

Based on Latest

NCERT | NEET Syllabus &
NTA Guidelines



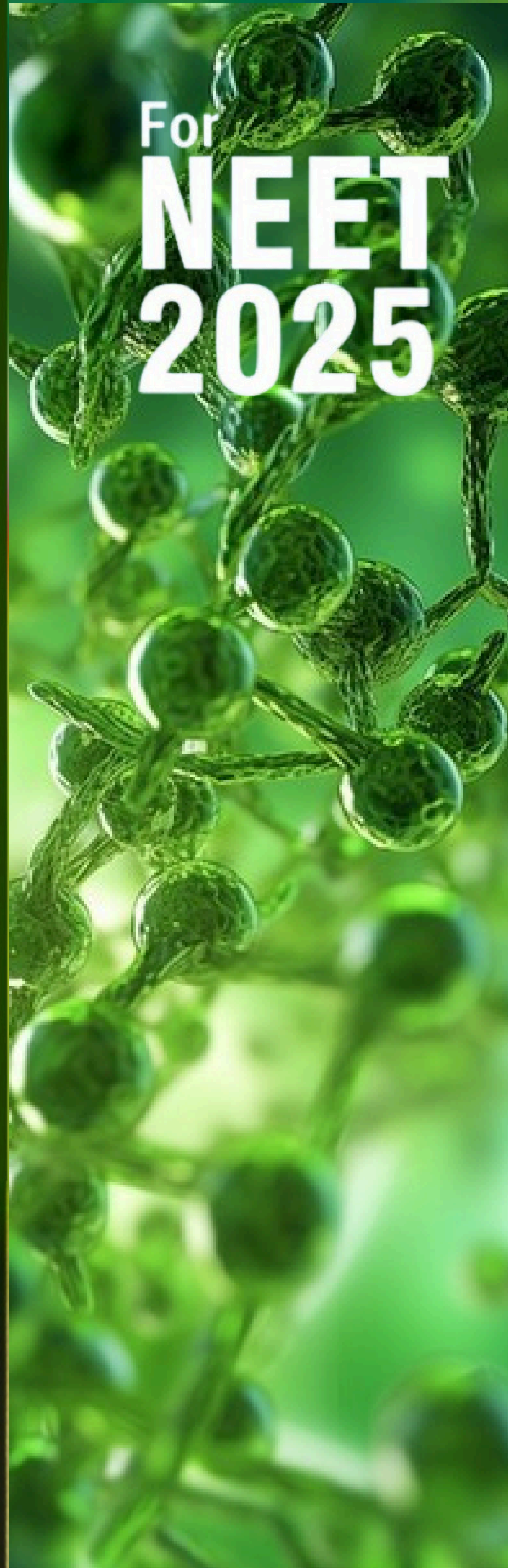
For
NEET
2025

Topic
&
Chapter **Wise**

Classroom Discussion

NEET
BIOLOGY

CLASS XI & XII



CLASSROOM DISCUSSION CHAPTERWISE CB09 - BIOLOGY				
Scoring Grid	Total Questions	45	Total Marks	180
	Attempted		Correct	
	Incorrect		Net Score	
	Cut-off Score	45	Qualifying Score	60
	Success Gap = Net Score – Qualifying Score			
	Net Score = (Correct × 4) – (Incorrect × 1)			

Contents

Class
XI

1. The Living World
2. Biological Classification
3. Plant Kingdom
4. Animal Kingdom
5. Morphology of Flowering Plants
6. Anatomy of Flowering Plants
7. Structural Organisation in Animals
8. Cell-The Unit of Life
9. Biomolecules
10. Cell Cycle and Cell Division
11. Photosynthesis in Higher Plants
12. Respiration in Plants
13. Plant Growth and Development
14. Breathing and Exchange of Gases
15. Body Fluids and Circulation
16. Excretory Products and Their Elimination
17. Locomotion and Movement
18. Neural Control and Coordination
19. Chemical Coordination and Integration

Contents

Class
XII

1. Sexual Reproduction in Flowering Plants
2. Human Reproduction
3. Reproductive Health
4. Principles of Inheritance and Variation
5. Molecular Basis of Inheritance
6. Evolution
7. Human Health and Diseases
8. Microbes in Human Welfare
9. Biotechnology: Principles and Processes
10. Biotechnology and Its Applications
11. Organisms and Populations
12. Ecosystem
13. Biodiversity and Conservation

Classroom Discussion

Chapter-wise Sheets

Date :

Start Time :

End Time :

BIOLOGY

(CB09)

SYLLABUS : Biomolecules

Max. Marks : 180

Marking Scheme : + 4 for correct & (-1) for incorrect

Time : 60 min.

INSTRUCTIONS : This Daily Practice Problem Sheet contains 45 MCQs. For each question only one option is correct. Darken the correct circle/ bubble in the Response Grid provided on each page.

- A nucleotide is formed of
 - Purine, pyrimidine and phosphate
 - Purine, sugar and phosphate
 - Nitrogen base, sugar and phosphate
 - Pyrimidine, sugar and phosphate
- Glycogen is a polymer of
 - galactose
 - glucose
 - fructose
 - sucrose
- Most abundant organic compound on earth is
 - Protein
 - Cellulose
 - Lipids
 - Steroids
- Protein synthesis in a cell takes place
 - only in the cytoplasm
 - in the nucleolus as well as in cytoplasm
 - in cytoplasm as well as in mitochondria
 - only on ribosomes attached to the nuclear envelope
- In RNA, thymine is replaced by
 - Adenine
 - Guanine
 - Cytosine
 - Uracil
- Which of the following is a reducing sugar?
 - Galactose
 - Gluconic acid
 - β -methyl galactoside
 - Sucrose
- An enzyme that can stimulate germination of barley seeds is
 - lipase
 - protease
 - invertase
 - α -amylase
- Carrier ions like Na^+ facilitate the absorption of substances like:
 - amino acids and glucose
 - glucose and fatty acids
 - fatty acids and glycerol
 - fructose and some amino acids

RESPONSE
GRID

1. (a)(b)(c)(d) 2. (a)(b)(c)(d) 3. (a)(b)(c)(d) 4. (a)(b)(c)(d) 5. (a)(b)(c)(d)
6. (a)(b)(c)(d) 7. (a)(b)(c)(d) 8. (a)(b)(c)(d)

Space for Rough Work

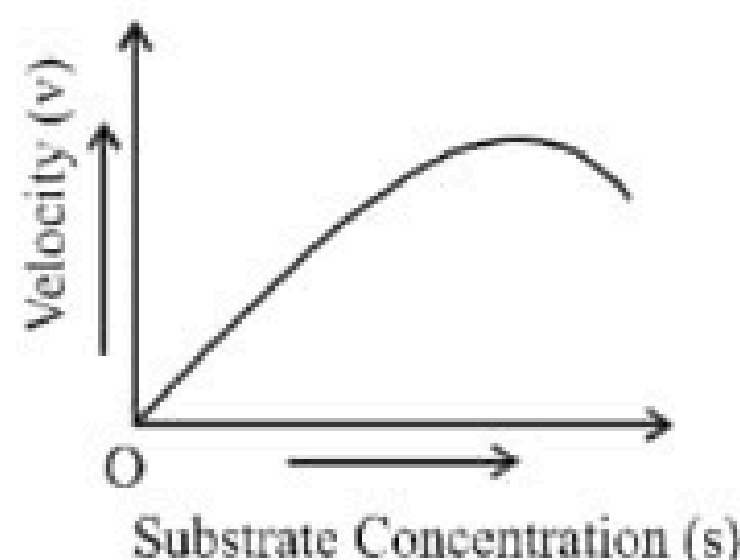
9. An enzyme brings about
 (a) decrease in reaction time
 (b) increase in reaction time
 (c) increase in activation energy
 (d) reduction in activation energy
10. The enzymes hexokinase which catalyses glucose to glucose-6-phosphate in glycolysis is inhibited by glucose-6-phosphate. This is an example of
 (a) competitive inhibition
 (b) non-competitive inhibition
 (c) feedback allosteric inhibition
 (d) positive feedback
11. The enormous diversity of protein molecules is due mainly to the diversity of
 (a) amino groups on the amino acids
 (b) R groups on the amino acids
 (c) amino acid sequences within the protein molecule
 (d) peptide bonds
12. Length of one turn of the helix in a B-form DNA is approximately
 (a) 3.4 nm (b) 2 nm
 (c) 0.34 nm (d) 20 nm
13. The catalytic efficiency of two different enzymes can be compared by the
 (a) formation of the product
 (b) pH optimum value
 (c) K_m value
 (d) molecular size of the enzyme
14. Which of the following sets contains polysaccharides?
 (a) Glucose, fructose, lactose
 (b) Starch, glycogen, cellulose
 (c) Sucrose, maltose, cellulose
 (d) Galactose, starch, sucrose
15. Sigmoid growth curve is represented by
 (a) $dN/dt = rN$
 (b) $dN/dt = rN(1 - N/K)$
 (c) $N_t = N_0 + B + I - D - E$
 (d) $dN/dt = 1 - N/K$
16. A coenzyme is
 (a) Same enzyme that occurs in different tissues such as heart and muscle
 (b) One that shares the function of other enzyme
 (c) Organic or inorganic in nature and helps activate metabolic enzymes
 (d) Organic non-protein in nature and helps to activate metabolic enzymes
17. The most basic amino acid is
 (a) Arginine (b) Histidine
 (c) Glycine (d) Glutamine
18. Which of the following is not an aromatic amino acid?
 (a) Valine (b) Tyrosine
 (c) Phenylalanine (d) Tryptophan
19. The class of enzymes that catalyze the removal of a group from a substrate without addition of water, leaving double bonds, is
 (a) Transferases (b) Dehydrogenases
 (c) Hydrolases (d) Lyases
20. Which of the following is a component of vitamin (thiamine, biotin), Acetyl CoA, cysteine, methionine and ferredoxin?
 (a) Fe (b) S
 (c) Co (d) K
21. The helical structure of protein is stabilized by
 (a) Ester (b) Peptide bonds
 (c) Disulphide bonds (d) Hydrogen bonds
22. Cellulose is a polymer of
 (a) α -glucose (b) α -D-glucose
 (c) β -D-glucose (d) β -L-glucose

RESPONSE
GRID

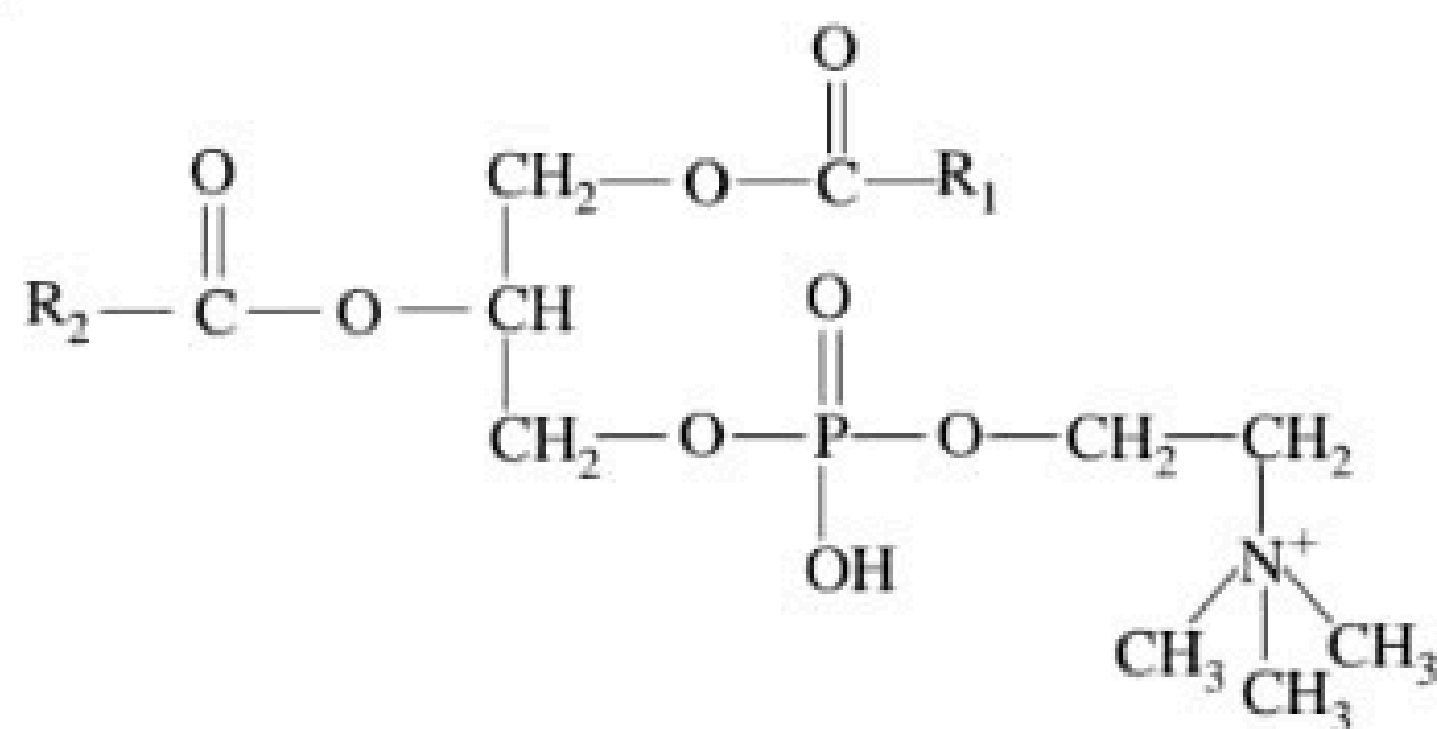
- | | | | | |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| 9. (a) (b) (c) (d) | 10. (a) (b) (c) (d) | 11. (a) (b) (c) (d) | 12. (a) (b) (c) (d) | 13. (a) (b) (c) (d) |
| 14. (a) (b) (c) (d) | 15. (a) (b) (c) (d) | 16. (a) (b) (c) (d) | 17. (a) (b) (c) (d) | 18. (a) (b) (c) (d) |
| 19. (a) (b) (c) (d) | 20. (a) (b) (c) (d) | 21. (a) (b) (c) (d) | 22. (a) (b) (c) (d) | |

Space for Rough Work

23. The given graph shows the effect of substrate concentration on the rate of reaction of the enzyme green -gram - phosphatase. What does the graph indicate ?



- (a) The rate of enzyme reaction is directly proportional to the substrate concentration
 (b) Presence of an enzyme inhibitor in the reaction mixture
 (c) Formation of an enzyme-substrate complex
 (d) At higher substrate-concentration the pH increases.
24. The K_m value of the enzyme is the value of the substrate concentration at which the reaction reaches to
 (a) Zero (b) $2V_{max}$
 (c) $\frac{1}{2}V_{max}$ (d) $\frac{1}{4}V_{max}$
25. Which group contains biocatalysts?
 (a) Myosin, oxytocin, adrenalin
 (b) Peptidase, amylase, rennin
 (c) Glucose, amino acids, fatty acids
 (d) Rhodopsin, pepsin, steapsin
- 26.



Given structural formula is correctly identified alongwith its related function by which of the following options?

- (a) Cholesterol – A component of animal cell membrane
 (b) Lecithin – A component of cell membrane
 (c) Triglyceride – An energy source
 (d) Adenosine – A component of nucleic acids
27. Select the option that correctly identifies the chemical bonds present in the given biomolecules.
 Polysaccharides – A, Proteins – B, Fats – C, Water – D
- | | A | B | C | D |
|-----|------------|---------|------------|------------|
| (a) | Ester | Peptide | Glycosidic | Hydrogen |
| (b) | Glycosidic | Peptide | Ester | Hydrogen |
| (c) | Glycosidic | Peptide | Hydrogen | Ester |
| (d) | Hydrogen | Ester | Peptide | Glycosidic |
28. Which of the following statements is not correct regarding chitin?
 (a) It is a storage polysaccharide
 (b) It is a homopolysaccharide
 (c) It is a constituent of arthropod exoskeleton and fungal cell wall
 (d) It is the second most abundant carbohydrate on earth
29. Which of the following secondary metabolites are used as drugs?
 (a) Abrin and ricin
 (b) Vinblastin and curcumin
 (c) Anthocyanins
 (d) Gums and cellulose
30. Enzymes that catalyse removal of groups from substrates by mechanisms other than hydrolysis, and addition of groups to double bonds, are called
 (a) ligases (b) lyases
 (c) hydrolases (d) dehydrogenases
31. Which of the following statement is incorrect w.r.t. starch?
 (a) Starch consists of unbranched amylose and branched amylopectin
 (b) It is a polymer of α -D-glucose
 (c) Successive glucose units are linked together by α 1 \rightarrow 6 linkage and at branching α 1 \rightarrow 4 linkage is found
 (d) Starch turns black with iodine

RESPONSE
GRID

23. (a) (b) (c) (d) 24. (a) (b) (c) (d) 25. (a) (b) (c) (d) 26. (a) (b) (c) (d) 27. (a) (b) (c) (d)
 28. (a) (b) (c) (d) 29. (a) (b) (c) (d) 30. (a) (b) (c) (d) 31. (a) (b) (c) (d)

Space for Rough Work

32. Cellulose differs from chitin in
 (a) Branching
 (b) Type of glycosidic bond
 (c) Type of monomer unit
 (d) Abundancy in biosphere
33. Oils are rich in
 (a) Glycerol that possesses three hydroxyl groups
 (b) Saturated fatty acids
 (c) Fats that are generally liquid at room temperature
 (d) Esters of fatty acids
34. Bonds that do not exist in tertiary structure of proteins
 (a) Covalent bonds
 (b) Phosphodiester bonds
 (c) Hydrophobic interactions
 (d) Ionic bonds
35. Cleavage of specific covalent bonds and removal of groups without hydrolysis is the property of
 (a) Isomerases (b) Lyases
 (c) Hydrolases (d) Transferases
36. The catalytic efficiency of two different enzymes can be compared by the
 (a) K_m value
 (b) pH value
 (c) Formation of the product
 (d) Molecular size of the enzyme
37. Which of the following is an example of isozyme?
 (a) α -Amylase
 (b) Glucokinase
 (c) Lactate dehydrogenase
 (d) All of these
38. Essential amino acids include
 (a) leucine (b) valine
 (c) tryptophan (d) all of these
39. Acidic amino acids have two $-\text{COOH}$ groups and one $-\text{NH}_2$ group per molecule. Select the pair that consists of acidic amino acids.
 (a) Aspartic acid, glutamic acid
 (b) Lysine, arginine
 (c) Glycine, alanine
 (d) Both (a) and (b)
40. The structure of glucose and galactose are same except with regard to
 (a) First carbon atom
 (b) Second carbon atom
 (c) Third carbon atom
 (d) Fourth carbon atom
41. All the following statements are true with regard to glucose, except :
 (a) It is an aldohexose
 (b) It is a reducing sugar
 (c) It is present in starch and cellulose
 (d) It is an epimer of fructose
42. Guanylic acid is a
 (a) Nucleoside of purine
 (b) Nucleoside of pyrimidine
 (c) Nucleotide of purine
 (d) Nucleotide of pyrimidine
43. Long chain molecules of fatty acids are formed by
 (a) Polymerisation of 2 carbon compounds
 (b) Decomposition of fats
 (c) Polymerisation of glycogen
 (d) Conversion of glycogen
44. Read the following four statements (A to D) and mark the option that has both correct statements
 A. Blood conc. of glucose in a normal healthy man is 4.5 to 5.0 mM
 B. In proteins only left handed helices are observed
 C. The pitch of B- DNA is 3.4 Angstrom
 D. At each step of ascent the strand of DNA turns 36 degree
 (a) A, B (b) B, C (c) C, D (d) A, D
45. Which one of the following biomolecules is correctly characterized?
 (a) Lecithin - A phosphorylated glyceride found in cell membrane.
 (b) Palmitic acid - An unsaturated fatty acid with 18 carbon atoms.
 (c) Adenylic acid - Adenosine with a glucose phosphate molecule.
 (d) Alanine amino acid - Contains an amino group and an acidic group anywhere in the molecule.

RESPONSE GRID

32. (a) (b) (c) (d)	33. (a) (b) (c) (d)	34. (a) (b) (c) (d)	35. (a) (b) (c) (d)	36. (a) (b) (c) (d)
37. (a) (b) (c) (d)	38. (a) (b) (c) (d)	39. (a) (b) (c) (d)	40. (a) (b) (c) (d)	41. (a) (b) (c) (d)
42. (a) (b) (c) (d)	43. (a) (b) (c) (d)	44. (a) (b) (c) (d)	45. (a) (b) (c) (d)	

Space for Rough Work