



YEARS 1988 - 2023

As per latest syllabus prescribed by

NMC

# PREVIOUS SOLVED PAPERS

2829 MCQs

Chapter-wise & Subtopic-wise

## NEET (UG) BIOLOGY

**INCLUDES SOLVED QUESTION PAPER OF 2023** 

A comprehensive collection of NEET & AIPMT Questions from past 36 Years

Target Publications® Pvt. Ltd.

**36** *YEARS*1988 - 2023

**2829 MCQs** 

## PREVIOUS SOLVED PAPER

Chapter-wise & Subtopic-wise

### **NEET BIOLOGY**

Updated as per latest syllabus prescribed by

NMC on 06<sup>th</sup> October, 2023

#### **Salient Features**

- A compilation of 36 years of AIPMT/NEET questions (1988-2023)
- Includes solved questions from NEET (UG) 2023
- Includes '2829' AIPMT/NEET MCQs
- Chapter-wise and Subtopic-wise segregation of questions
- Year-wise flow of content concluded with the latest questions
- Solutions provided wherever required
- Graphical analysis of questions: Chapter-wise and Subtopic-wise
- Separate list of questions excluded from the NEET (UG) 2024 syllabus

Scan the adjacent QR code in *Quill - The Padhai App* to view **NEET (UG) 2023** (Manipur) question paper along with answers and solutions in PDF format.



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P.O. No. 11411

**TEID: 2806** 

#### **PREFACE**

Target's 'NEET Biology: PSP (Previous Solved Papers)' is a compilation of questions asked in the past 36 years (1988-2023) in the National Eligibility cum Entrance Test (NEET), formerly known as the All India Pre-Medical Test (AIPMT).

The book consists of chapter-wise categorization of questions. Each chapter is further segregated into subtopics and thereafter all the questions pertaining to a subtopic are arranged year-wise concluding with the latest year. To aid students, we have also provided solutions for questions wherever deemed necessary.

Considering the latest modifications in the syllabus of NEET (UG) examination, a list of questions based on the concepts excluded from the latest NEET (UG) 2024 syllabus is provided.

A graphical (% wise) analysis of the subtopics for the past 36 years as well as 11 years (2013 onwards) has been provided at the beginning of every topic. Both the graphs will help the students to understand and analyse each subtopic's distribution for AIPMT/ NEET (36 years) and NEET (UG) (11 Years).

We are confident that this book will comprehensively cater to needs of students and effectively assist them to achieve their goal.

The journey to create a complete book is strewn with triumphs, failures and near misses. If you think we've nearly missed something or want to applaud us for our triumphs, we'd love to hear from you. Please write to us on: mail@targetpublications.org

A book affects eternity; one can never tell where its influence stops.

Best of luck to all the aspirants!

Publisher **Edition:** Fourth

#### **Frequently Asked Questions**

Why this	• This book acts as a go-to tool to find all the AIPMT/NEET questions since the past 36 years at one place.		
book?	• The subtopic wise arrangement of questions provides the break-down of a chapter into its important components which will enable students to design an effective learning plan.		
Why the need for two graphs?	• The graphical analysis guides students in ascertaining their own preparation of a particular topic. Admission for undergraduate and post graduate medical courses underwent a critical change with the introduction of NEET in 2013. Although it received a huge backlash and was criticised for the following two years, NEET went on to replace AIPMT in 2016. The introduction of NEET brought in a few structural differences in terms of how the exam was conducted. Although the syllabus has majorly remained the same, the chances of asking a question from a particular subtopic are seen to vary slightly with the inception of NEET.		
	The two graphs will fundamentally help the students to understand that the (weightage) distribution of a particular chapter can vary i.e., a particular subtopic having the most weightage for AIPMT may not necessarily be the subtopic with the most weightage for NEET.		
	• The two graphs provide a subtopic's weightage distribution over the past 36 years (for AIPMT/NEET) and over the past 11 years (for NEET-UG).		
How are the	• The students can use these graphs as a self-evaluation tool by analyzing and comparing a particular subtopic's weightage with their preparation of the subtopic. This exercise would help the students to get a clear picture about their strength and weakness based on the subtopics.		
two graphs beneficial to the students?	• Students can also use the graphs as a source to know the most important as well as least important subtopics as per weightage of a particular chapter which will further help them in planning the study structure of a particular chapter.  (Note: The percentage-wise weightage analysis of subtopics is solely for the knowledge of students and does not guarantee questions from subtopics having the most weightage, in the future exams.  Question classification of a subtopic is done as per the authors' discretion and may vary with respect to another individual.)		

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#### **Usage of symbols:**

- **▼** Complete chapter excluded from the NEET (UG) 2024 syllabus (in index)
- Part of the chapter excluded from the NEET (UG) 2024 syllabus (in index)
- Sub-topics or questions that are not part of the NCERT Rationalised (2023-24) textbooks (in book)

#### Questions based on the concepts excluded from the NEET (UG) 2024 Syllabus

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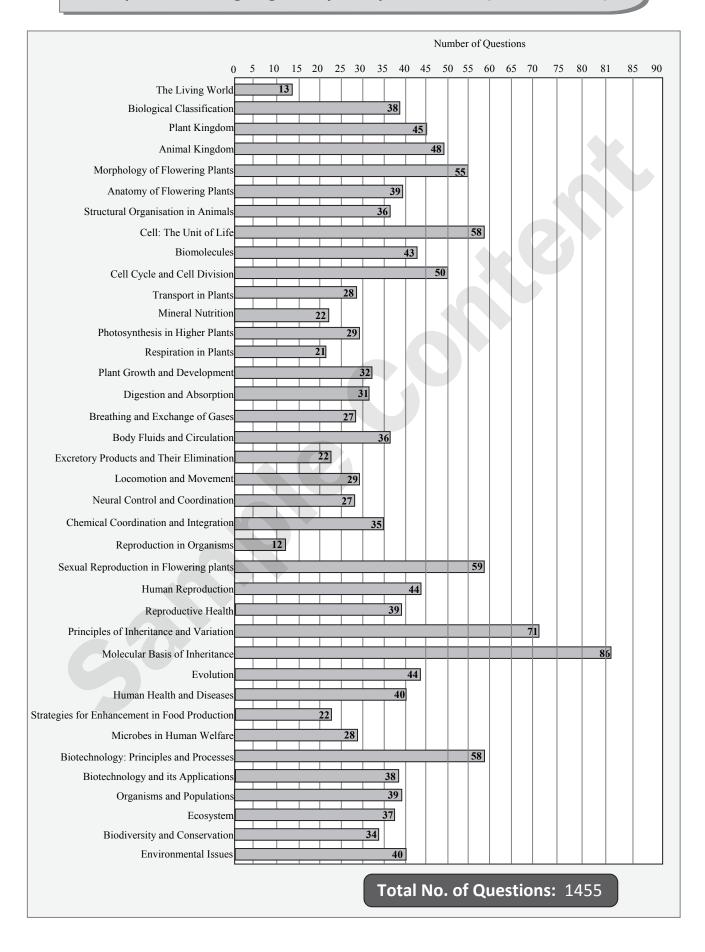
**Note:** The above table contains the list of chapters/subtopics/question numbers that are excluded from the latest syllabus of NEET (UG) 2024. However, these questions are covered to give an idea about the variety and difficulty levels of questions asked in the examination over the years.

#### Disclaimer

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#### **Chapter-wise Weightage Analysis of past 11 Years (2013 Onwards)**

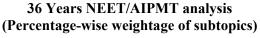


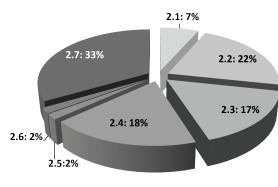
## 2

## **Biological Classification**

- 2.1 Five Kingdom Classification
- 2.2 Kingdom Monera
- 2.3 Kingdom Protista
- 2.4 Kingdom Fungi

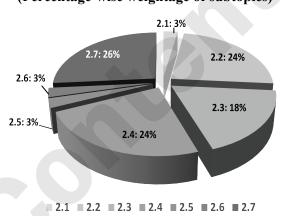
- 2.5 Kingdom Plantae
- 2.6 Kingdom Animalia
- 2.7 Viruses, Viroids and Lichens





■ 2.1 ■ 2.2 ■ 2.3 ■ 2.4 ■ 2.5 ■ 2.6 ■ 2.7

## 11 Years NEET analysis (2013 onwards) (Percentage-wise weightage of subtopics)



#### 2.1 Five Kingdom Classification

1. In the five kingdom system of classification, which single kingdom out of the following can include blue-green algae, nitrogen fixing bacteria and methanogenic archaebacteria?

[1998]

- (A) Monera
- (B) Fungi
- (C) Plantae
- (D) Protista
- 2. In five kingdom system, the main basis of classification is [2002]
  - (A) structure of nucleus
  - (B) mode of nutrition
  - (C) structure of cell wall
  - (D) asexual reproduction
- 3. In the five-kingdom classification, *Chlamydomonas* and *Chlorella* have been included in [2012]
  - (A) Protista
- (B) Algae
- (C) Plantae
- (D) Monera
- 4. Five kingdom system of classification suggested by R.H. Whittaker is NOT based on
  - [2014]
  - (A) presence or absence of a well-defined nucleus
  - (B) mode of reproduction

- (C) mode of nutrition
- (D) complexity of body organization

#### 2.2 Kingdom Monera

- 1. Which one belongs to monera? [1990]
  - (A) Amoeba
- (B) Escherichia
- (C) Gelidium
- (D) Spirogyra
- Which bacteria is utilized in gobar gas plant? [2002]
  - (A) Methanogens
  - (B) Nitrifying bacteria
  - (C) Ammonifying bacteria
  - (D) Denitrifying bacteria
- 3. Membrane-bound organelles are absent in:

[2010]

- (A) Saccharomyces
- (B) Streptococcus
- (C) Chlamydomonas
- (D) Plasmodium
- 4. The cyanobacteria are also referred to as

[2012]

- (A) protists
- (B) golden algae
- (C) slime moulds
- (D) blue green algae



- 5. Which of the following are likely to be present in deep sea water? [2013]
  - (A) Archaebacteria
  - (B) Eubacteria
  - (C) Blue-green algae
  - (D) Saprophytic fungi
- 6. True nucleus is absent in :- [2015]
  - (A) Mucor
- (B) Vaucheria
- (C) Volvox
- (D) Anabaena
- 7. The primitive prokaryotes responsible for the production of biogas from the dung of ruminant animals, include the [Phase-I 2016]
  - (A) Methanogens
  - (B) Eubacteria
  - (C) Halophiles
  - (D) Thermoacidophiles
- 8. Which one of the following is WRONG for fungi? [Phase-II 2016]
  - (A) They are both unicellular and multicellular.
  - (B) They are eukaryotic.
  - (C) All fungi possess a purely cellulosic cell wall.
  - (D) They are heterotrophic.
- 9. Methanogens belongs to [Phase-II 2016]
  - (A) Eubacteria
  - (B) Archaebacteria
  - (C) Dinoflagellates
  - (D) Slime moulds
- 10. Which among the following are the smallest living cells, known without a definite cell wall, pathogenic to plants as well as animals and can survive without oxygen? [2017]
  - (A) Bacillus
- (B) Pseudomonas
- (C) Mycoplasma
- (D) Nostoc
- 11. Which of the following are found in extreme saline conditions? [2017]
  - (A) Archaebacteria
- (B) Eubacteria
- (C) Cyanobacteria
- (D) Mycobacteria
- 12. Match the organisms in Column I with habitats in Column II.

	Column-I		Column-II
i.	Halophiles	a.	Hot springs
ii.	Thermoacidophiles	b.	Aquatic
			environment
iii.	Methanogens	c.	Guts of ruminants
iv.	Cyanobacteria	d.	Salty areas

Select the correct answer from the options given below: [Odisha 2019]

- (A) i-b, ii-d, iii-c, iv-a
- (B) i-d, ii-a, iii-c, iv-b
- (C) i-a, ii-b, iii-c, iv-d
- (D) i-c, ii-d, iii-b, iv-a

- 13. Which of the following is INCORRECT about Cynobacteria? [Phase-II 2020]
  - (A) They lack heterocysts.
  - (B) They often form blooms in polluted water bodies.
  - (C) They have chlorophyll 'a' similar to green plants.
  - (D) They are photoautotrophs.

#### 2.3 Kingdom Protista

1. Which of the following organisms possesses characteristics of both a plant and an animal?

[1995]

- (A) Bacteria
- (B) Euglena
- (C) Mycoplasma
- (D) Paramoecium
- 2. Single-celled eukaryotes are included in:

[2010]

- (A) Protista
- (B) Fungi
- (C) Archaea
- (D) Monera
- 3. Which one of the following organisms is NOT an example of eukaryotic cells? [2011]
  - (A) Paramoecium caudatum
  - (B) Escherichia coli
  - (C) Euglena viridis
  - (D) Amoeba proteus
- 4. In which group of organisms, the cell walls form two thin overlapping shells which fit together? [Re-Test 2015]
  - (A) Slime moulds
- (B) Chrysophytes
- (C) Euglenoids
- (D) Dinoflagellates
- 5. Chrysophytes, Euglenoids, Dinoflagellates and Slime moulds are included in the kingdom

[Phase-I 2016]

- (A) Fungi
- (B) Animalia
- (C) Monera
- (D) Protista
- 6. Select the WRONG statement. [Phase-II 2016]
  - (A) Diatoms are microscopic and float passively in water.
  - (B) The walls of diatoms are easily destructible.
  - (C) 'Diatomaceous earth' is formed by the cell walls of diatoms.
  - (D) Diatoms are chief producers in the oceans.
- 7. Which among the following is NOT a prokaryote? [2018]
  - (A) Nostoc
- (B) Mycobacterium
- (C) Saccharomyces
- (D) Oscillatoria
- 8. Ciliates differ from all other protozoans in [2018]
  - a) using pseudopodia for capturing prey
  - (B) having a contractile vacuole for removing excess water
  - (C) using flagella for locomotion
  - (D) having two types of nuclei

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- 9. Which of the following organisms are known as chief producers in the oceans? [2018]
  - (A) Cyanobacteria
- (B) Diatoms
- (C) Dinoflagellates
- (D) Euglenoids
- 10. Which of the following is a CORRECT statement? [2022]
  - (A) Slime moulds are saprophytic organisms classified under Kingdom Monera.
  - (B) Mycoplasma have DNA, Ribosome and cell wall.
  - (C) Cyanobacteria are a group of autotrophic organisms classified under Kingdom Monera.
  - (D) Bacteria are exclusively heterotrophic organisms.

#### 2.4 Kingdom Fungi

- 1. Absorptive heterotrophic nutrition is exhibited by [1990]
  - (A) Algae
- (B) Fungi
- (C) Bryophytes
- (D) Pteridophytes
- 2. Black rust of wheat is caused by [2000]
  - (A) Puccinia
- (B) Mucor
- (C) Aspergillus
- (D) Rhizopus
- 3. Which one of the following matches is CORRECT? [2015]

(A)	Alternaria	Sexual	Deuteromycetes
		reproduction	
		absent	
(B)	Mucor	Reproduction	Ascomycetes
		by conjugation	
(C)	Agaricus	Parasitic	Phycomycetes
		fungus	
(D)	Trichoderma	Aseptate	Basidiomycetes
		mycelium	

4. The imperfect fungi which are decomposers of litter and help in mineral cycling belong to:

[Re-Test 2015]

- (A) Basidiomycetes
- (B) Phycomycetes
- (C) Ascomycetes
- (D) Deuteromycetes
- 5. Choose the WRONG statement.

#### [Re-Test 2015]

- (A) Yeast is unicellular and useful in fermentation.
- (B) *Penicillium* is multicellular and produces antibiotics.
- (C) *Neurospora* is used in the study of biochemical genetics.
- (D) Morels and truffles are poisonous mushrooms.

- 6. Which one of the following statements is wrong? [Phase-I 2016]
  - (A) Eubacteria are also called false bacteria.
  - (B) Phycomycetes are also called algal fungi.
  - (C) Cyanobacteria are also called blue-green algae.
  - (D) Golden algae are also called desmids.
- 7. One of the major components of cell wall of most fungi is [Phase-I 2016]
  - (A) chitin
- (B) peptidoglycan
- (C) cellulose
- (D) hemicellulose
- 8. After karyogamy followed by meiosis, spores are produced exogenously in [2018]
  - (A) Agaricus
  - (B) Alternaria
  - (C) Neurospora
  - (D) Saccharomyces
- 9. Which of the following statements is INCORRECT? [2019]
  - (A) Conidia are produced exogenously and ascospores endogenously.
  - (B) Yeasts have filamentous bodies with long thread like hyphae.
  - (C) Morels and truffles are edible delicacies.
  - (D) *Claviceps* is a source of many alkaloids and LSD.
- 10. Which of the following statements is CORRECT? [2021]
  - (A) Some of the organisms can fix atmospheric nitrogen in specialized cells called sheath cells.
  - (B) Fusion of two cells is called Karyogamy.
  - (C) Fusion of protoplasm between two motile on non-motile gametes is called plasmogamy.
  - (D) Organisms that depend on living plants are called saprophytes.
- 11. Identify the asexual reproductive structure associated with *Penicillium*. [2022]
  - (A) Gemmules
- (B) Buds
- (C) Zoospores
- (D) Conidia

#### 2.5 Kingdom Plantae

- 1. Select the WRONG statement. [2018]
  - (A) Pseudopodia are locomotory and feeding structures in sporozoans.
  - (B) Mushrooms belong to Basidiomycetes.
  - (C) Cell wall is present in members of Fungi and Plantae.
  - (D) Mitochondria are the powerhouse of the cell in all kingdoms, except Monera.



#### 2.6 Kingdom Animalia

1. Pick up the WRONG statement.

#### [Re-Test 2015]

- (A) Nuclear membrane is present in Monera.
- (B) Cell wall is absent in Animalia.
- (C) Protista have photosynthetic and heterotrophic modes of nutrition.
- (D) Some fungi are edible.

#### 2.7 Viruses, Viroids and Lichens

- 1. Lichens indicate SO<sub>2</sub> pollution because they [1989]
  - (A) show association between algae and fungi
  - (B) grow faster than others
  - (C) are sensitive to  $SO_2$
  - (D) flourish in SO<sub>2</sub> rich environment
- 2. Organisms which are indicator of  $SO_2$  pollution of air [1992]
  - (A) mosses
- (B) lichens
- (C) mushrooms
- (D) puffballs
- 3. Tobacco Mosaic Virus (TMV) genes are

[1994]

- (A) double stranded RNA
- (B) single stranded RNA
- (C) polyribonucleotides
- (D) proteinaceous
- 4. Which one of the following statements about viruses is CORRECT? [1997]
  - (A) Viruses possess their own metabolic system.
  - (B) Viruses contain either DNA or RNA.
  - (C) Viruses are facultative parasites.
  - (D) Viruses are readily killed by antibiotics.
- 5. Which of the following is the use of lichens in case of pollution? [1999]
  - (A) They promote pollution.
  - (B) Lichens are not related with pollution.
  - (C) They treat the polluted water.
  - (D) They act as bioindicators of pollutions.
- 6. Which one of the following statements about viruses is CORRECT? [2003]
  - (A) nucleic acid of viruses is known as capsid.
  - (B) Viruses possess their own metabolic system.
  - (C) All viruses contain both RNA and DNA.
  - (D) Viruses are obligate parasites.

- 7. Lichens are well known combination of an alga and a fungus where fungus has [2004]
  - (A) a saprophytic relationship with the alga.
  - (B) an epiphytic relationship with the alga.
  - (C) a parasitic relationship with the alga.
  - (D) a symbiotic relationship with the alga.
- 8. There exists a close association between the alga and the fungus within a lichen. The fungus [2005]
  - (A) provides protection, anchorage and absorption for the alga.
  - (B) provides food for the alga.
  - (C) fixes the atmospheric nitrogen for the alga.
  - (D) releases oxygen for the alga.
- 9. Virus envelope is known as [2010]
  - (A) capsid
- (B) virion
- (C) nucleoprotein
- (D) core
- 10. Which one single organism or the pair of organisms is correctly assigned to its taxonomic group? [2012]
  - (A) Paramoecium and Plasmodium belong to the same kingdom as that of Penicillium.
  - (B) Lichen is a composite organism formed from the symbiotic association of an algae and a protozoan.
  - (C) Yeast used in making bread and beer is a fungus.
  - (D) *Nostoc* and *Anabaena* are examples of Protista.
- 11. Which of the following shows coiled RNA strand and capsomeres? [2014]
  - (A) Polio virus
  - (B) Tobacco mosaic virus
  - (C) Measles virus
  - (D) Retrovirus
- 12. Viruses have [2014]
  - (A) DNA enclosed in a protein coat
  - (B) prokaryotic nucleus
  - (C) single chromosome
  - (D) both DNA and RNA
- 13. A location with luxuriant growth of lichens on the trees indicates that the [2014]
  - (A) trees are very healthy
  - (B) trees are heavily infested
  - (C) location is highly polluted
  - (D) location is not polluted
- 14. Which of the following are most suitable indicators of SO<sub>2</sub> pollution in the environment? [Re-Test 2015]
  - (A) Fungi
- (B) Lichens
- (C) Conifers
- (D) Algae



- Choose the wrong statement. [Re-Test 2015] 15.
  - Mosaic disease in tobacco and AIDS in human being are caused by viruses
  - The viroids were discovered by D.I. (B) Ivanowski.
  - W.M. Stanley showed that viruses could (C) be crystallized
  - (D) The term contagium vivum fluidum was coined by M.W. Beijerinek
- Which of the following statements is WRONG 16. for viroids? [Phase-I 2016]
  - (A) They cause infections.
  - (B) Their RNA is of high molecular weight.
  - (C) They lack a protein coat.
  - They are smaller than viruses. (D)
- 17. Viroids differ from viruses in having
  - DNA molecules with protein coat (A)
  - (B) DNA molecules without protein coat
  - RNA molecules with protein coat (C)
  - (D) RNA molecules without protein coat
- 18. Match Column – I with Column – II.

	Column – I		Column – II
i.	Saprophyte	p.	Symbiotic association of
			fungi with plants roots
ii.	Parasite	q.	Decomposition of dead
		•	organic materials

iii.	Lichens	r.	Living on living plants or
			animals
iv.	Mycorrhiza	S.	Symbiotic association of
			algae and fungi

Choose the correct answer from the options given below: [2019]

- (A) i-q, ii-p, iii-r, iv-s
- i-q, ii-r, iii-s, iv-p(B)
- (C) i-p, ii-q, iii-r, iv-s
- (D) i-r, ii-q, iii-p, iv-s
- 19. Which of the following statements is CORRECT? [Odisha 2019]
  - good pollution (A) Lichens are not indicators.
  - Lichens do not grow in polluted areas. (B)
  - Algal component of lichens is called (C) mycobiont.
  - (D) Fungal component of lichens is called phycobiont.
- 20. Which of the following is CORRECT about viroids? [Phase-I 2020]
  - They have free RNA without protein (A) coat.
  - (B) They have DNA with protein coat.
  - They have free DNA without protein (C) coat.
  - (D) They have RNA with protein coat.

## Answers to MCQs

- (A) 4. (A) 2.1: 1. (A) 2. (B) 3.
- 2.2: (B) 4. (D) 5. 1. (B) 2. (A) 3. (A) 6. (D) 7. (A) 8. (C) 9. (B) 10. (C)
  - (A) 12. (B) 13. (A)
- 2.3: 1. (B) 2. (A) 3. (B) 4. (B) 5. (D) 6. (B) 7. (C) 8. (D) 9. (B) 10. (C)
- (B) (A) 3. 2.4: 1. 2. (A) 4. (D) 5. (D) 6. (A) 7. (A) 8. (A) 9. (B) 10. (C) 11. (D)
- 2.5: 1. (A)
- 2.6: 1. (A)
- 2.7: (C) 2. (B) 4. (B) 5. (D) 6. (D) 7. (D) 8. (A) 9. (A) 10. (C)
  - 11. **(B)** 12. (A) 13. (D) 14. (B) 15. (B) 16. (B) 17. (D) 18. (B) 19. (B) 20. (A)



#### Solutions to MCQs

#### 2.1 **Five Kingdom Classification**

- 2. In five kingdom system of classification, fungi were separated from plantae on the basis of criteria – mode of nutrition
- 4. Other criteria for five kingdom system of classification include cell structure and phylogenetic relationships.



#### 2.2 Kingdom Monera

- 1. Amoeba belongs to Kingdom Protista. Gelidium and Spirogyra are included in kingdom Plantae.
- 2. Methanogens produce methane (biogas) from the dung of animals such as cows and buffaloes.
- 3. Streptococcus is a bacteria and belongs to kingdom Monera. The members of this kingdom lack membrane bound cell organelles.
- 8. In fungi, cell wall is usually composed of chitin.
- Archaebacteria live in some of the most harsh habitats.
   Methanogens belongs to archaebacteria and are mostly found in marshy areas.
- 13. Cynobacteria possess heterocyst that fixes atmospheric nitrogen to ammonia.

#### 2.3 Kingdom Protista

- 1. Euglena produces food in the presence of sunlight but when deprived of sunlight behaves like a heterotroph and predates on other smaller organisms. Thus, it possesses characteristics of both plants and animals.
- 3 Escherichia coli is a prokaryote.

  Paramoecium, Euglena and Amoeba belong to kingdom Protista and are eukaryotes.
- 6. The walls of diatoms contain cellulose and silica. Thus the wall of diatoms is indestructible. They do not decay easily. After death, they are deposited at the bottom in water and form diatomaceous earth.
- 7. *Saccharomyces* is a eukaryote.
- Slime moulds are saprophytic organisms classified under Kingdom Protista.
   Mycoplasma lack cell wall.
   Bacteria may be photosynthetic, chemosynthetic or heterotrophic.

#### 2.4 Kingdom Fungi

- 5. Morels and truffles are edible mushrooms.
- 6. Eubacteria are also called true bacteria.
- 8. In *Agaricus*, spores are produced exogenously whereas in *Neurospora* and *Saccharomyces* spores are produced endogenously. *Alternaria* does not produce sexual spores.
- 9. Yeasts lack filamentous structures called hyphae. It is a unicellular organism.

Some of the organisms can fix atmospheric nitrogen in specialised cells called heterocysts e.g. *Nostoc* and *Anabaena*.
 Karyogamy refers to fusion of two nuclei.
 Organisms that depend on living plants are called primary consumers.

#### 2.5 Kingdom Plantae

1. Pseudopodia are locomotory and feeding structures in amoeboid protozoans.

#### 2.6 Kingdom Animalia

1. The members of Kingdom Monera lack nuclear membrane.

#### 2.7 Viruses, Viroids and Lichens

- Viruses do not have their metabolic machinery.
   They are obligate parasites.
   Antibiotics have no effect on viruses.
- 6. The protein coat of viruses is known as capsid. Viruses lack their own metabolic machinery. All viruses contain either RNA or DNA.
- Paramoecium and Plasmodium belong to kingdom Protista whereas Penicillium belongs to kingdom Fungi.
   Lichen is a composite organism formed from the symbiotic association between algae and fungi.
   Nostoc and Anabaena are examples of Monera.
- 16. The RNA of viroids is of low molecular weight.
- 19. Lichens are good pollution indicators as they do not grow in polluted areas.



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