pain without causing impairment of consciousness.
 - 2) They alleviate pain by reducing local inflammatory responses
- a) 1 alone
 - b) 2 alone
 - c) 1, 2**
 - d) None

Explanation

Analgesics **reduce the pain without causing impairment of consciousness**. They alleviate pain by reducing local inflammatory responses.

19. Which of the following is/are anti-inflammatory drug?

- a) Ibuprofen
- b) Aspirin
- c) Paracetamol

d) All the above

Explanation

Anti-inflammatory drugs:

Acetaminophen or paracetamol, Ibuprofen, Aspirin.

Antipyretics:

Example Salicylates Acetylsalicylic acid (aspirin), Acetaminophen or Paracetamol

20. Which of the following are the uses of Analgesics?

- 1) Used for short-term pain relief and for modest painlike headache
- 2) These drugs have many other effects such as reducing fever (antipyretic) and preventing platelet coagulation
- 3) Reduces fever by causing the hypothalamus to override a prostaglandin-induced increase in temperature.
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above**

Explanation

Uses of Analgesics:

- Used for short-term pain relief and for modest painlike headache, muscle strain, bruising, or arthritis
- These drugs have many other effects such as **reducing fever (antipyretic)** and preventing platelet coagulation. Due to this property, aspirin finds useful in the prevention of heart attacks
- Reduces fever by causing the hypothalamus to override a prostaglandin-induced increase in temperature.

21. Which of the following statement about Opioids is correct?

- 1) Relieve pain and produce sleep.
- 2) Used for either short term or long-term relief of severe pain.
- 3) Morphine is an example of Opioids
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above**

Explanation

Opioids (Narcotic Analgesics):

Examples: Morphine, codeine

Relieve pain and produce sleep. These drugs are addictive. In poisonous dose, these produces coma and ultimately death.

Uses:

Used for either short-term or long-term relief of severe pain. Mainly used for post-operative pain, pain of terminal cancer.

22. Which of the following statement about local anaesthetics?

- 1) It causes loss of sensation, in the area in which it is applied without losing consciousness
 - 2) They block pain perception that is transmitted via peripheral nerve fibres to the brain
 - 3) They are often used during major surgery
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Anaesthetics causes loss of sensation, in the area in which it is applied without losing consciousness. They block pain perception that is transmitted via peripheral nerve fibres to the brain. **They are often used during minor surgical procedures.**

23. Match the following

- | | |
|---------------------------------------|---------------|
| I. Ester-linked local anaesthetic | 1. Isoflurane |
| II. Amide-linked local anaesthetic | 2. Procaine |
| III. Intravenous general anaesthetics | 3. Lidocaine |
| IV. Inhalational general anaesthetics | 4. Propofol |
- a) 2, 1, 3, 4
 - b) 2, 3, 4, 1
 - c) 2, 1, 4, 3
 - d) 1, 3, 2, 4

Explanation

Local anaesthetics:

Ester-linked local anaesthetic – Procaine

Amide-linked local anaesthetic – Lidocaine

General anaesthetics:

Intravenous general anaesthetics– Propofol

Inhalational general anaesthetics – Isoflurane

24. Which of the following statement about General anaesthetics is correct?

- 1) Cause a controlled and reversible loss of consciousness by affecting central nervous system
 - 2) They are often used for major surgical procedures
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

General anaesthetics: Cause a controlled and reversible loss of consciousness by affecting central nervous system

Uses: They are often **used for major surgical procedures.**

25. Which of the following are Antacids?

- 1) Ranitidine

- 2) Milk of Magnesia
- 3) Omeprazole
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Antacids: Milk of Magnesia, Sodium bicarbonate, calcium bicarbonate, aluminium hydroxide
Ranitidine, Cimetidine, Omeprazole, rabeprazole.

26. Which of the following statement is incorrect?

- 1) Neutralize the acid in the stomach that causes acidity
- 2) They relieve symptoms such as burning sensation in the chest/ throat area
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) **None**

Explanation

Antacids: Neutralize the acid in the stomach that causes acidity.

Uses: To **relieve symptoms such as burning sensation in the chest/ throat area** (heart burns) caused by acid reflux.

27. Which of the following statement is correct?

- 1) Cetirizine, levocetirizine, desloratadine are Antihistamines
- 2) They Block histamine release from histamine-1 receptors
- 3) They are used provide relief from the allergic effects
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Antihistamines: Cetirizine, levocetirizine, desloratadine, brompheniramine Terfenadine

They Block histamine release from histamine-1 receptors.

Uses: **To provide relief from the allergic effects**

28. Which of the following statement about Beta-Lactam is correct?

- 1) Erythromycin, ampicillin are Antimicrobials
- 2) They are used to treat skin infections, dental infections, ear infections, respiratory tract infections
- 3) Inhibits bacterial cell wall biosynthesis
 - a) 1, 2
 - b) 1, 3
 - c) **2, 3**
 - d) All the above

Explanation

Beta-Lactams: Penicillin, ampicillin, cephalosporins, carbapenems, and monobactams

Inhibits bacterial cell wall biosynthesis

Used to treat skin infections, dental infections, ear infections, respiratory tract infections, pneumonia, urinary tract infections, and gonorrhoea

29. Which of the following are used to treat respiratory tract infection?

- a) **Erythromycin**
- b) Paracetamol
- c) Ampicillin
- d) All the above

Explanation

Macrolides: **Erythromycin, azithromycin**

Targets bacterial ribosomes and prevent protein production

Uses: To **treat respiratory tract infections**, genital, gastrointestinal tract and skin infections

30. Which of the following can be treated with Fluoroquinolones?

- 1) Urinary tract infections
 - 2) Skin infections
 - 3) Pulmonary infections
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Fluoroquinolones can be used to **treat urinary tract infections, skin infections**, and respiratory infections (such as sinusitis, pneumonia, bronchitis), **pulmonary infections** in cystic fibrosis.

31. Tetracyclines Inhibit the bacterial protein synthesis via interaction with the___ subunit of the bacterial ribosome

- a) **30S**
- b) 50S
- c) 60S
- d) 20S

Explanation

Tetracyclines:

Examples: Doxycycline, minocycline, oxytetracycline

Inhibit the bacterial protein synthesis via interaction with the **30S subunit of the bacterial ribosome**

32. Which of the following are examples of Antiseptics?

- a) Hydrogen peroxide
- b) Benzalkonium chloride
- c) Povidone-iodine
- d) **All the above**

Explanation

Antiseptics Stop or slow down the growth of microorganisms – Applied to living tissue. Examples **Hydrogen peroxide, povidone-iodine, benzalkonium chloride.**

33. Which of the following statement about disinfectant is incorrect?

- 1) Chlorine compounds, alcohol, Hydrogen peroxide are examples of disinfectants
- 2) Generally used on inanimate objects
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) **None**

Explanation

Disinfectants:

Examples: Chlorine compounds, alcohol, Hydrogen peroxide.

Stop or slow down the growth of microorganisms – Generally used on inanimate objects.

34. Which of the following are the advantages of food additives?

- 1) Flavouring agents enhance the aroma of the food
- 2) Addition of vitamins and minerals reduces the mall nutrient
- 3) Oxidants prevent the formation of potentially toxic oxidation products of lipids
 - a) **1, 2**
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Advantages of food additives:

- Uses of preservatives reduce the product spoilage and extend the shelf-life of food
- Addition of vitamins and minerals reduces the mall nutrient
- Flavouring agents enhance the aroma of the food
- **Antioxidants prevent the formation of potentially toxic oxidation products of lipids and other food constituents**

35. Which of the following statement is correct?

- 1) Preservatives are capable of inhibiting, retarding or arresting the process of fermentation, acidification or other decomposition of food by growth of microorganisms
- 2) Alkyl esters of hydroxy benzoic acid are very effective in more acidic conditions
- 3) Organic acids such as benzoic acid, sorbic acid and their salts are potent inhibitors of a number of fungi, yeast and bacteria
 - a) 1, 2
 - b) **1, 3**
 - c) 2, 3
 - d) All the above

Explanation

Preservatives are capable of inhibiting, retarding or arresting the process of fermentation, acidification or other decomposition of food by growth of microorganisms. Organic acids such as

benzoic acid, sorbic acid and their salts are potent inhibitors of a number of fungi, yeast and bacteria.

Alkyl esters of hydroxy benzoic acid are very effective in **less acidic conditions**.

36. _____ is used mainly as a preservative for the preparation of pickles

- a) Formic acid
- b) Citric acid
- c) Malic acid
- d) **Acetic acid**

Explanation

Acetic acid is used mainly as a **preservative for the preparation of pickles** and for preserved vegetables. Sodium meta-sulphite is used as preservatives for fresh vegetables and fruits.

37. Which of the following preservative methods can be used to preserve food?

- 1) Pasteurisation
 - 2) Freezing
 - 3) Dehydration
 - 4) Irradiation
- a) 1, 2, 4
 - b) 2, 3, 4
 - c) 1, 3, 4
 - d) **All the above**

Explanation

In addition to chemical treatment, physical methods such as heat treatment (pasteurisation and sterilisations), cold treatment (chilling and freezing) drying (dehydration) and irradiation are used to preserve food.

38. Which of the following statement is correct?

- 1) Antioxidants are substances which retard the oxidative deteriorations of food
 - 2) Food containing fats and oils is easily oxidised and turn rancid
 - 3) To prevent the oxidation of the fats and oils, chemical BHT, BHA are added as food additives.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Antioxidants are substances which retard the oxidative deteriorations of food. Food containing fats and oils is easily oxidised and turn rancid. **To prevent the oxidation of the fats and oils, chemical BHT (butyl hydroxy toluene), BHA (Butylated hydroxy anisole) are added as food additives**. They are generally called antioxidants.

39. Which of the following are sugar substituents?

- 1) Sorbitol
- 2) Sucralose
- 3) Xylitol

- a) 1, 2
- b) 1, 3**
- c) 2, 3
- d) All the above

Explanation

Those compounds that are used like sugars (glucose, sucrose) for sweetening, but are metabolised without the influence of insulin are called **sugar substituents**. e.g. **Sorbitol, Xylitol, Mannitol**.

40. Which of the following are artificial sweetening agent?

- 1) Saccharin
- 2) Aspartame
- 3) Alitame
- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) All the above**

Explanation

Synthetic compounds which imprint a sweet sensation and possess no or negligible nutritional value are called artificial sweeteners. Eg. Saccharin, Aspartame, sucralose, alitame etc...

41. Chemically soap is_____

- a) Sodium or potassium salt of higher fatty acids**
- b) Sodium or potassium salt of lower fatty acids
- c) Sodium salt of higher fatty acids
- d) Potassium salt of higher fatty acids

Explanation

Soaps and detergents are used as cleansing agents. **Chemically soap is the sodium or potassium salt of higher fatty acids**. Detergent is sodium salt of alkyl hydrogen sulphates or alkyl benzene sulphonic acids.

42. Which of the following statement is correct?

- 1) Soaps are made from animal fats or vegetable oils.
- 2) They contain glyceryl esters of long chain fatty acids
- 3) When the glycerides are heated with a solution of sodium-hydroxide they become soap and glycerol.
- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) All the above**

Explanation

Soaps are made from animal fats or vegetable oils. They contain glyceryl esters of long chain fatty acids. When the glycerides are heated with a solution of sodium-hydroxide they become soap and glycerol.

43. Which of the following statement is correct?

- 1) The quality of a soap is described in terms of total fatty matter
- 2) Lower the TFM quantity in the soap better is its quality
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The quality of a soap is described in terms of **total fatty matter (TFM value)**. It is defined as the total amount of fatty matter that can be separated from a sample after splitting with mineral acids.,

Higher the TFM quantity in the soap better is its quality.

44. Which of the following statement is correct?

- 1) As per BIS standards, Grade-1 soaps should have 76% minimum TFM
- 2) Grade 3 must have 60%, minimum TFM
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

As per BIS standards, **Grade-1 soaps should have 76% minimum TFM**, while **Grade-2 and 3** must have 70 and **60%, minimum respectively**. The other quality parameters are lather, moisture content, mushiness, insoluble matter in alcohol etc.

45. Which of the following statement is correct?

- 1) The nonpolar portion is hydrophobic while the polar end is hydrophilic
- 2) The hydrophobic hydro carbon portion is soluble in water
- 3) The hydrophilic carboxylate group is soluble in water.
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

The cleansing action of soap is directly related to the structure of carboxylate ions (palmitate ion) present in soap. The nonpolar portion is hydrophobic while the polar end is hydrophilic. The **hydrophobic hydro carbon portion is soluble in oils and greases, but not in water**. The hydrophilic carboxylate group is soluble in water.

46. Which of the following statement is correct?

- 1) Synthetic detergents are formulated products containing either sodium salts of alkyl hydrogen sulphates
- 2) There are three types of detergents
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2

d) None

Explanation

Synthetic detergents are formulated products containing either sodium salts of alkyl hydrogen sulphates or sodium salts of long chain alkyl benzene sulphonic acids. There are three types of detergents.

47. Which of the following statement is correct?

- 1) The term Polymer is derived from the Greek word 'polumeres' meaning "having many parts".
- 2) The constitution of a polymer is described in terms of its structural units called monomers
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The term Polymer is derived from the Greek word 'polumeres' meaning "having many parts". The constitution of a polymer is described in terms of its structural units called monomers.

48. Which of the following statement is incorrect?

- 1) Polymers consists of large number of monomer units derived from simple molecules
- 2) Polymers can be classified based on the source of availability, structure, molecular forces and the mode of synthesis
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Polymers consists of large number of monomer units derived from simple molecules. For example: PVC (Poly Vinyl Chloride). is a polymer which is obtained from the monomer vinyl chloride. Polymers can be classified based on the source of availability, structure, molecular forces and the mode of synthesis.

49. Which of the following statement is correct?

- 1) The process of forming a very large, high molecular mass polymer from small structural units i.e., monomer is called polymerisation
- 2) Addition polymerisation is also known as chain growth polymerisation
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The process of forming a very large, high molecular mass polymer from small structural units i.e., monomer is called polymerisation. Polymerisation occurs in the following two ways

- **Addition polymerisation or chain growth polymerisation**

- Condensation polymerisation or step growth polymerisation

50. How many mechanisms are there depending upon the reactive intermediate involved in Addition polymerisation?

- a) 2
- b) 3**
- c) 4
- d) 5

Explanation

The addition polymerisation can follow any of the **following three mechanisms** depending upon the reactive intermediate involved in the process.

- Free radical polymerisation
- Cationic polymerisation
- Anionic polymerisation

51. Which of the following statement is correct?

- 1) Condensation polymers are formed by the reaction between functional groups an adjacent monomer with the elimination of simple molecules like H_2O , NH_3
 - 2) Nylon – 6,6 can be prepared by mixing equimolar adipic acid and hexamethylene – diamine to form a nylon salt
- a) 1 alone
 - b) 2 alone
 - c) 1, 2**
 - d) None

Explanation

Condensation polymers are formed by the reaction between functional groups an adjacent monomers with the elimination of simple molecules like H_2O , NH_3 . Nylon – 6,6 can be prepared by mixing equimolar adipic acid and hexamethylene – diamine to form a nylon salt which on heating eliminate a water molecule to form amide bonds.

52. ___ is used in blending with cotton or wool fibres

- a) Teflon
- b) Bakelite
- c) Dacron**
- d) All the above

Explanation

Terylene (Dacron) is used in blending with cotton or wool fibres and as glass reinforcing materials in safety helmets.

53. Which of the following statement is correct?

- 1) Charles Good found that the rubber had become strong and elastic when he accidentally dropped a mixture of natural rubber and sulphur onto a hot stove
 - 2) This discovery led to the process that Good year called vulcanization.
- a) 1 alone
 - b) 2 alone

- c) 1, 2
- d) None

Explanation

In the year 1839, Charles Good year accidentally dropped a **mixture of natural rubber and sulphur onto a hot stove**. He was surprised to find that the rubber had become strong and elastic. This discovery led to the process that Good year called vulcanization.

54. ___ is used in the manufacture of chemical containers, conveyer belts

- a) **Neoprene**
- b) Buna-N
- c) Buna-S
- d) Bakelite

Explanation

The free radical polymerisation of the monomer, 2-chloro buta-1,3-diene(chloroprene) gives neoprene. It is used in the **manufacture of chemical containers, conveyer belts**.

55. Which of the following are Biodegradable Polymers?

- 1) Polyhydroxy butyrate
 - 2) Polyglycolic acid
 - 3) Poly (ϵ caprolactone)
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Examples of Biodegradable Polymer:

- Polyhydroxy butyrate (PHB)
- Polyhydroxy butyrate-co-A- hydroxyl valerate (PHBV)
- Polyglycolic acid (PGA), Polylactic acid (PLA)
- Poly (ϵ caprolactone) (PCL)

56. Which of the following statement is correct?

- 1) The materials that are readily decomposed by microorganisms in the environment are called biodegradable.
 - 2) Natural polymers degrade on their own after certain period of time but the synthetic polymers do not
- a) 1 alone
 - b) 2 alone
 - c) **1, 2**
 - d) None

Explanation

The materials that are readily decomposed by microorganisms in the environment are called biodegradable. Natural polymers degrade on their own after certain period of time but the synthetic polymers do not. It leads to serious environmental pollution.