

CUET UG 2023 Biology Question Paper PDF (Jun 10, 2023) (Shift 1)

Q1. Select the statements which hold true for immune system:

- A. Innate immunity or nonspecific immunity is present at the time of birth
- B. Acquired immunity is never pathogen specific
- C. Cytokine barriers are a part of innate immunity
- D. Rheumatoid arthritis is an auto-immune disease

Choose the **correct** answer from the options given below.

- (a) A, C and D only
- (b) A, B and D only
- (c) A, B and C only
- (d) B, C and D only

Q2. Match List-I with List-II:

List-I		List-II	
(A)	Brassica	(I)	Pusa Sadabahar
(B)	Okra	(II)	Pusa Komal
(C)	Cowpea	(III)	Pusa Sawani
(D)	Chilli	(IV)	Pusa Swarnim

Choose the **correct** answer from the options given below:

- (a) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
- (b) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
- (c) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
- (d) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)

Q3. *Bacillus thuringiensis* produces Bt toxin crystals it does not kill the bacterium itself as the toxin is in the _____ in bacteria.

- (a) Harmless form
- (b) Inactive form
- (c) Premature stage
- (d) Insoluble stage

Q4. Asexual reproductive structure of sponge is:

- (a) Conidia
- (b) Offset
- (c) Gemmule
- (d) Zoospore

Q5. Net primary productivity is the:

- (a) Difference between the productivity of two different ecosystems
- (b) Difference between the productivity of an area before and after succession
- (c) Rate of production of organic matter
- (d) Rate of production of organic matter after considering respiration loss

Q6. Two nucleotides linked together to form a dinucleotide through:

- (a) 3' – 5' phosphodiester linkage
- (b) 2' – 5' phosphodiester linkage
- (c) 1' – 5' phosphodiester linkage
- (d) N-glycosidic linkage

Q7. Match List-I with List-II:

List-I		List-II	
(A)	Down's Syndrome	(I)	Absence of a copy of X chromosome
(B)	Klinefelter's Syndrome	(II)	Presence of additional copy of X chromosome
(C)	Turner's Syndrome	(III)	Mutation of X chromosome
(D)	Colour blindness	(IV)	Trisomy of 21 st chromosome

Choose the **correct** answer from the options given below:

- (a) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (b) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
- (c) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (d) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

Q8. The processing of pro-insulin involves:

- (a) Attachment of C-peptide
- (b) Modification of C-peptide
- (c) Maturation of C-peptide
- (d) Removal of C-peptide

Q9. Which is the biofortified variety of wheat with high protein content?

- (a) Kalyan Sona
- (b) Sonalika
- (c) Atlas - 66
- (d) Himgiri

Q10. Which is not a type of sexually transmitted infections?

- (a) Genital warts
- (b) Cancer
- (c) Gonorrhoea
- (d) Syphilis

Q11. Arrange the following steps of sewage treatment in correct sequence:

- A. Flocs consume organic matter and reduces the BOD.
- B. Removal of floating debris and grit.
- C. Bacterial flocs allowed to sediment.
- D. Primary effluent passed into aeration tank and agitated mechanically.
- E. Effluent after secondary treatment is released into water bodies.

Choose the correct answer from the options given below:

- (a) B—D—A—C—E
- (b) B—C—A—D—E
- (c) A—D—E—B—C
- (d) A—C—D—E—B

Q12. Select the high yielding and disease resistant variety(ies) of rice from the following:

- A. *Sonalika*
- B. *Jaya*
- C. *Kalyan Sona*
- D. *Ratna*

Choose the **correct answer** from the options given below:

- (a) B only
- (b) B and D only
- (c) A and C only
- (d) A and D only

Q13. ABO blood groups are controlled by

- (a) Gene A
- (b) Gene B
- (c) Gene I
- (d) Gene O

Q14. Which of the following is not made by fermentation?

- (a) Dosa batter
- (b) Bread
- (c) Toddy
- (d) Aerated drinks

Q15. Which of the following hormone is secreted by the ovary in the later phase of pregnancy?

- (a) Lactogen
- (b) Relaxin
- (c) Human chorionic gonadotropin (hCG)
- (d) Estrogen

Q16. Choose the correct sequence of events for the process of oogenesis:

- A. The tertiary follicle changes into Graafian follicle
- B. Formation of oogonia in fetal ovary.
- C. Completion of first meiotic division by primary oocyte within the tertiary follicle.
- D. Release of secondary oocyte from the ovary

Choose the **correct answer** from the options given

below:

- (a) A, B, C, D
- (b) D, C, A, B
- (c) B, A, D, C
- (d) B, C, A, D

Q17. Human activities have accelerated rate of species extinction in the world. The major cause for it are:

- A. Habitat loss and defragmentation
- B. Habitat loss and fragmentation
- C. Over-exploitation
- D. Alien species invasions

Choose the correct answer from the options given below:

- (a) A, C and D only
- (b) A, B and C only
- (c) B, C and D only
- (d) A, B and D only

Q18. Match List-I with List-II:

List-I		List-II	
(A)	Surgical method	(I)	Saheli
(B)	Oral contraceptive	(II)	Condom
(C)	Barrier contraceptive	(III)	Sterilisation
(D)	Natural contraceptive	(IV)	Lactational amenorrhea

Choose the **correct answer** from the options given below:

- (a) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (b) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
- (c) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (d) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

Q19. Solid wastes generated from hospitals are generally disposed off by:

- (a) Recycling
- (b) Reusing
- (c) Throwing it in landfills
- (d) Using incinerators

Q20. Which of the following is not a cannabinoid?

- (a) Marijuana
- (b) Hashish
- (c) Ganja
- (d) Heroin

Q21. A double stranded DNA has 30% Of Thymine. The percentage Of Guanine in it would be:

- (a) 70%
- (b) 20%
- (c) 40%
- (d) 30%

Q22. Organs which differ in their origin and development but perform similar function are known as:

- (a) Homologous organs
- (b) Analogous organs
- (c) Vestigial organs
- (d) Atavistic organs

Q23. Match List-I with List-II:

List-I		List-II	
(A)	Agarose	(I)	Polymerase chain reaction
(B)	Thermostable DNA polymerase	(II)	Electrophoresis
(C)	Micro injection	(III)	Ampicillin resistance gene
(D)	Selectable marker	(IV)	Introduction of alien DNA in animal cell

Choose the correct answer from the options given below:

- (a) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)
 (b) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)
 (c) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
 (d) (A)-(I), (B)-(III), (C)-(II), (D)-(IV)

Q24. Select the brain capacity of *Homo erectus* from the following:

- (a) 900 cc
 (b) 800 cc
 (c) 1400 cc
 (d) 500 cc

Q25. Sickle-cell anaemia is:

- (a) Autosome linked dominant trait
 (b) Sex linked dominant trait
 (c) Sex linked recessive trait
 (d) Autosome linked recessive trait

Q26. The enzyme that can recognise the following palindromic sequence

5'-GAATTC-3'

3'-CTTAAG-5' is _____:

- (a) *Hind II*
 (b) *EcoRI*
 (c) *Hind III*
 (d) *Bam HI*

Q27. Match List-I with List-II:

List-I		List-II	
(A)	<i>Haemophilus influenzae</i>	(I)	Elephantiasis
(B)	Rhino viruses	(II)	Ringworm
(C)	<i>Wuchereria bancrofti</i>	(III)	Common cold
(D)	<i>Trichophyton</i>	(IV)	Pneumonia

Choose the correct answer from the options given below:

- (a) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
 (b) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
 (c) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
 (d) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

Q28. Pollen grains are protected from high temperature and strong acids due to the presence of:

- (a) Sporopollenin
 (b) Collagen
 (c) Pectin
 (d) Cellulose

Q29. Match List-I with List-II:

List-I		List-II	
Name of the organism		Chromosome number in a meiocyte	
(A)	Rat	(I)	38
(B)	Dog	(II)	42
(C)	Cat	(III)	1260
(D)	<i>Ophioglossum</i>	(IV)	78

Choose the correct answer from the options given below:

- (a) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

(b) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(c) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(d) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

Q30. Arrange the following stages of primary succession in water in correct sequence.

- A. Rooted submerged plants
 B. Marsh meadows
 C. Phytoplanktons
 D. Scrubs followed by trees
 E. Free floating plants

Choose the correct answer from the options given below:

- (a) A→C→B→E→D
 (b) E→D→A→C→B
 (c) D→B→A→C→E
 (d) C→A→E→B→D

Q31. Match List-I with List-II:

List-I		List-II	
(A)	Dodo	(I)	Russia
(B)	Quagga	(II)	Australia
(C)	Thylacine	(III)	Mauritius
(D)	Stellar's Sea cow	(IV)	Africa

Choose the correct answer from the options given below:

- (a) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
 (b) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
 (c) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
 (d) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

Q32. 'r' in exponential growth equation implies:

- (a) Difference between the total number of births and deaths
 (b) Extrinsic rate of natural increase
 (c) Population density
 (d) Intrinsic rate of natural increase

Q33. Arrange the following steps of Polymerase Chain Reaction in correct sequence.

- A. Annealing of Primer
 B. Denaturation of dsDNA
 C. Extension of Primer
 D. Amplification

Choose the correct answer from the options given below:

- (a) A-B-C-D

(b) B-A-C-D

(c) D-B-C-A

(d) C-A-B-D

Q34. Identify the gas which was not used by Miller's in his classic experiment:

- (a) CH₄
 (b) O₂
 (c) H₂O
 (d) NH₃

- Q35.** Identify the statements relevant to Genetically Modified (GM) crops:
- They have better pest resistance.
 - They have increased nutritional value.
 - They are more reliant on chemical fertilisers.
 - They have less post harvest losses.

Choose the correct answer from the options given below:

- A, B, and C only
 - A and B only
 - A and C only
 - A, B and D only
- Q36.** Zooplanktons species suspended their development during unfavourable conditions. This phenomenon is known as:
- Hibernation
 - Dormancy
 - Aestivation
 - Diapause

- Q37.** Identify the statements which are true with respect to Euchromatin
- Loosely packed
 - Densely packed
 - Stains light
 - Transcriptionally active

Choose the correct answer from the options given below:

- A, B and D only
 - A, C and D only
 - B and C only
 - B, C, and D only
- Q38.** Identify the floral reward offered to insects for pollination
- Pollen grains
 - Nectar
 - Fragrance
 - Safe place to lay eggs

Choose the **correct answer** from the options given below.

- A, B and D only
 - B and C only
 - C and D only
 - A and C only
- Q39.** Select the statements(s) which is/are true for

Baculoviruses:

- They belong to genus Nucleopolytetraviruses.
- They are species specific in their action.
- They have narrow spectrum insecticidal application.
- They don't have any negative impact on non-target insects.

Choose the correct answer from the options given below:

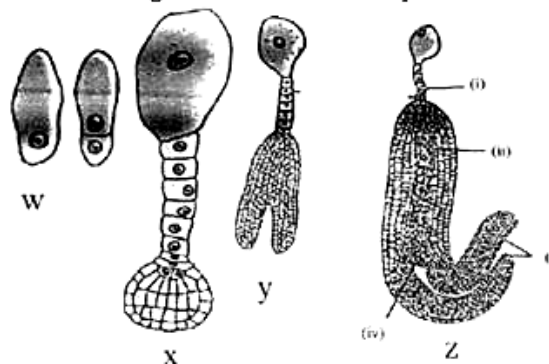
- A, B and C only

- B and C only
- B, C and D only
- D only

- Q40.** Joint Forest Management (JFM) was introduced to promote:

- Chipko Movement
- Jhum Cultivation
- Slash and burn agriculture
- Local community in protecting forests

- Q41.** Observe the figures and answer the question

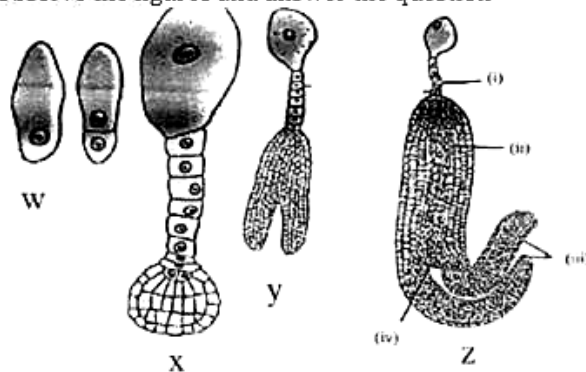


(Stages in embryo development in a dicot)

Why is it that most zygotes divide only after certain amount of endosperm is formed?

- It assures nutrition to the developing embryo.
- It assures nutrition to the developing cotyledons.
- It ensures that endosperm is completely consumed.
- It ensures that endosperm persists in the mature seed.

- Q42.** Observe the figures and answer the question



(Stages in embryo development in a dicot)

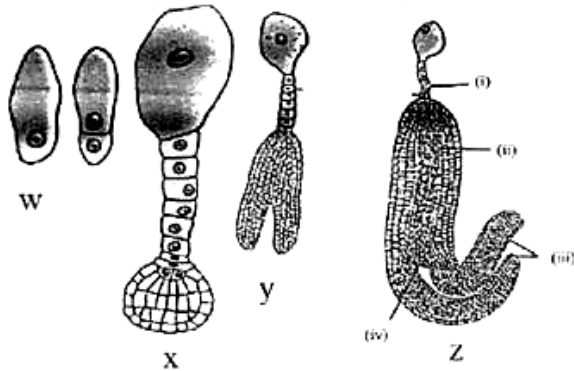
Identify the parts of the embryonal axis of a dicot embryo:

- Epicotyle
- Plumule
- Radicle
- Scutellum

Choose the correct answer from the options given below:

- (a) A, B and D only
(b) A, B and C only
(c) B, C and D only
(d) A, C and D only

Q43. Observe the figures and answer the question

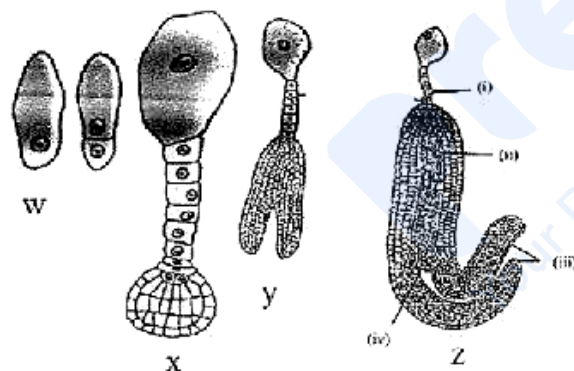


(Stages in embryo development in a dicot)

Coleoptile and Coleorrhiza in the embryo of grasses are:

- (a) Part of the embryonal axis with hypocotyl
(b) part of the embryonal axis with epicotyl
(c) Hollow foliar structure enclosing shoot apex, leaf primordia AND sheath enclosing radicle and root cap, respectively
(d) Sheath enclosing root cap and hollow foliar structure enclosing leaf primordia respectively

Q44. Observe the figures and answer the question



(Stages in embryo development in a dicot)

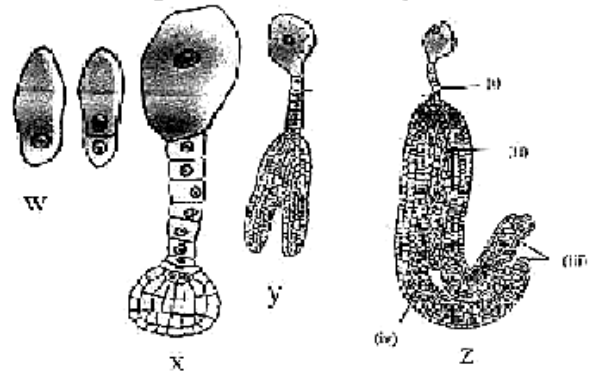
The correct sequence for parts labelled (i), (ii), (iii) and (iv) in the figure is:

- A. Plumule
B. Suspensor
C. Cotyledons
D. Radicle

Choose the correct answer from the options given below:

- (a) A, B, D, C
(b) B, C, A, D
(c) A, D, B, C
(d) B, D, C, A

Q45. Observe the figures and answer the question



(Stages in embryo development in a dicot)

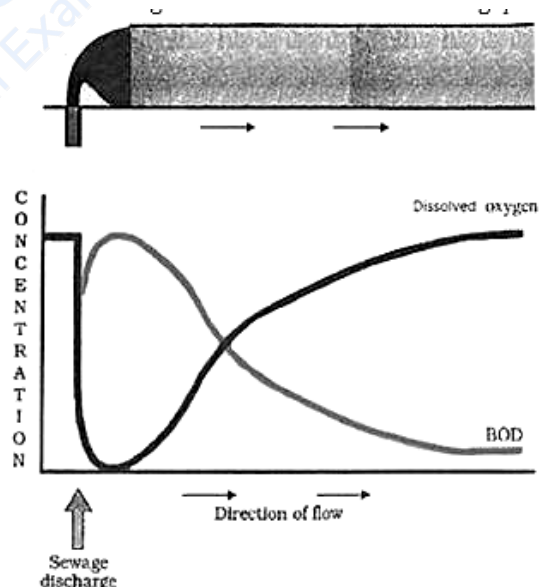
Match List-I with List-II:

List-I		List-II	
(A)	Globular embryo	(I)	W
(B)	Mature embryo	(II)	Y
(C)	Zygote	(III)	Z
(D)	Heart-shaped embryo	(IV)	X

Choose the **correct** answer from the options given below:

- (a) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
(b) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
(c) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)
(d) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

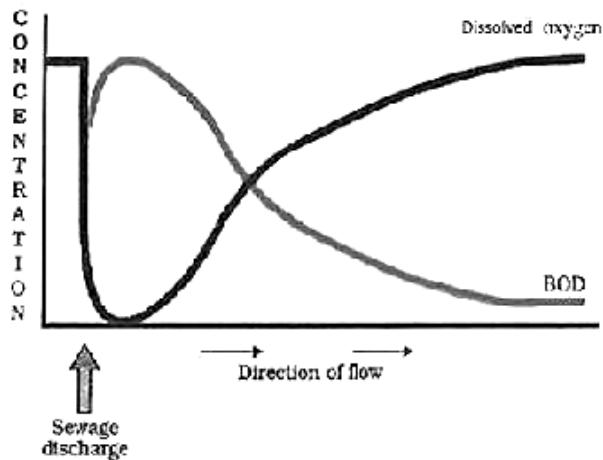
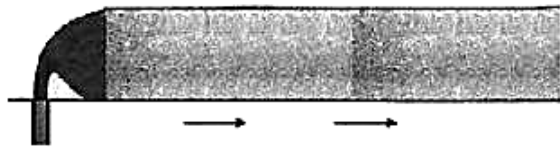
Q46. Observe the figures and answer the following question



Domestic sewage primarily contains:

- (a) Inorganic matter
(b) Organic matter
(c) Heavy- metals
(d) Electronic wastes

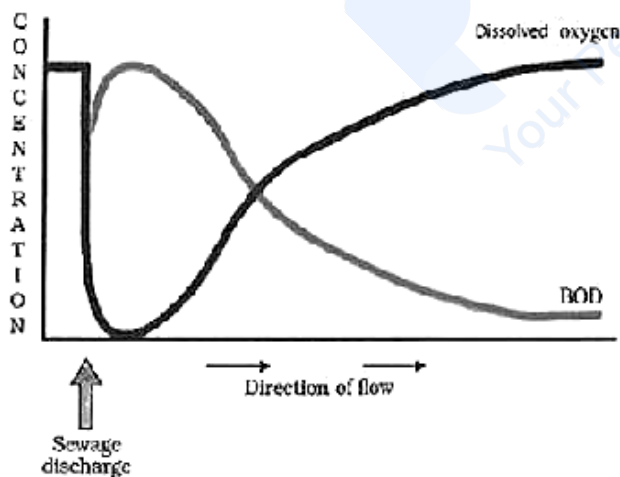
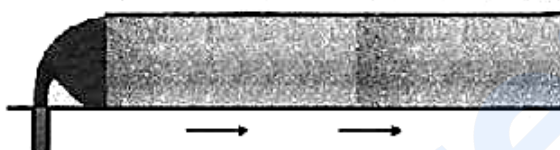
Q47. Observe the figures and answer the following question



Indirectly, BOD is a measure of:

- (a) Inorganic matter present in water
- (b) Carbon dioxide in water
- (c) Organic matter present in water
- (d) Sand in water

Q48. Observe the figures and answer the following question

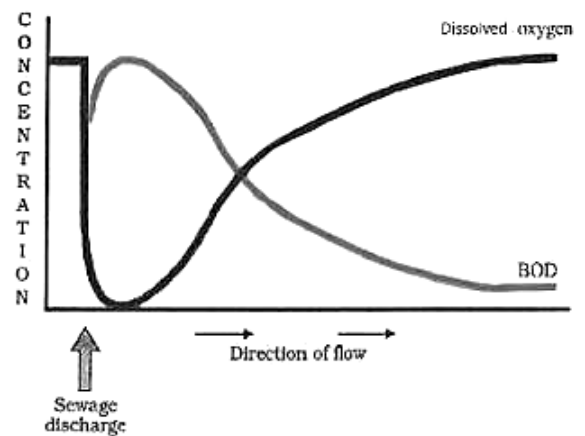
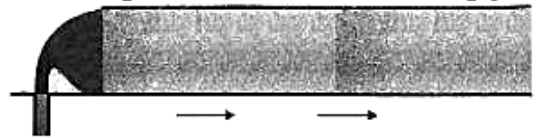


BOD of water decreases significantly and the clean water organisms appears, in the water because

- (a) Microorganism have consumed all inorganic matter present in water
- (b) Microorganisms have consumed most of the biodegradable organic matter present in Water
- (c) Dissolved Oxygen is totally consumed

(d) Level of Carbon dioxide is significantly increased

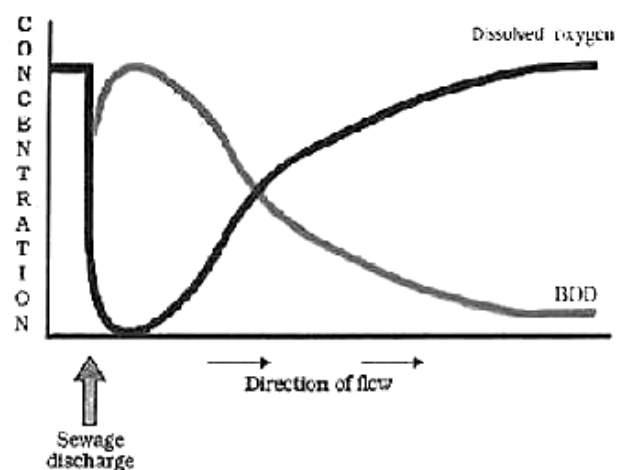
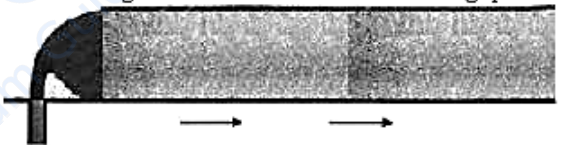
Q49. Observe the figures and answer the following question



At the point of sewage discharge, the mortality of fish and Other aquatic creatures increases because:

- (a) Dissolved oxygen becomes low
- (b) Dissolved oxygen become high
- (c) Dissolved Carbon dioxide becomes low
- (d) Dissolved Nitrogen concentration becomes high

Q50. Observe the figures and answer the following question



The pollutants present in sewage which are relatively easy to remove are:

- (a) Dissolved salts
- (b) Metal ions
- (c) Dissolved organic compounds
- (d) Floating debris