45 DAYS MOST WANTED for NEET

Biology

EFFORT

RESULT

80% QUESTIONS COME FROM 20% TOPICS

DAY 1 TO DAY 45 | FOCUS DIVISION

- 40% Rapid Revision
- 30% Solve NEET Replica
- 20% Handpicked PYQs
- 10% Solve Sample Papers

CONSISTS OF NEWLY ADDED CHAPTERS & TOPICS AS PER LATEST NMC SYLLABUS

Content

45 Days Preparation plan

Days	Chapter Name	Revision Plan	Expected No. of MCQs	Preparation %
Day-1	The Living World	Revise Theory Solve Questions	0-1	2%
Day-2	Biological Classification	Revise Theory Solve Questions	2-3	4%
Day-3	Plant Kingdom	Revise Theory Solve Questions	2-3	6%
Day-4	Animal Kingdom	Revise Theory	3-4	10%
Day-5		Solve Questions		
Day-6	Morphology of Flowering Plants	Revise Theory	3-4	14%
Day-7		Solve Questions		
Day-8	Anatomy of Flowering Plants	Revise Theory Solve Questions	3-4	16%
Day-9	Structural Organisation in Animals	Revise Theory Solve Questions	3-4	18%
Day-10	Cell : The Unit of Life	Revise Theory	2-3	22%
Day-11		Solve Questions		
Day-12	Biomolecules	Revise Theory Solve Questions	3-4	24%
Day-13	Cell Cycle and Cell Division	Revise Theory Solve Questions	4-5	26%
Day-14	Revise Class-XI Chapter-1 to 10			30%
Day-15	Photosynthesis in Higher Plants	Revise Theory Solve Questions	2-3	32%
Day-16	Respiration in Plants	Revise Theory Solve Questions	1-2	34%
Day-17	Plant Growth and Development	Revise Theory Solve Questions	2-3	36%
Day-18	Breathing and Exchange of Gases	Revise Theory Solve Questions	1-2	38%
Day-19	Body Fluids and Circulation	Revise Theory Solve Questions	2-3	40%
Day-20	Excretory Products and Their Elimination	Revise Theory Solve Questions	1-2	42%
Day-21	Locomotion and Movement	Revise Theory Solve Questions	1-2	44%
Day-22	Neural Control and Coordination	Revise Theory Solve Questions	1-2	46%
Day-23	Chemical Coordination and Integration	Revise Theory Solve Questions	2-3	48%
Day-24	Revise Class-XI Chapter-11 to 19			50%

2024

NEET SOLVED PAPER

BOTANY-SECTION-A

Biological Classification

(Kingdom Fungi)

1. Which one of the following is not a criterion for classification of fungi?

a. Mode of spore formation
b. Fruiting body
c. Morphology of mycelium
d. Mode of nutrition

2. Match List-I with List-II.

List-I		List-II	
(A)	*Rhizopus*	(I)	Mushroom
(B)	*Ustilago*	(II)	Smut fungus
(C)	*Puccinia*	(III)	Bread mould
(D)	*Agaricus*	(IV)	Rust fungus

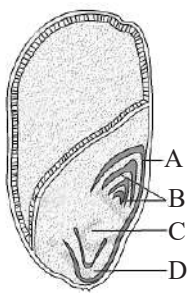
Choose the correct answer from the options given below:

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

Morphology of Flowering Plants

(The Seed)

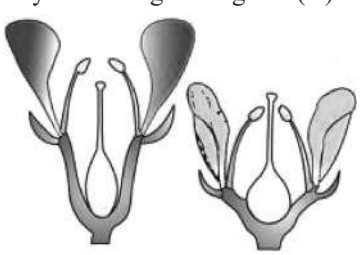
3. Identify the part of the seed from the given figure which is destined to form root when the seed germinates.



a. C
b. D
c. A
d. B

(The Flower)

4. Identify the type of flowers based on the position of calyx, corolla and androecium with respect to the ovary from the given figures (A) and (B).



(A) (B)

a. (A) Perigynous; (B) Epigynous
b. (A) Perigynous; (B) Perigynous
c. (A) Epigynous; (B) Hypogynous
d. (A) Hypogynous; (B) Epigynous

5. Which of the following is an example of actinomorphic flower?

a. *Pisum*
b. *Sesbania*
c. *Datura*
d. *Cassia*

Anatomy of Flowering Plants

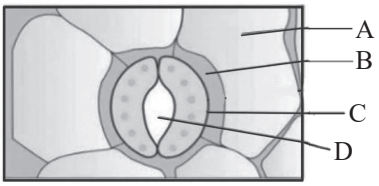
(Anatomy of Dicot & Monocot Plants)

6. Bulliform cells are responsible for

a. Increased photosynthesis in monocots.
b. Providing large spaces for storage of sugars.
c. Inward curling of leaves in monocots.
d. Protecting the plant from salt stress.

(Tissue System)

7. In the given figure, which component has thin outer walls and highly thickened inner walls?



a. A
b. B
c. C
d. D

(Permanent Tissues)

8. Given below are two statements:

Statement I: Parenchyma is living but collenchyma is dead tissue.

Statement II: Gymnosperms lack xylem vessels but presence of xylem vessels is the characteristic of angiosperms.

In the light of the above statements, choose the correct answer from the options given below:

a. Statement I is true put Statement II is false
b. Statement I is false but Statement II is true
c. Both Statement I and Statement II are true
d. Both Statement I and Statement II are false

Cell The Unit of Life

(Nucleus and Microbodies)

9. Match List-I with List-II.

List-I		List-II	
(A)	Nucleolus	(I)	Site of formation of glycolipid
(B)	Centriole	(II)	Organization like the cartwheel
(C)	Leucoplasts	(III)	Site for active ribosomal RNA synthesis
(D)	Golgi apparatus	(IV)	For storing nutrients

Choose the correct answer from the options given below:

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

Biomolecules

(Enzymes)

10. Inhibition of Succinic dehydrogenase enzyme by malonate is a classical example of:

a. Competitive inhibition
b. Enzyme activation
c. Cofactor inhibition
d. Feedback inhibition

11. The cofactor of the enzyme carboxypeptidase is

a. Flavin
b. Haem
c. Zinc
d. Niacin

(Analysis of Chemical Composition)

12. Lecithin, a small molecular weight organic compound found in living tissues, is an example of:

a. Glycerides
b. Carbohydrates
c. Amino acids
d. Phospholipids

Cell Cycle and Cell Division

(Mitosis)

13. Spindle fibers attach to kinetochores of chromosomes during

a. Anaphase
b. Telophase
c. Prophase
d. Metaphase

(Meiosis)

14. Given below are two statements:

Statement I: Chromosomes become gradually visible under light microscope during leptotene stage.

Statement II: The beginning of diplotene stage is recognized by dissolution of synaptonemal complex.

In the light of the above statements, choose the correct answer from the options given below:

a. Statement I is true but Statement II is false
b. Statement I is false but Statement II is true
c. Both Statement I and Statement II are true
d. Both Statement I and Statement II are false

Photosynthesis in Higher Plants

(Where are ATP & NADPH Used?)

15. Which of the following are required for the dark reaction of photosynthesis?

A. Light
B. Chlorophyll
C. CO_2
D. ATP
E. NADPH

Choose the correct answer from the options given below:

a. C, D and E only
b. D and E only
c. A, B and C only
d. B, C and D only

16. How many molecules of ATP and NADPH are required for every molecule of CO_2 fixed in the Calvin cycle?

a. 3 molecules of ATP and 3 molecules of NADPH
b. 3 molecules of ATP and 2 molecules of NADPH
c. 2 molecules of ATP and 3 molecules of NADPH
d. 2 molecules of ATP and 2 molecules of NADPH

Plant Growth and Development

(Differentiation, Dedifferentiation, Redifferentiation and Development)

17. Formation of interfascicular cambium from fully developed parenchyma cells is an example for

a. Dedifferentiation
b. Maturation
c. Differentiation
d. Redifferentiation

(Plant Growth Regulators)

18. Auxin is used by gardeners to prepare weed free lawns. But no damage is caused to grass as auxin

a. does not affect mature monocotyledonous plants.
b. can help in cell division in grasses, to produce growth.
c. promotes apical dominance.
d. promotes abscission of mature leaves only.

Sexual Reproduction in Flowering Plants

(Flowering and Pre-fertilisation)

19. Identify the set of correct statements:

A. The flowers of *Vallisneria* are colourful and produce nectar.
B. The flowers of waterlily are not pollinated by water.
C. In most of water-pollinated species, the pollen grains are protected from wetting.
D. Pollen grains of some hydrophytes are long and ribbon like.
E. In some hydrophytes, the pollen grains are carried passively inside water.

Choose the correct answer from the options given below:

a. A, C, D and E only
b. B, C, D and E only
c. C, D and E only
d. A, B, C and D only

Principles of Inheritance and Variation

(Mendel's Laws of Inheritance and Inheritance of One Gene)

20. In a plant, black seed color (BB/Bb) is dominant over white seed color (bb). In order to find out the genotype of the black seed plant, with which of the following genotype will you cross it?

a. Bb
b. BB/Bb
c. BB
d. bb

21. A pink flowered Snapdragon plant was crossed with a red flowered Snapdragon plant. What type of phenotype/s is/are expected in the progeny?

a. Only pink flowered plants
b. Red, Pink as well as white flowered plants
c. Only red flowered plants
d. Red flowered as well as pink flowered plants

22. Match List-I with List-II.

List-I		List-II	
(A)	Two or more alternative forms of a gene	(I)	Back cross
(B)	Cross of F_1 progeny with homozygous recessive parent	(II)	Ploidy
(C)	Cross of F_1 progeny with any of the parents	(III)	Allele
(D)	Number of chromosome sets in plant	(IV)	Test cross

Choose the correct answer from the options given below:

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

23. Which one of the following can be explained on the basis of Mendel's Law of Dominance?

A. Out of one pair of factors one is dominant and the other is recessive.
B. Alleles do not show any expression and both the characters appears as such in F_2 generation.
C. Factors occur in pairs in normal diploid plants.
D. The discrete unit controlling a particular character is called factor.
E. The expression of only one of the parental characters is found in a monohybrid cross.

Choose the correct answer from the options given below:

a. B, C and D only
b. A, B, C, D and E
c. A, B and C only
d. A, C, D and E only

Molecular Basis of Inheritance

(Transcription)

24. A transcription unit in DNA is defined primarily by the three regions in DNA and these are with respect to upstream and down stream end;

a. Inducer, Repressor, Structural gene
b. Promotor, Structural gene, Terminator
c. Repressor, Operator gene, Structural gene
d. Structural gene, Transposons, Operator gene

(Regulation of Gene Expression)

25. The lactose present in the growth medium of bacteria is transported to the cell by the action of

a. Permease
b. Polymerase
c. Beta-galactosidase
d. Acetylase

Microbes in Human Welfare

(Microbes in Household & Industrial Products)

26. Match List-I with List-II.

List-I		List-II	
(A)	*Clostridium butylicum*	(I)	Ethanol
(B)	*Saccharomyces cerevisae*	(II)	Streptokinase
(C)	*Trichoderma polysporum*	(III)	Butyric acid
(D)	*Streptococcus* sp.	(IV)	Cyclosporin-A

Choose the correct answer from the options given below:

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

Biotechnology : Principles and Processes

(Tools of Recombinant DNA Technology)

27. *Hin*d II always cuts DNA molecules at a particular point called recognition sequence and it consists of:

a. 4 bp
b. 10 bp
c. 8 bp
d. 6 bp

(Principles of Biotechnology)

28. What is the fate of a piece of DNA carrying a gene of interest which is transferred into an alien organism?

A. The piece of DNA would be able to multiply, itself independently in the progeny cells of the organism.
B. It may get integrated into the genome of recipient.
C. It may multiply and be inherited along with the host DNA.

D. The alien piece of DNA is not an integral part of chromosome.

E. It shows ability to replicate.

Choose the correct answer from the options given below:

a. B and C only

b. A and E only

c. A and B only

d. D and E only

Biotechnology and Its Applications

(Biotechnological Applications in Agriculture)

29. The capacity to generate a whole plant from any cell of the plant is called:

a. Differentiation

b. Somatic hybridization

c. Totipotency

d. Micropropagation

30. Given below are two statements:

Statement I: Bt toxins are insect group specific and coded by a gene *cry IAc*.

Statement II: Bt toxin exists as inactive protoxin in *B. thuringiensis*. However, after ingestion by the insect the inactive protoxin gets converted into active form due to acidic pH of the insect gut.

In the light of the above statements, choose the correct answer from the options given below:

a. Statement I is true but Statement II is false

b. Statement I is false but Statement II is true

c. Both Statement I and statement II arc true

d. Both Statement I and Statement II are false

Organisms and Populations

(Population Attributes, Population Growth and Life History Variation)

31. The equation of Verhulst-Pearl logistic growth is

$$\frac{dN}{dt} = rN\left[\frac{K-N}{K}\right].$$

From this equation, K indicates:

a. Carrying capacity

b. Population density

c. Intrinsic rate of natural increase

d. Biotic potential

Biodiversity and Conservation

(Biodiversity Conservation)

32. The type of conservation in which the threatened species are taken out from their natural habitat and placed in special setting where they can be protected and given special care is called;

a. Semi-conservative method

b. Sustainable development

c. *in-situ* conservation

d. Biodiversity conservation

(Biodiversity & Patterns of Biodiversity)

33. Tropical regions show greatest level of species richness because

A. Tropical latitudes have remained relatively undisturbed for millions of years, hence more time was available for species diversification.

B. Tropical environments are more seasonal.

C. More solar energy is available in tropics.

D. Constant environments promote niche specialization.

E. Tropical environments are constant and predictable.

Choose the correct answer from the options given below:

a. A, B and E only

b. A, B and D only

c. A, C, D and E only

d. A and B only

(Importance & Loss of Biodiversity)

34. These are regarded as major causes of biodiversity loss:

A. Over exploitation

B. Co-extinction

C. Mutation

D. Habitat loss and fragmentation

E. Migration

Choose the correct option:

a. A, B and E only

b. A, B and D only

c. A, C and D only

d. A, B, C and D only

35. List of endangered species was released by-

a. FOAM

b. IUCN

c. GE AC

d. WWF

BOTANY-SECTION-B

Plant Kingdom

(Algae)

36. Read the following statements and choose the set of correct statements.

In the members of Phaeophyceae,

A. Asexual reproduction occurs usually by biflagellate zoospores.

B. Sexual reproduction is by oogamous method only.

C. Stored food is in the form of carbohydrates which is either mannitol or laminarin.

D. The major pigments found are chlorophyll a, c and carotenoids and xanthophyll.

E. Vegetative cells have a cellulosic wall, usually covered on the outside by gelatinous coating of algin.

Choose the correct answer from the options given below:

a. A, C, D and E only

b. A, B, C and E only

c. A, B, C and C only

d. B, C, D and E only

Morphology of Flowering Plants

(The Flower)

37. Match List-I with List-II.

List-I		List-II	
(A)	Rose	(I)	Twisted aestivation
(B)	Pea	(II)	Perigynous flower
(C)	Cotton	(III)	Drupe
(D)	Mango	(IV)	Marginal placentation

Choose the correct answer from the options given below:

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

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

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

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

38. Match List-I with List-II.

List-I (Types of stamen)		List-II (Example)	
(A)	Monoadelphous	(I)	Citrus
(B)	Diadelphous	(II)	Pea
(C)	Polyadelphous	(III)	Lily
(D)	Epiphyllous	(IV)	China-rose

Choose the correct answer from the option below:

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

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

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

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

Cell The Unit of Life

(Mitochondria, Plastids, Ribosomes)

39. The DNA present in chloroplast is:

a. Linear, single stranded b. Circular, single stranded

c. Linear, double stranded d. Circular, double stranded

Biomolecules

(Biomacromolecules, Proteins)

40. Match List-I with List-II.

List-I		List-II	
(A)	GLUT-4	(I)	Hormone
(B)	Insulin	(II)	Enzyme
(C)	Trypsin	(III)	Intercellular ground substance
(D)	Collagen	(IV)	Enables glucose transport into cells

Choose the correct answer from the options given below:

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

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

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

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

Plant Growth and Development

(Plant Growth Regulators)

41. Spraying sugarcane crop with which of the following plant growth regulators, increases the length of stem, thus, increasing the yield?

a. Cytokinin
b. Abscisic acid
c. Auxin
d. Gibberellin

Photosynthesis in Higher Plants

(C4 Pathway & Photorespiration)

42. Given below are two statements:

Statement I: In C_3 plants, some O_2 binds RuBisCO, hence CO_2 fixation is decreased.

Statement II: In C_4 plants, mesophyll cells shows very little photorespiration while bundle sheath cells do not show photorespiration.

In the light of the above statements, choose the correct answer from the options given below:

a. Statement I is true but Statement II is false
b. Statement I is false but Statement II is true
c. Both Statement I and Statement II are true
d. Both Statement I and Statement II are false

Respiration in Plants

(Aerobic Respiration)

43. Identify the step in tricarboxylic acid cycle, which does not involve oxidation of substrate.

a. Succinyl-CoA → Succinic acid
b. Isocitrate → α-ketoglutaric acid
c. Malic acid → Oxaloacetic acid
d. Succinic acid → Malic acid

44. Match List-I with List-II

List-I		List-II	
(A)	Citric acid cycle	(I)	Cytoplasm
(B)	Glycolysis	(II)	Mitochondrial matrix
(C)	Electron transport	(III)	Intermembrane space of mitochondria
(D)	Proton gradient	(IV)	Inner mitochondrial membrane

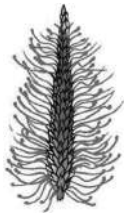
Choose the correct answer from the option given below:

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

Sexual Reproduction in Flowering Plants

(Flower and Pre-fertilisation)

45. Identify the correct description about the given figure:



a. Cleistogamous flowers showing autogamy.
b. Compact inflorescence showing complete autogamy.
c. Wind pollinated plant inflorescence showing flowers with well exposed stamens.
d. Water pollinated flowers showing stamens with mucilaginous covering.

Molecular Basis of Inheritance

(Regulation of Gene Expression)

46. Match List-I with List-II

List-I		List-II	
(A)	Frederick Griffith	(I)	Genetic code
(B)	Francois Jacob & Jacque	(II)	Semi-conservative mode of DNA replication
(C)	Har Gobind Khorana	(III)	Transformation
(D)	Meselson & Stahl	(IV)	*Lac* operon

Choose the correct answer from the options given below:

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

(Replication)

47. Which of the following statement is correct regarding the process of replication in *E.coli*?

a. The DNA dependent DNA polymerase catalyses polymerization in 5' → 3' as well as 3' → 5' direction.

b. The DNA dependent DNA polymerase catalyses polymerization in 5' → 3 ' direction.

c. The DNA dependent DNA polymerase catalyses polymerization in one direction that is 3' → 5'.

d. The DNA dependent RNA polymerase catalyses polymerization in one direction, that is 5' → 3'.

Biotechnology and Its Applications

(Biotechnological Applications in Agriculture)

48. Which of the following are fused in somatic hybridization involving two varieties of plants?

a. Protoplasts
b. Pollens
c. Callus
d. Somatic embryos

Ecosystem

(Productivity)

49. In an ecosystem if the Net Primary Productivity (NPP) of first trophic level is $100x$ (kcalm^{-2}) yr^{-1}, what would be the GPP (Gross Primary Productivity') of the third trophic level of the same ecosystem?

a. $10x\ (kcalm^{-2})\ yr^{-1}$ yr^{-1}
b. $\frac{100x}{3x}\ (kcalm^{-2})$
c. $\frac{x}{10}(kcalm^{-2})\ yr^{-1}$
d. $x\ (kcalm^{-2})\ yr^{-1}$

Biodiversity and Conservation

(Importance & Loss of Biodiversity)

50. Match List-I with List-II.

List-I		List-II	
(A)	Robert May	(I)	Species-Area relationship
(B)	Alexander von Humboldt	(II)	Long term ecosystem experiment using out door plots
(C)	Paul Ehrlich	(III)	Global species diversity at about 7 million
(D)	David Tilman	(IV)	Rivet popper hypothesis

Choose the correct answer from the options given below:

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

ZOOLOGY-SECTION-A

Animal Kingdom

(Basis of Classification)

51. Consider the following statements:

A. Annelids are true coelomates
B. Poriferans are pseudocoelomates
C. Aschelminthes are acoelomates
D. Platyhelminthes are pseudocoelomates

Choose the correct answer from the options given below :

a. C only
b. D only
c. B only
d. A only

(Class Cyclostomata, Chondrichythes, Osteichythes)

52. Match List-I with List-II:

List-I		List-II	
(A)	*Pleurobrachia*	(I)	Mollusca
(B)	Radula	(II)	Ctenophora
(C)	Stomochord	(III)	Osteichthyes
(D)	Air bladder	(IV)	Hemichordata

Choose the correct answer from the options given below:

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

53. Match List-I with List-II:

List-I		List-II	
(A)	*Pterophyllum*	(I)	Hag fish
(B)	*Myxine*	(II)	Saw fish
(C)	*Pristis*	(III)	Angel fish
(D)	*Exocoetus*	(IV)	Flying fish

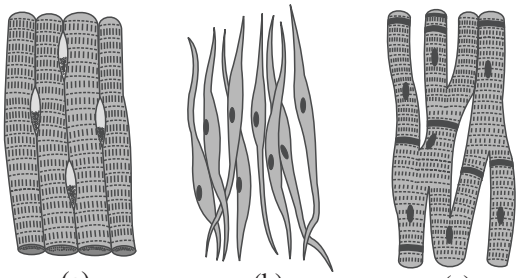
Choose the correct answer from the options given below:

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

Structural Organisation in Animals

(Muscle Tissue & Neural Tissue)

54. Three types of muscles are given as a, b and c. Identify the correct matching pair along with their location in human body:



(a) (b) (c)

Name of muscle/locatIon

a. (a) Skeletal - Biceps
   (b) Involuntary - Intestine
   (c) Smooth - Heart.
b. (a) Involuntary - Nose tip
   (b) Skeletal - Bone
   (c) Cardiac - Heart.
c. (a) Smooth - Toes
   (b) Skeletal - Legs
   (c) Cardiac - Heart.
d. (a) Skeletal-Triceps
   (b) Smooth - Stomach
   (c) Cardiac - Heart.

(Cockroach)

55. In both sexes of cockroach, a pair of jointed filamentous structures called anal cerci are present on :

a. 8th and 9th segment
b. 11th segment
c. 5th segment
d. 10th segment

Cell: The Unit of Life

(Nucleus and Microbodies)

56. Match List-I with List-II:

List-I		List-II	
(A)	Axoneme	(I)	Centriole
(B)	Cartwheel pattern	(II)	Cilia and flagella
(C)	Crista	(III)	Chromosome
(D)	Satellite	(IV)	Mitochondria

Choose the correct answer from the options given below :

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

Biomolecules

(Polysaccharides, Nucleic Acids & Types of Bond)

57. Match List-I with List-II.

List-I		List-II	
(A)	Lipase	(I)	Peptide bond
(B)	Nuclease	(II)	Ester bond
(C)	Protease	(III)	Glycosidic bond
(D)	Amylase	(IV)	Phosphodiester bond

Choose the correct answer from the options given below:

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

Cell Cycle and Cell Division

(Cell Cycle)

58. Following are the stages of cell division :

A. Gap 2 phase
B. Cytokinesis
C. Synthesis phase
D. Karyokinesis
E. Gap 1 phase

Choose the correct sequence of stages from the options given below :

a. B-D-E-A-C
b. E-C-A-D-B
c. C-E-D-A-B
d. E-B-D-A-C

(Meiosis)

59. Match List-I with List-II:

List-I (Sub Phases of Prophase I)		List-II (Specific characters)	
(A)	Diakinesis	(I)	Synaptonemal complex formation
(B)	Pachytene	(II)	Completion of terminalisation of chiasmata
(C)	Zygotene	(III)	Chromosomes look like thin threads
(D)	Leptotene	(IV)	Appearance of recombination nodules

Choose the correct answer from the options given below;

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

Breathing and Exchange of Gases

(Respiratory Volumes & Capacities)

60. Match List-I with List-II:

List-I		List-II	
(A)	Expiratory capacity	(I)	Expiratory reserve volume + Tidal volume + Inspiratory reserve volume
(B)	Functional residual capacity	(II)	Tidal volume + Expiratory reserve volume
(C)	Vital capacity	(III)	Tidal volume + Inspiratory reserve volume
(D)	Inspiratory capacity	(IV)	Expiratory reserve volume + Residual volume

Choose the correct answer from the options given below :

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

(Exchange and Transport of Gases)

61. Which of the following factors are favourable for the formation of oxyhaemoglobin in alveoli?

a. Low pCO_2 and High H^+ concentration
b. Low pCO_2 and High temperature
c. High pO_2 and High pCO_2
d. High pO_2 and Lesser H^+ concentration

Body Fluids and Circulation

(Circulatory Pathways)

62. Following are the stages of pathway for conduction of an action potential through the heart:

A. AV bundle
B. Purkinje fibres
C. AV node
D. Bundle branches
E. SA node

Choose the correct sequence of pathway from the options given below:

a. B-D-E-C-A
b. E-A-D-B-C
c. E-C-A-D-B
d. A-E-C-B-D

Excretory Products and Their Elimination

(Urine Formation, Function of Tubules)

63. Given below are two statements:

Statement I: In the nephron, the descending limb of loop of Henle impermeable to water and permeable to electrolytes.

Statement II: The proximal convoluted tubule is lined by simple columnar brush border epithelium and increases the surface area for reabsorption.

In the light of the above statements, choose the correct answer from the options given below :

a. Statement I is true but Statement II is false
b. Statement I is false but Statement II is true
c. Both Statement I and Statement II are true
d. Both Statement I and Statement II are false

Locomotion and Movement

(Joints)

64. Match List-I with List-II:

List-I		List-II	
(A)	Fibrous joints	(I)	Adjacent vertebrae, limited movement
(B)	Cartilaginous joints	(II)	Humerus and Pectoral girdle, rotational movement
(C)	Hinge joints	(III)	Skull, don't allow any movement
(D)	Ball and socket joints	(IV)	Knee, help in locomotion

Choose the correct answer from the options given below:

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

(Disorders of Muscular and Skeletal System)

65. Which of the following are Autoimmune disorders?

A. Myasthenia gravis
B. Rheumatoid arthritis
C. Gout
D. Muscular dystrophy
E. Systemic Lupus Erythematosus (SLE)

Choose the most appropriate answer from the options given below:

a. B, C & E only
b. C, D & E only
c. A, B & D only
d. A, B & E only

Neural Control and Coordination

(Central Nervous System)

66. Match List-I with List-II:

List-I		List-II	
(A)	Pons	(I)	Provides additional space for Neurons, regulates posture and balance.
(B)	Hypothalamus	(II)	Controls respiration and gastric secretions.
(C)	Medulla	(III)	Connects different regions of the brain.
(D)	Cerebellum	(IV)	Neuro secretory cells

Choose the correct answer from the options given below:

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

Chemical Coordination and Integration

(Mechanism of Hormone Action)

67. Which of the following is not a steroid hormone?

a. Progesterone
b. Glucagon
c. Cortisol
d. Testosterone

Human Reproduction

(Female Reproductive System)

68. Given below are two statements:

Statement I : The presence or absence of hymen is not a reliable indicator of virginity.

Statement II : The hymen is torn during the first coitus only.

In the light of the above statements, choose the correct answer from the options given below :

a. Statement I is true but Statement II is false
b. Statement I is false but Statement II is true
c. Both Statement I and Statement II are true
d. Both Statement I and Statement II are false

69. Which of the following is not a component of Fallopian tube?

a. Infundibulum
b. Ampulla
c. Uterine fundus
d. Isthmus

(Menstrual Cycle)

70. Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: FSH acts upon ovarian follicles in female and Leydig cells in male.

Reason R: Growing ovarian follicles secrete estrogen in female while interstitial cells secrete androgen in male human being.

In the light of the above statements, choose the correct answer from the options given below:

a. A is true but R is false
b. A is false but R is true
c. Both A and R are true and R is the correct explanation of A.
d. Both A and R are true but R is NOT the correct explanation of A.

(Parturition and Lactation)

71. Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Breast-feeding during initial period of infant growth is recommended by doctors for bringing a healthy baby.

Reason R : Colostrum contains several antibodies absolutely essential to develop resistance for the new born baby.

In the light of the above statements, choose the most appropriate answer from the options given below :

a. A is correct but R is not correct.
b. A is not correct but R is correct.
c. Both A and R are correct and R is the correct explanation of A
d. Both A and R are correct but R is NOT the correct explanation of A.

Reproductive Health

(Population Stabilisation and Birth Control)

72. Match List-I with List-II:

List-I		List-II	
(A)	Non-medicated IUD	(I)	Multiload 375
(B)	Copper releasing IUD	(II)	Progestogens
(C)	Hormone releasing IUD	(III)	Lippes loop
(D)	Implants	(IV)	LNG - 20

Choose the correct answer from the options given below:

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

73. Which of the following is not a natural/traditional contraceptive method?

a. Lactational amenorrhea
b. Vaults
c. Coitus interruptus
d. Periodic abstinence

Principles of Inheritance and Variation

(Genetic Disorders)

74. Match List-I with List-II:

List-I		List-II	
(A)	Down's syndrome	(I)	11^{th} chromosome
(B)	α-Thalassemia	(II)	'X' chromosome
(C)	β-Thalassemia	(III)	21^{st} chromosome
(D)	Klinefelter's syndrome	(IV)	16^{th} chromosome

Choose the correct answer from the options given below:

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

Molecular Basis of Inheritance

(Transcription)

75. Which one is the correct product of DNA dependent RNA polymerase to the given template?

3'TACATGGCAAATATCCATTCA5'

a. 5'AUGUACCGUUUAUAGGGAAGU3'

b. 5'ATGTACCGTTTATAGGTAAGT3'

c. 5'AUGUACCGUUUAUAGGUAAGU3'

d. 5'AUGUAAAGUUUAUAGGUAAGU3'

Evolution

(Evidences of Evolution)

76. The flippers of the Penguins and Dolphins are the example of the

a. Convergent evolution

b. Divergent evolution

c. Adaptive radiation

d. Natural selection

(Hardy-Weinberg Principle)

77. Which one of the following factors will not affect the Hardy-Weinberg equilibrium?

a. Gene migration

b. Constant gene pool

c. Genetic recombination

d. Genetic drift

(Human Evolution)

78. Given below are some stages of human evolution. Arrange them in correct sequence. (Past to Recent)

A. *Homo habilis*

B. *Homo sapiens*

C. *Homo neanderthalensis*

D. *Homo erectus*

Choose the correct sequence of human evolution from the options given below:

a. C-B-D-A

b. A-D-C-B

c. D-A-C-B

d. B-A-D-C

Human Health and Diseases

(Common Diseases in Humans)

79. Match List-I with List-II:

List-I		List-II	
(A)	Typhoid	(I)	Fungus
(B)	Leishmaniasis	(II)	Nematode
(C)	Ringworm	(III)	Protozoa
(D)	Filariasis	(IV)	Bacteria

Choose the correct answer from the options given below:

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

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

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

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

80. Match List-I with List-II:

List-I		List-II	
(A)	Common cold	(I)	*Plasmodium*
(B)	Haemozoin	(II)	Typhoid
(C)	Widal test	(III)	*Rhinoviruses*
(D)	Allergy	(IV)	Dust mites

Choose the correct answer from the options given below:

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

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

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

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

(Drugs & Alcohol Abuse)

81. Match List-I with List-II:

List-I		List-II	
(A)	Cocaine	(I)	Effective sedative in surgery
(B)	Heroin	(II)	*Cannabis sativa*
(C)	Morphine	(III)	*Erythroxylum*
(D)	Marijuana	(IV)	*Papaver somniferum*

Choose the correct answer from the options given below :

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

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

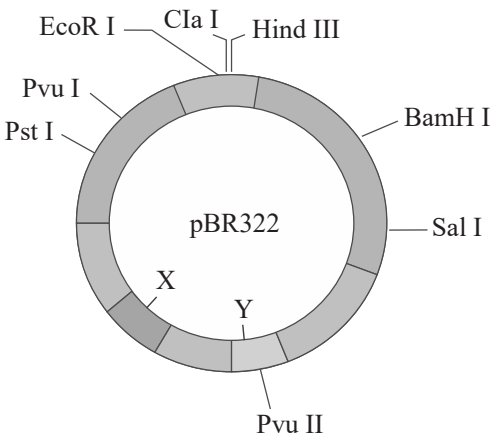
c. A-(IV), B-(III), C-(I), D-(II)

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

Biotechnology: Principles and Processes

(Tools of Recombinant DNA Technology)

82. The following diagram showing restriction sites in *E. coli* cloning vector pBR322. Find the role of '*X*' and '*Y*' genes :



a. The gene '*X*' is for protein involved in replication of Plasmid and '*Y*' for resistance to antibiotics.

b. Gene '*X*' is responsible for recognition sites and '*Y*' is responsible for antibiotic resistance.

c. The gene '*X*' is responsible for resistance to antibiotics and '*Y*' for protein involved in the replication of Plasmid.

d. The gene '*X*' is responsible for controlling the copy number of the linked DNA and '*Y*' for protein involved in the replication of Plasmid.

83. The "Ti plasmid" of *Agrobacterium tumefaciens* stands for

a. Tumor inducing plasmid

b. Temperature independent plasmid

c. Tumour, inhibiting plasmid

d. Tumor independent plasmid

(Processes of Recombinant DNA Technology)

84. Which of the following statements is incorrect?

a. Bio-reactors are used to produce small scale bacterial cultures.

b. Bio-reactors have an agitator system, an oxygen delivery system and foam control system.

c. A bio-reactor provides optimal growth conditions for achieving the desired product.

d. Most commonly used bio-reactors are of stirring type.

Biotechnology and Its Applications

(Transgenic Animals)

85. Match List-I with List-II:

List-I		List-II	
(A)	α - 1 antitrypsin	(I)	Cotton bollworm
(B)	*Cry IAb*	(II)	ADA deficiency
(C)	*Cry IAc*	(III)	Emphysema
(D)	Enzyme replacement therapy	(IV)	Corn borer

Choose the correct answer from the options given below :

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

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

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

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

ZOOLOGY-SECTION-B

Animal Kingdom

(Hemichordata and Chordata)

86. The following are the statements about non-chordates:

A. Pharynx is perforated by gill slits.

B. Notochord is absent.

C. Central nervous system is dorsal.

D. Heart is dorsal if present.

E. Post anal tail is absent.

Choose the most appropriate answer from the options given below:

a. B, D & E only

b. B, C & D only

c. A & C only

d. A, B & D only

Answer Key & Explanations

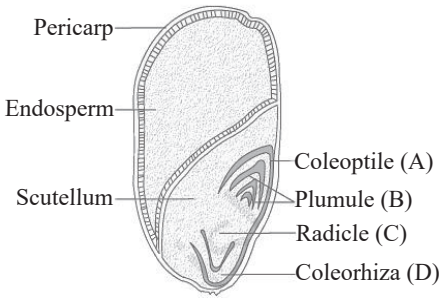
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
d	c	a	b	c	c	c	b	c	a	c	d	d	c	a	b	a	a
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
b	d	d	a	d	b	a	a	d	a	c	a	a	d	c	b	b	a
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
c	c	d	c	d	a	a	d	c	d	b	a	a	d	d	d	d	d
55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
d	b	a	b	a	c	d	c	d	b	d	d	b	a	c	b	c	b
73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
b	a	c	a	b	b	d	a	b	d	a	a	a	a	a	c	a	c
91	92	93	94	95	96	97	98	99	100								
d	a	a	b	c	c	b	b	c	b								

1. (d) The morphology of the mycelium, mode of spore formation and fruiting bodies form the basis for the division of the kingdom fungi into various classes. All fungi derive their nutrition through heterotrophic mode of nutrition.

2. (c) Some common members of basidiomycetes are *Agaricus* (mushroom) , *Ustilago* (smut) and *Puccinia* (rust fungus).

Rhizopus is also known as the bread mould. It belongs to Phycomycetes.

3. (a) The primary root, or radicle is the first organ to appear when a seed germinates.



4. (b) Given figures (A) and (B) shows perigynous flower. In this, gynoecium is situated in the centre and other parts of the flower are located on the rim of the thalamus almost at the same level. The ovary here is said to be half inferior, e.g., plum, rose, peach.

5. (c) *Datura* is an example of actinomorphic flower as their flowers can be divided into two equal radial halves in any radial plane passing through the centre.

6. (c) In monocots, under water stress condition, bulliform cells becomes flaccid that makes the leaves curl inwards to minimise water loss.

7. (c) In the given figure of stomata with bean shaped guard cells, A-Epidermal cells, B-Subsidiary cells, C-Guard cells, D-Stomatal pore.

The outer walls of guard cells (away from the stomatal pore) are thin and the inner walls (towards the stomatal pore) are highly thickened.

8. (b) Parenchyma and collenchyma are living tissue. Gymnosperms lack vessels in their xylem but in flowering plants, tracheids and vessels are the main water transporting elements.

9. (c)

A. Nucleolus - site for active ribosomal RNA synthesis.

B. Centriole - organisation like cartwheel

C. Leucoplasts - for storing nutrients

D. Golgi apparatus- site for formation of glycolipid

10. (a) Inhibition of succinic dehydrogenase by malonate is an example of competitive inhibition. Malonate resembles the substrate succinate and competes with the substrate for the substrate-

6860290

Test Booklet No.

Test Booklet Code

ENGLISH

01

MOCK TEST

Do not open this Test Booklet until you are asked to do so.

Important Instructions:

1. The Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars on ORIGINAL Copy carefully with **blue/black** ball point pen only.
2. The test is of **3 hours 20 minutes** duration and the Test Booklet contains **200** multiple-choice questions (four options with a single correct answer) from **Physics, Chemistry and Biology (Botany and Zoology)**. **50** questions in each subject are divided into **two Sections (A and B)** as per details given below:
   (a) **Section A** shall consist of **35 (Thirty-five)** Questions in each subject (Question Nos - 1 to 35, 51 to 85, 101 to 135 and 151 and 185). All questions are compulsory.
   (b) **Section B** shall consist of **15 (Fifteen)** questions in each subject (Question Nos - 36 to 50, 86 to 100, 136 to 150, and 186 to 200). In Section B, a candidate needs to **attempt any 10 (Ten)** questions out of **15 (Fifteen)** in each subject.
   Candidates are advised to read all 15 questions in each subject of Section B before they start attempting the question paper. In the event of a candidate attempting more than ten questions, **the first ten questions answered by the candidate shall be evaluated**.
3. Each question carries 4 marks. For each correct response, the candidate will get **4 marks**. For each incorrect response, **one** mark will be deducted from the total scores. **The maximum marks are 720**.
4. **Use Blue/Black Ball Point Pen only** for writing particulars on this page/marking responses on Answer Sheet.
5. Rough work is to be done in the space provided for this purpose in the Test Booklet only.
6. On completion of the test, the candidate **must hand over the Answer Sheet (ORIGINAL and OFFICE Copy) to the Invigilator** before leaving the Room/Hall. The candidates are allowed to take away this Test Booklet with them.
7. **The CODE for this Booklet is 01. Make sure that the CODE printed on the Original Copy of the Answer Sheet is the same as that on this Test Booklet.** In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Test Booklet and the Answer Sheet.
8. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Roll No. anywhere else except in the specified space in the Test Booklet/Answer Sheet.
9. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.
10. Each candidate must show on-demand his/her Admit Card to the Invigilator
11. No candidate, without special permission of the centre Superintendent or Invigilator, would leave his/her seat.
12. The candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign (with time) the Attendance Sheet **twice**. **Cases, where a candidate has not signed the Attendance Sheet second time, will be deemed not to have handed over the Answer Sheet and dealt with as an Unfair Means case.**
13. Use of Electronic/Manual Calculator is prohibited.
14. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Room/Hall. All cases of unfair means will be dealt with as per the Rules and Regulations of this examination.
15. **No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.**
16. The candidates will write the Correct Test Booklet Code as given in the Test Booklet/Answer Sheet in the Attendance Sheet.
17. Compensatory time of one hour five minutes will be provided for the examination of three hours and 20 minutes duration, whether such candidate (having a physical limitation to write) uses the facility of Scribe or not.

Name of the Candidate (in Capitals): _____

Roll Number : In figures _____

: In words _____

Centre of Examination (in Capitals): _____

Candidate's Signature: _____ **Invigilator's Signature:** _____

Facsimile Signature stamp of Centre Superintendent

98. $CH \equiv CH \xrightarrow{O_3/NaOH} X \xrightarrow{Zn/CH_3COOH} Y$, Y is:

(1) $CH_2OH - CH_2OH$ (2) CH_3COOH

(3) C_2H_5OH (4) CH_3-CH_3

99. The ammonia evolved from the treatment of 0.30g of an organic compound for the estimation of nitrogen was passed in 100ml of 0.1 M sulphuric acid. The excess of acid required 20 ml of 0.5 M sodium hydroxide solution for complete neutralization. The organic compound is:

(1) Acetamide (2) Benzamide

(3) Urea (4) Thiourea

100. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): The 19th electron in K-atom enters into 3d and not the 4s-orbital.

Reason (R): (n + *l*) rule is followed for determining the orbital of the lowest energy state.

In light of the above statement, choose the correct answer from the options given below:

(1) Both Assertion and Reason are True and the Reason is a correct explanation of the Assertion.

(2) Both Assertion and Reason are True but Reason is not a correct explanation of the Assertion.

(3) Assertion is True but the Reason is False.

(4) Assertion is False but Reason is True.

Botany : Section-A (Q. No. 101 to 135)

101. Match Column-I with Column-II.

Column-I		Column-II	
A.	Darwinian fitness	I.	Verhulst-Pearl logistic growth
B.	$N_t = N_0e^{rt}$	II.	High r value
C.	$N_{t+1} = N_t + [(B + I) - (D + E)]$	III.	Exponential growth
D.	$\frac{dN}{dt} = rN\left(\frac{K - N}{K}\right)$	IV.	Population density

Choose the correct answer from the options given below:

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

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

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

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

102. Read the following statements and choose the correct set of statements.

A. Male or female cones may be borne on the same tree in *Pinus*.

B. Megaspore mother cell divides mitotically to form four megaspores.

C. Meiosis in zygote results in haploid spore formation.

D. Male and female gametophytes have independent free-living existence in gymnosperms.

E. Haplontic life cycle is observed in *Fucus*.

Choose the correct answer from the options given below:

(1) A, B and E only

(2) A, B, D and E only

(3) B, C, D and E only

(4) A and C only

103. Match Column-I with Column-II.

Column-I		Column-II	
A.	High lignin content in detritus	I.	Highly resistant to microbes and decomposes slowly
B.	Humus	II.	Precipitation of water-soluble inorganic nutrients into the soil horizon as unavailable salts
C.	Leaching	III.	Accelerates decomposition, affecting immediate nutrient availability and microbial activity
D.	High nitrogen content in detritus	IV.	Leads to slower decomposition, affecting long-term soil carbon storage

Choose the correct answer from the options given below:

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

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

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

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

[Contd…

C.	Rate of storage of organic matter in plant tissues excluding the respiratory utilization during the measurement period.	III.	Secondary productivity
D.	Rate of energy storage at consumer level.	IV.	Net primary productivity

Choose the correct answer from the options given below:

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

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

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

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

144. Given below are two statements:

Statement-I: The flower of guava is hypogynous.

Statement-II: In hypogynous flower, the ovary occupies the lowest position.

In the light of the above statements, choose the correct answer from the options given below:

(1) Statement I is correct but Statement II is incorrect.

(2) Statement I is incorrect but Statement II is correct.

(3) Both Statement I and Statement II are correct.

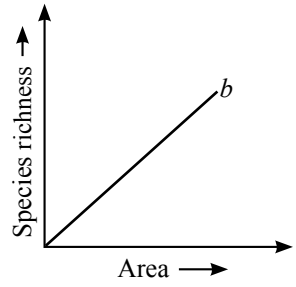
(4) Both Statement I and Statement II are incorrect.

145. Study the given populations and choose the correct option in relation to species diversity.

Population	Species	Group	Individuals
Population A	I	Mammals	3
	II	Birds	2
	III	Amphibians	2
Population B	I	Mammals	2
	II	Mammals	2
	III	Amphibians	1
Population C	I	Mammals	3
	II	Mammals	2
	III	Mammals	1

	Maximum Diversity	Minimum Diversity
(1)	Population B	Population C
(2)	Population A	Population C
(3)	Population A	Population B
(4)	Population B	Population A

146. The given graph shows a species-area relationship. Choose the correct equation for the curve *b*.



(1) Log S = Log A + Z log C

(2) Log S = Log C + A log Z

(3) Log C = Log S + Z log A

(4) Log S = Log C + Z log A

147. Which of the following bacteria are known for nitrogen fixation while being free-living in soil?

A. *Rhizobium*

B. *Mycobacterium*

C. *Azospirillum*

D. *Azotobacter*

E. *Lactobacillus*

F. *Streptococcus*

(1) A, C and F (2) B, C and D

(3) C and D (4) A, B and E

148. Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R :

Assertion A: In most eukaryotic cells, the net gain of ATP per glucose molecule oxidized is 38 ATP.

Reason R: Only three molecules of ATP are synthesised during glycolysis.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) A is true but R is false.

(2) A is false but R is true.

(3) Both A and R are true and R is the correct explanation of A.

(4) Both A and R are true but R is NOT the correct explanation of A.

149. Identify the wrong statement.

(1) The probability of homozygous dwarf progeny formed in a cross TT × TT is 0.

(2) The probability of homozygous dwarf progeny formed in TT × Tt is 0.

(3) The heterozygous tall progeny formed in a cross TT ×Tt is 25%.

(4) The homozygous tall progeny formed in a cross involving TT × TT is 1.

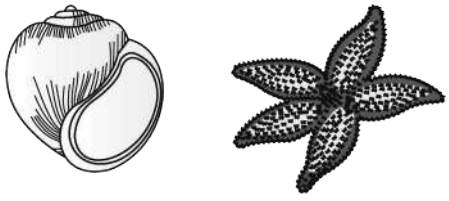
150. Arrangement of nuclei in normal dicot embryo sac is

(1) 3 + 3 + 2 (2) 2 + 3 + 3

(3) 3 + 2 + 3 (4) 2 + 4 + 2

Zoology : Section-A (Q. No. 151 to 185)

151. Correct statement, regarding A & B is:



A B

(1) A is having radula while larva of B is having radial symmetry.

(2) A and B both are eucoelomate.

(3) A and B both show indirect development.

(4) Both (2) and (3)

152. Match Column-I with Column-II.

Column-I		Column-II	
A.	Sea lily	I.	Parapodia
B.	Sea hare	II.	Malpighian tubules
C.	Cockroach	III.	Water vascular system
D.	*Nereis*	IV.	Radula

Choose the correct answer from the options given below:

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

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

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

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

153. The notochord is formed on which side of the body during embryonic development?

(1) Lateral (2) Ventral

(3) Dorsal (4) Bilateral

154. Which of the following statements are true for molluscs?

A. They have a soft body surrounded by silica shell.

B. Body is covered with external skeleton made of chitin.

C. Have a organ system grade of body organization with bilateral symmetry.

D. They are oviparous with indirect development.

Choose the correct answer from the options given below:

(1) B and D

(2) C and D

(3) A, B and C

(4) A, B, C and D

155. *Hydra* is

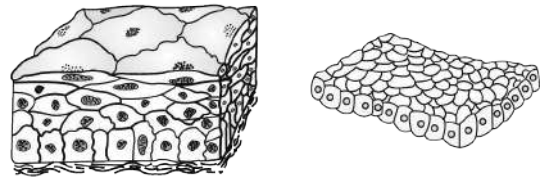
(1) Fresh water form, radially symmetrical and diploblastic

(2) Marine, radially symmetrical and diploblastic

(3) Fresh water form, bilaterally symmetrical and diploblastic

(4) Marine, radially symmetrical and triploblastic

156. Identify the correct option with respect to the figures (A and B) given below.



A B

(1) A: Mainly role in secretion and absorption

(2) A: Secrete mucus, saliva, earwax, oil, milk, digestive enzymes

(3) B: Found in ducts of glands and its main function is secretion and absorption

(4) B: Mainly present in the inner surface of hollow organs like bronchioles and fallopian tubes.

[Contd…

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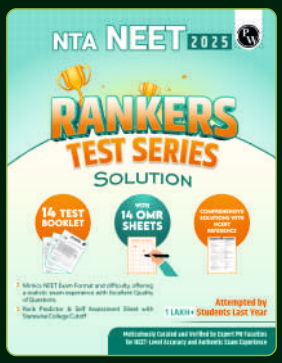

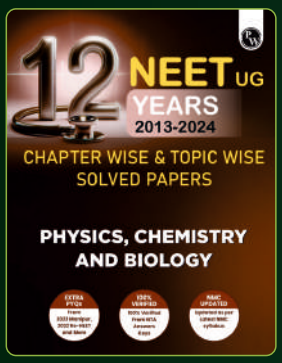

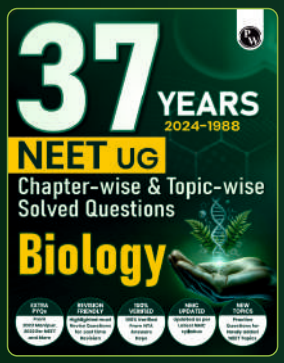

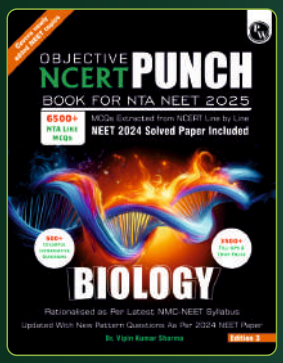

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