

# **BIOLOGY**

# **NEET & AIIMS**

# **BIOLOGICAL CLASSIFICATION**

Example

1. Who classified plants into trees, shrubs and

herbs?



**2.** Name the kingdom system proposed by R.H. Whittaker.



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**3.** In which kingdom, all prokaryotic organism are included?



**4.** Name the group of bacteria, present in the gut of ruminant animals which are responsible for the production of methane from the drug.



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**5.** What is name of common reproduction unit of Mycoplasma?



**6.** In which type of slime mould somatic body is free living, multinucleate, naked and diploid ?



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7. Name the asexual reproductive spores in fungi.



8. What is the name of bread mould?



9. What is the name of rust fungus?



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**10.** Name the asexual reproductive bodies of Deuteromycetes.



11. Give two examples of insectivorous plant.



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**12.** Name the connecting link between living and non-living.



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**13.** Name the genetic material found in viruses.



# Try Yourself

**1.** Name the group of animals which have red blood cells.



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**2.** Who was the earliest to attempt more scientific basis for classification ?

**3.** Write the name of five kingdoms which were proposed under Five Kingdom System.



**4.** Which kingdom includes only photosynthetic organisms w.r.t. Whittaker classification system?



**5.** Name the kingdom under which all unicellular eukaryotes are included.



**6.** Paramoecium and Amoeba are included under kingdom .



7. Write group of bacteria live in extreme salty areas?



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8. How can archaebacteria live in harish conditions?



**9.** Photosynthetic pigment in cyanobacteria is\_\_\_\_\_.



**10.** Name the special cells, where nitrogen fixation takes place in cyanobacteria.



**11.** Give one example of euglenoid.



12. Which type of nutrition Euglena shows?



**13.** What is the basis of classification in kingdom fungi?



**14.** Name the sexual spores in fungi?



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15. Write the name of an unicellular fungi?



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**16.** What are coprophilous fungi?



**17.** Name the group to which bracket fungi belong.



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**18.** Where karyogamy and meiosis take place in basidiomycetes ?



**19.** Name the main groups in which fungi are classified.



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20. Give three examples of deuteromycetes.



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**21.** Members of kingdom animalia store food reserves in the form of .



**22.** Which mode of nutrition is found in kingdom animalia?



23. Who coined the term 'Virus'?



24. Who demonstrated that the extract of the infected plants of tobacco could cause infection in healthy plants?



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25. Viruses that infect the bacteria are called \_\_\_\_\_.



**26.** Name five diseases caused by viruses in man.



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Exercise

**1.** Position of bacteria in a kingdom system of classification proposed by Linnaeus is

A. Monera

- B. Protista
- C. Plantae
- D. Mychota

#### **Answer: C**



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2. In three kingdom classification, the kingdom

Protista includes

A. Unicellular eukaryotic organisms only

- B. Unicellular prokaryotic organisms only
- C. Wide variety of unicellular, mostly aquatic eukaryotes
- D. Wide variety of unicellular, mostly terrestrial Prokaryotes

## Answer: C



**3.** Which of the following was given the status of kingdom in the classification system given by Copeland?

A. Prokaryotes

B. Myxomycetes

C. Eukaryotic algae

D. Protista

#### **Answer: A**



**4.** Which one of the following is not the basis of five kingdom classification?

A. Cell type

B. Body organisation

C. Reproduction

D. Reserve food materials

#### **Answer: D**



5.	Multicellular	eukaryotic	organisms	with
hol	lophytic mode	of nutritio	n belong to	how
ma	ny kingdoms i	n Whittaker	system ?	

- A. One
- B. Two
- C. Three
- D. Five

## **Answer: A**



**6.** In six kingdom classification, Monera was divided into two separate kingdoms on the basis of

- A. Cell wall composition
- B. Lipid nature in plasma membrane
- C. Absence of sap vacuole
- D. Both (1) & (2)

#### **Answer: D**



- 7. Select correct statement w.r.t. monera
  - A. All are autotrophic prokaryotes
  - B. All are chemoheterotrophs
  - C. Unicellular, colonial or filamentous organisms
  - D. Prokaryotes with 70 S ribosome and histonic DNA

#### **Answer: C**



**8.** Multicellular with loose tissue body organisation is a characteristic feature of

- A. Monera
- B. Protista
- C. Plantae
- D. Fungi

**Answer: D** 



9.	Cell	wall	is	made	of	polysaccharide	and	
amino acid in most of the members of								

- A. Monera
- B. Protista
- C. Fungi
- D. Animalia

#### **Answer: A**



10.	Cyclosis	is	absent in

- A. Diatoms
- B. Eubacteria
- C. Algae
- D. Plantae

## **Answer: B**



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11. Select incorrect statement w.r.t. eubacteria

- A. Have very simple structure
- B. Peptidoglycan nature of cell wall
- C. Heterotrophs are most abundant in nature
- D. Show most simple metabolic diversity

#### **Answer: D**



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12. Find odd one w.r.t. phototrophic nutrition

- A. Chromatium and Chlorobium
- B. Rhodopseudomonas and Thiospirillium
- C. Chloronema and Chloroflexus
- D. Pseudomonas and Clostridium

#### **Answer: D**



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**13.** Mark the incorrect option (w.r.t. nitrifying bacteria)

- A. Nitrococcus
- B. Leptothrix
- C. Nitrobacter
- D. Nitrocystis

#### **Answer: B**



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**14.** Genetic recombination in which a small double stranded place of DNA is transferred

from donor bacterium to recipient bacterium

by a bacteriophage was first demonstrated by

- A. Griffith
- B. Lederberg and Tatum
- C. Zinder and Lederberg
- D. Avery et.al.

## **Answer: C**



#### 15. Select correct match

#### Column-I

- a. Ketting of fibres
- b. Pollution control
- Curing of leaves
- d. Backracin

#### Column-II

- (i) Pseudomonas putida
- (ii) Pseudomonas fluorescence
- (iii) Bacillus licheniformis
- (M) Micrococcus candidans

#### **Answer: A**



#### 16. Archaebacteria do not show

- A. Peptidoglycan in cell wall
- B. Introns in DNA
- C. Branched chain lipids in cell membrane
- D. Ribosomal proteins with highly acidic nature

#### **Answer: A**



- **17.** Thermoacidophiles are capable of withstanding extremely low pH and high temperature due to the
  - A. Presence of branched chain of lipid in cell membrane
  - B. Presence of resistant enzyme which can operate in basic conditions
  - C. Presence of higher concentration of KCl in their cells
  - D. More than one option is correct

#### **Answer: A**



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**18.** Which group of monerans played significant role in evolution of aerobic forms of life ?

- A. Mycoplasma
- B. Cyanobacteria
- C. Archaebacteria
- D. Actinomycetes

#### **Answer: B**



- **19.** The characteristic photosynthetic pigments in cyanobacteria are
  - A. Chlorophyll a and c
  - B. Chlorophyll a and carotenes
  - C. Chlorophyll a and phycobilins

D. Chlorophyll a, carotenoids and phycobilins

# **Answer: D**



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# **20.** Smallest wall-less monerans

- A. Develop fried egg appearance in culture
- B. Are motile
- C. Have definite shape

D. Are mostly saprophytic

**Answer: A** 



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**21.** Which kingdom includes most diversed group of organisms and has no well defined boundaries?

A. Monera

B. Protista

- C. Fungi
- D. Plantae

# **Answer: B**



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# **22.** Chrysophytes are

- A. Diatoms and desmids
- B. Diatoms and dinoflagellates
- C. Slime moulds and desmids

D. Slime moulds and diatoms

#### **Answer: A**



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**23.** Which of the following option for diatoms is correct?

- A. Pecto-cellulosic cell wall
- B. Slicified cell wall
- C. Multicellular eukaryotes

D. Produce saxitoxin

**Answer: B** 



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**24.** The cell wall encloses the peripheral layer of cytoplasm surrounded a large central vacuole in

A. Euglena

**B.** Diatoms

- C. Amoeba
- D. Aulosira

# **Answer: B**



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**25.** Red tide is caused by rapid multiplication of

- A. Nostoc
- B. Desmids

- C. Diatoms
- D. Gonyaulax

## **Answer: C**



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- **26.** Mark the mis-matched pair
  - A. Pyrocystis Bioluminescence
  - B. Whirling whips Soap box like body

structure

- C. Diatomite Kieselguhr
- D. Gymnodinium Zygotic meiosis

#### **Answer: D**



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**27.** Red-organge photosenitive pigment in Euglena is

- A. Astaxanthin
- B. Chlorophyll

- C. Phycocyanin
- D. Phycoerythrin

## **Answer: B**



- 28. Acellular slime moulds show
  - A. Haploid uninucleate plasmodium
  - B. Naked sporangia
  - C. Autotrophic nutrition

D. Isogamous type reproduction

**Answer: D** 



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**29.** In acellular slime moulds, sporangium has an intricate network of cytoplasmic threads called

A. Peridium

B. Pseudopodia

- C. Capillitium
- D. Trichocyst

## **Answer: C**



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# **30.** Mark the correct match:

- A. Amoeboid protozoan All endoparasite
- B. Flagellated protozoan Paramoecium

C. Sporozoan - Absence of locomotory

structure

D. Ciliated protozoan - Entamoeba

**Answer: C** 



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31. Mark the odd one (w.r.t. fungi)

A. Unicistemal golgi bodies

- B. Show a great diversity in morphology and habitat
- C. Most of the members are aquatic
- D. Reverse fodd material is stored in the form of oil and glycogen

#### **Answer: C**



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**32.** Select incorrectly matched pair :

- A. Rhizopus Sporangiospore
- B. Penicillium Ascocarp
- C. Mucor Dikaryophase
- D. Aspergillus Conidia

#### **Answer: C**



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33. Coenocytic mycelium is found in:-

A. Neurospora

- B. Rhizopus
- C. Penicillium
- D. Ustilago

#### **Answer: B**



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**34.** Choose incorrect match w.r.t. different classes of fungi

A. Oomycetes - zoospore - gametic copulation

B. Zygomycetes - sporangiospore zygophore

C. Ascomycetes - conidia - monokaryotic aseptate mycelium

D. Phycomucetes - algal and conjugation fungi - coenocytic mycelium

# **Answer: C**



# 35. Asci are not organised into ascocarps in

- A. True yeast
- B. Drosophila of plant kingdom
- C. Pigmented mould
- D. Morels

#### **Answer: A**



**36.** Ultimate branches of conidiophore in

Penicillium is

- A. Rami
- B. Phialide
- C. Sterigmata
- D. Metulae

**Answer: D** 



**37.** The common type of asexual spore in sac fungi is

- A. Uninucleate and motile
- B. Unilayered and non-motile
- C. Two layered and non-motile
- D. Multinucleate, two layered and motile

**Answer: C** 



**38.** The name of the class is based on sexual structure as the site karyogamy and meiosis in

- A. Phycomycetes and Actinomycetes
- B. Deuteromycetes and Zygomycetes
- C. Acomycetes and Basidiomycetes
- D. Basidiomycetes and Actinomycetes

### **Answer: C**



**39.** In Agaricus, clamp connections and dolipore septa are shown by the hyphae of

- A. Primary mycelium
- B. Secondary mycelium
- C. Monokaryotic mycelium
- D. Coenocytic mycelium

**Answer: B** 



40. Select correct statement w.r.t. mycorrhizal roots

A. They do not differ in shape from normal roots

B. Often show a wooly covering

C. Possess root cap but lack hairs

D. Fungal partner is commonly a member of Ascomycetes

**Answer: B** 



41. Lichens growing on tree bark are called

A. Lignicolous

**B.** Terricolous

C. Corticolous

D. Saxicolous

**Answer: C** 



**42.** Common mycobionts and phycobionts of lichen body are respectively

- A. Ascomycetes, Chloropyceae
- B. Ascomycetes, Cyanophyceae
- C. Basidomycetes, Chlorophycease
- D. Basidomycetes, Cyanophyceae

## **Answer: A**



**43.** Foliose lichens are attached to the substratum at one or few places with the help of

- A. Branched, multicellular rhizoids
- B. Holdfast
- C. Rhizines
- D. Rhizomorph

#### **Answer: C**



**44.** Specialised structure in the thallus of lichen for nitrogen fixation and retaining moisture is

- A. Cyphellae
- B. Isidia
- C. Cephalodia
- D. Soredia

#### **Answer: C**



**45.** Which of the following feature is not related with virus?

A. Infectivity and host specificity

B. Presence of genetic material

C. Occurrence of certain enzymes

D. Presence of respiration

#### **Answer: D**



- 46. Most of the viruses are/have
  - A. Enveloped nucleo-protein structure
  - B. Non-enveloped nucleo-protein structure
  - C. Infectious protein particles
  - D. Double stranded DNA as well as dsRNA

#### Answer: B



**47.** Select incorrect statement w.r.t.  $T_4$  bacteriophages

- A. Have polygonal
- B. Motile organisms
- C. Six all fibres
- D. ds-DNA as the genetic material

**Answer: B** 



**48.** TMV is

A. ds Ribovirus

B. ds Deoxyvirus

C. ss Ribovirus

D. Ribovirus with 6400 capsomeres

**Answer: C** 



**49.** Infectious RNA particles without protein coat

- A. Have high molecular weight
- B. Were discovered by Alper
- C. Known to cause disease in plants
- D. More than one option is correct

**Answer: C** 



50. Mark the odd one (w.r.t. prions)

A. CFJ disease

B. Mad cow disease

C. Potato leaf roll

D. Scrapie disease

Answer: C



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**Assignment Section A Objective Type Questions** 

**1.** Statement-1: Linnaeus classified plants into trees, shrubs and herbs, on the basis of morphological characters.

Statement-2: Aristotle divided animals into group -Anaima and Enaima.

- A. Only statement-1 is correct
- B. Only statement-2 is correct
- C. Both statement-1 and statement-2 are

correct

D. Both statement-1 and statement-2 are incorrect

# **Answer: B**



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**2.** In members of which kingdom, nuclear membrane is absent ?

A. Monera

B. Protista

C. Fungi

D. Plantae

**Answer: A** 



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**3.** In five-kingdom classification system, the kingdom that includes, the blue-green algae, nitrogen-fixing bacteria and methanogenic archaebacteria is

B. Protista

C. Funi

D. Plantae

### **Answer: A**



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**4.** Which one of the following is not the basis of five kingdom classification?

- A. Cell structure
- B. Body organisation
- C. Reproduction
- D. Reserve food materials



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**5.** Position of bacteria in a kingdom system of classification proposed by Linnaeus is

- A. Monera
- B. Protista
- C. Plantae
- D. Animalia

## **Answer: C**



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**6.** Who was the founder of five kingdom system of classification?

A. C. Linnaeus

B. R.H. Whittaker

C. Aristotle

D. T.O. Diener

# Answer: B



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7. According to five kingdom system, gymnosperms and angiosperms are grouped under the kingdom

- A. Monera
- B. Protista
- C. Fungi
- D. Plantae



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**8.** Which organisms are not included in the five kingdom system of classification ?

- A. Protozoans
- B. Viruses
- C. Lichens
- D. Both (2) & (3)



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**9.** Who for the first time classified organisms on the basis of scientific approach?

- A. Aristotle
- **B. Linnaeus**
- C. Whittaker
- D. Pasteur

# **Answer: A**



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10. Aristotle classified animals in two groups on the basis of presence of absence of RBC.

The group which does not have RBCs is

- A. Anaima
- B. Enaima
- C. Ovipera
- D. Vivipera

# Answer: A



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11. The heterotrophic, eukaryotic, multicellular organism without cell wall is included in the kingdom

- A. Protista
- B. Fungi
- C. Plantae
- D. Animalia



# 12. Match the following

Column-I (Group of bacteria)

Column-II (Their shape)

a. Coccus

(i) Rod-shaped

b. Bacillus

- (ii) Spherical
- c. Spirillum
- (iii) Spiral
- d. Vibrium :
- (iv) Comma-shaped

A. a(i), b(ii), c(iii), d(iv)

B. a(ii), b(i), c(iii), d(iv)

C. a(i), b(ii), c(iv), d(iii)

D. a(ii), b(i), c(iv), d(iii)

#### **Answer: B**



**13.** During favourable conditions bacteria mainly reproduce by

A. Budding

B. Fragmentation

C. Sporulation

D. Fission

**Answer: D** 



- 14. Select the correct statement
  - A. Cholera, typhoid, tetanus are well-known diseases caused by viruses
  - B. Dinoflagellates, euglenoids and slime moulds are placed under kingdom

    Monera
  - C. Members of kingdom Protista are primarily aquatic

D. Dinoflagellates are the chief 'producers' in the oceans

**Answer: C** 



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15. Select the incorrect statement.

A. Nostoc and Anabaena have heterocysts for nitrogens fixation.

- B. Cyanobacteria often form blooms in polluted water bodies
- C. Heterotrophic bacteria are more abundant in nature
- D. The cell wall of Mycoplasma are made up of chitin



**16.** Heterocysts present in Anabaena is specialised for

- A. Nitrogen fixation
- B. Food storage
- C. Fission
- D. Sexual reproduction

**Answer: A** 



17. Mark the odd one w.r.t. cell wall.

A. Halophiles

B. Methanogens

C. Thermoacidophiles

D. Cyanobacteria

**Answer: D** 



**18.** Primitive bacteria living in salty areas are called as

A. Methanogens

B. Thermoacidophiles

C. Heliophytes

D. Halophiles

**Answer: D** 



<b>19.</b> Select the non-protistan group.
A. Slime moulds
B. Dinoflagellates
C. Phycomycetes
D. Chrysophytes
Answer: C



- A. All slime moulds are haploid
- B. Protozoans-lack cell wall
- C. Dinoflagellates are non-motile
- D. Pellicle is absent in Euglena

### **Answer: B**



- 21. Which is not a feature of dinoflagellates?
  - A. They cause red tides

- B. Their cell wall has stiff cellulose plates on the outer surface
- C. They release toxins
- D. These are mostly fresh water and nonphotosynthetic



**22.** \_\_\_\_\_are saprophytic protists, whose body moves along decaying twigs and leaves engulfing organic material.

- A. Euglenoids
- B. Dinoflagellates
- C. Chrysophytes
- D. Slime moulds

#### **Answer: D**



**23.** Being photosynthetic, which organism in absence of sunlight behave like heterotrophs?

- A. Slime moulds
- B. Euglenoids
- C. Sporozoans
- D. Ciliated protozoans

#### **Answer: B**



24. Which is the incorrect statement regarding fungi?

A. Wheat rust causing agent in Puccinia

B. Penicillium is a source of antibiotic

C. The cell wall of fungi are composed of peptidoglycans

D. Fungi prefer to grow in warm and humid places

# **Answer: C**



**25.** Statement-1 : Yeast is a multicellular fungus.

Statement-2 : Penicillium is an unicellular fungus.

Statement-3 : Albugo is a parasitic fungus on mustard.

A. Only statement-1 and statement-2 are correct

B. All the above statements are incorrect

C. Only statement-3 is correct

D. Both statement-1 and statement-3 are incorrect

#### **Answer: C**



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26. Mark the correct statement.

A. Phycomycetes include mushrooms,

bracket fungi or puff balls

- B. The mycelium of basidiomycetes is branched and septate
- C. Neurospora is used extensively in biochemical and genetic work, it belong to group basidiomycetes
- D. Morels and truffles are non-edible

## Answer: B



**27.** With respect to fungal sexual cycle, choose the correct sequence of events

- A. Karyogamy, plasmogamy and meiosis
- B. Meiosis, plasmogamy, and karyogamy
- C. Plasmogamy, karyogamy and meiosis
- D. Meiosis, karyogamy and plasmogamy

**Answer: C** 



- 28. Mark the odd one w.r.t. kingdom fungi.
  - A. They reproduce asexually and sexually
  - B. They show a great diversity in structure and habitat
  - C. Most of fungi are saprophytic in their mode of nutrition
  - D. They do not reproduce by zoospores



29. The sex orange are absent, but plasmogamy is brought about by fusion of two vegetative or somatic cells of different genotypes. It is the feature of

- A. Phycomycetes
- B. Basidiomycetes
- C. Ascomycetes
- D. All of these

#### **Answer: B**



**30.** The fungi form fruiting bodies in which\_\_\_\_\_division occurs, leading to formation of\_\_\_\_spores.

A. Mitotic, diploid

B. Reduction, haploid

C. Mitotic, haploid

D. Reduction, diploid

Answer: B

**31.** Vegetative reproduction by fragmentation is common in

A. Agaricus

B. Saccharomyces

C. Euglena

D. Gonyaulax

**Answer: A** 



#### **32.** Select the incorrect match.

- Member Class
- Phycomycetes Albugo
- Class Member
- Basidiomycetes Claviceps
- Class Member
- Penicillium Ascomycetes
- Class Member
- Deuteromycetes Trichoderma

#### **Answer: B**



**33.** Haploid sexual spore produced exogenously is

- A. Ascospore
- B. Basidiospore
- C. Oospore
- D. Zygospore

### **Answer: B**



# 34. Coenocytic mycelium is found in

- A. Deuteromycetes
- B. Phycomycetes
- C. Ascomycetes
- D. All of these

#### **Answer: B**



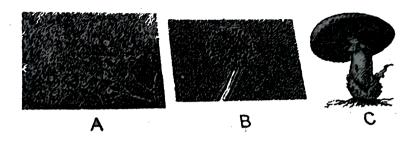
**35.** The members of which group are commonly known as sac fungi?

- A. Phycomycetes
- B. Deuteromycetes
- C. Basidomycetes
- D. Ascomycetes

**Answer: D** 



36. Identify A, B and C in given diagram.



- A. A = Mucor, B = Aspergillus, C = Agaricus
- B. A = Mucor, B = Agaricus, C = Aspergillus
- C. A = Agaricus, B = Mucor, C = Aspergillus
- D. A = Agaricus, B = Aspergillus, C = Mucor

#### **Answer: A**



## 37. Which one is correctly matched?

- A. Agaricus Smut
- B. Ustilago Mushroom
- C. Puccinia Insectivorous plant
- D. Deuteromycetes Imperfect fungi

### **Answer: D**



**38.** Which of the following statement is incorrect about viruses ?

A. Viruses contain either RNA or DNA

B. Viruses do not have their own metabolic

C. Bacteriophages are usually double stranded DNA viruses

D. TMV contains both RNA and DNA as their genetic material

**Answer: D** 

39. Viruses that infect the bacteria are termed as

A. Cyanophages

B. Bacteriophages

C. Mycophages

D. Both (1) & (2)

**Answer: B** 



**40.** Who demonstrated that the extract of the infected plants of tobacco could cause infection in healthy plants ?

A. Pasteur

B. M.W. Beijerinek

C. D.J. Ivanowsky

D. W.M. Stanley

**Answer: B** 



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**41.** The protein cost called capsied made of small subunits called capsomeres are present in

A. Viruses

B. Bacteria

C. Fungi

D. Gymnosperms

Answer: A

**42.** Select the incorrect match w.r.t. genetic material.

A. Herpes virus - ssDNA

B. Bacteriophages - dsDNA

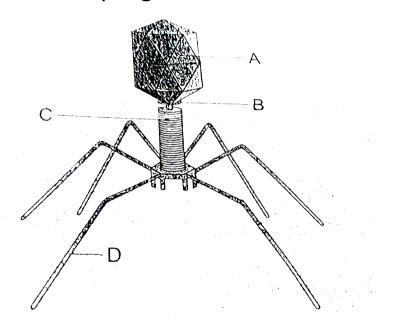
C. TMV - ssRNA

D. Influenza virus - ssRNA

Answer: A



**43.** Identify A, B, C and D parts in this diagram of bacteriophage.



A. A-Head, B - Sheath

C - Collar, D - Tail fibres

B. A - Head, B - Collar

C - Sheath, D - Tail fibres

C. A- Head, B- Collar

C - Tail fibres, D - Sheath

D. A - Head, B - Sheath

C - Tail fibres, D - Collar

## **Answer: B**



- 44. Select the correct statement.
  - A. Viroids have double stranded RNA
  - B. RNA of viroids have high molecular weight than viruses
  - C. Mumps and Herpes are viral diseases
  - D. The name virus was given by D.J.

    Ivanowsky

### **Answer: C**



**45.** Lichens show symbiotic relationships between

- A. Algae and fungi
- B. Algae and bacteria
- C. Fungi and bacteriophage
- D. Alage and bacteriophage

**Answer: A** 



- 46. Which is correct w.r.t. lichens?
  - A. Mycobiont is autotrophic component
  - B. Phycobiont is heterotrophic component
  - C. They are good pollution indicators
  - D. They do not grow non-pollution indicators

### **Answer: C**



**47.** An association between roots of higher plants and fungi called

- A. Lichens
- B. Mycorrhiza
- C. Slime mould
- D. Neurospora

**Answer: B** 



- **48.** Select the incorrect statement.
  - A. Cuscuta is a parasitic plant
  - B. Bladderwort and Venus fly trap are examples of insectivorous plants.
  - C. Plantae includes algae, bryophytes, pteridophytes, gymnosperms and angiosperms
  - D. The mode of nutrition in plants is holozoic

### **Answer: D**



- **49.** In which group of organisms, reserve food is stored in the form of glycogen and fat ?
  - A. Man and Monkey
  - B. Cuscuta and Dog
  - C. Bladderwort and Cuscuta
  - D. Bladderwort and Venus fly trap

### **Answer: A**



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**50.** Diatomaceous earth is formed due to which substance?

- A. Phosphorus
- B. Calcium
- C. Silicon
- D. Copper

### **Answer: C**



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# **Assignment Section B Objective Type Questions**

- **1.** Which kingdom was introduced in four kingdom classification and who proposed it?
  - A. Protista and Copeland
  - B. Plantae and Linnaeus
  - C. Monera and Whittaker

D. Monera and Copeland

**Answer: D** 



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**2.** Select correct match w.r.t. Whittaker' system of classification

A. Monera : Unicellular, osmotrophs, producers and decomposers, true,

cellulosic cell wall

B. Protista : Unicelullar, eukaryotic,

photoautotrophs and chemoautotrophs

C. Fungi: Multicellular tissue, eukaryotic, osmostrophs, chitinous wall

D. Animalia : Multicellular, eukaryotic, organ or organ system, hotozoic, no saprobic

Answer: C



**3.** Domain Eukarya includes how many kingdoms (w.r.t. six kingdom system)?

- A. 2
- B. 3
- C. 1
- D. 4

**Answer: D** 



**4.** Bacteria are considered primitive organisms because they

A. Possess incipent nucleus

B. Are small, microscopic plants, which are not seen by the naked eyes

C. Cause serious diseases to human being,

domesticated animals and crop plants

D. Produce endospores which are very resistant to adverse conditions

# Answer: A

**5.** 70S ribosomes, chromatophores and circular DNA, are found in

A. All eukaryotes

B. All prokaryotes

C. Some prokaryotes

D. Some eukaryotes and some prokaryotes

**Answer: C** 



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6. There is no alternation of generation in

Escherichia coli because of the absence of

A. Syngamy

B. Reduction division

C. Conjugation

D. Both (1) & (2)

**Answer: D** 



**7.** Branched chain lipids occur in the cell membranes of

A. Methanobacterium

B. Mycoplasma

C. Actinomycetes

D. Streptomyces

**Answer: A** 



8.	Cyano	bacteria	do	not	possess
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- A. Gene recombinations
- B. Flagella
- C. Plasmids
- D. Pigments

### **Answer: B**



**9.** Bacterial cell divides every one minute. It takes 15 minutes a cup to be one-fourth full. How much time will it take to fill the cup?

- A. 30 minutes
- B. 45 minutes
- C. 60 minutes
- D. 17 minutes

## **Answer: D**



**10.** Highly resistance nature of endospore is due to the presence to

A. Dipicolinic acid and peptidoglycan in spore coat

- B. Peptidoglycan in exosporium
- C. Dipicolinic acid and Ca in cortex
- D. Dipicolinic acid and Ca in cell membrane

**Answer: C** 



**11.** Endospores formed by certain becteria are actually the means for

A. Reproduction

**B.** Perennation

C. Bioluminescence

D. Red snow formation

**Answer: B** 



**12.** Select an incorrect statement for  $F^{\,+}$  bacteria

A. It has F plasmid

B. Only plasmic pili are present

C. It is considered as donor bacterium

D. It cannot conjugate with another  $F^{\,+}$ 

form

### **Answer: B**



**13.** Sea water glows during night mainly due to occurrence of

- A. Gonyaulax
- B. Noctiluca
- C. Euglena
- D. Cyclotella

**Answer: B** 



- 14. Rejuvenescent spore of diatom is
  - A. Haploid and exospore
  - B. Diploid and statospore
  - C. Haploid and statospore
  - D. Diploid and auxospore

**Answer: D** 



**15.** Leucosin (Chrysolaminarin) is a carbohydrate which is stored as reserve food in case of

- A. Diatom
- B. Euglena
- C. Dinoflagellates
- D. Paramoecium

## **Answer: A**



- **16.** Flagellation in Euglena is
  - A. Uniflagellation and stichonematic
  - B. Isokont and whiplash type
  - C. Heterokont and whiplash
  - D. Heterokont and stichonematic

### **Answer: D**



**17.** Special type of red pigment present in the eye-spot of Euglena and Crustacea is called

- A. Phycoerythrin
- B. Astaxanthin
- C. Carotene
- D. Xanthophyll

**Answer: B** 



<b>18.</b> Paraflagellar bo	dy of Eugl	ena helps ir
-----------------------------	------------	--------------

- A. Locomotion
- B. Photoreception
- C. Reproduction
- D. Osmoregulation

## **Answer: B**



**19.** The structure formed in the life cycle of cellular slime-mould due to chemotactic movement is

- A. Pseudoplasmodium
- B. Swarm cells
- C. Macrocyst
- D. Capillitia

## Answer: A



20. Myxamoeba are formed in the life cycle of

A. Physarum

B. Amoeba

C. Entamoeba

D. Diatoms

**Answer: A** 



**21.** Difference between a red sea and red tide is

A. Red tide takes place in red sea

B. Associated with a cyanobacteria and protist respectively

C. One is by virus and other by bacteria

D. Associated with Rhodophyceae and diatoms respectively

**Answer: B** 

- **22.** Consider the following statements and select correct set of features w.r.t. the life cycle of acellular slime moulds
- a. Haploid vegetative stage is myxamoebae
- b. Diploid vegetative stage as plasmodium
- c. Capillitium
- d. Photosynthetic protists
- e. Sporic meiosis
- f. Isogamous sexual reproduction

g. Anisogamous sexual reproduction with zygotic meiosis

A. a, c, g

B. b, c, g

C. b, d, e, f

D. b, c, e, f

#### **Answer: D**



## 23. Find the correct match

Column I Column II

- a. Gill fungi (i) Salmon disease
- b. Cup fungi (ii) Trama
- c. Black mould (iii) Penicillin
- d. Blue / green mould (iv) Zygophore
  - (v) Apothecium

A. a(ii), b(iii), c(i), d(v)

B. a(ii), b(v), c(iv), d(i)

C. a(ii), b(v), c(iv), d(iii)

D. a(ii), b(iii), c(i), d(iv)

#### **Answer: C**



24. Select incorrectly matched pair:

A. Mucor mucedo - Coprophilous

B. Albugo candida - Fecultative parasite

C. Agaricus bisporus - Edible basidiocarp

D. Puccinia graminis - Black rust fungi

**Answer: B** 



# 25. Fungi differs from bacteria in

- A. Mode of nutrition
- B. Having NAG in cell wall
- C. Flagella structure
- D. Reserve food material as glycogen

# **Answer: C**



26. Fruiting body in Aspergillus (or Penicillium)

is known as

A. Cleistothecium

B. Apothecium

C. Perithecium

D. Ascus

**Answer: A** 



**27.** The famous Irish famine is related to a disease of potato known as:-

- A. Late blight of potato
- B. Early blight of potato
- C. Dry rot of potato
- D. Potato scab

## **Answer: A**



**28.** A dolipore septum is a characteristic feature of

- A. Phycomycetes
- B. Ascomycetes
- C. Basidiomycetes
- D. Zygomycetes

**Answer: C** 



**29.** Which one of the following combination of characters is correct for the given fungal group?

A. Algal fungi : Coenocytic, cellulosic wall, zoospore, zygospore, dikaryophase present

B. Conjugating fungi: Septate mycellium, chitinous wall, sporangiospore, shorter (n+n) phase

C. Sac fungi : Septate mycellium,

Ascogonium, Crozier stage, meiospores as ascosspores shorter dikaryophase

D. Club fungi: Shorter primary mycellium stage, No sex organs, dominant dikaryophase zygosporic meiosis

# Answer: C



**30.** Find set of edible basidiocarps.

A. Agaricus Pleurotus

B. Agaricus, Morchella

C. Volvariella, Tuber

D. Amanita, Morchella

**Answer: A** 



- 31. Read the statements carefully
- a. Hartig net is the network of intracellular mycellium of Boletus
- b. Ectomycorrhiza forms ten percent of total mycorrhiza
- c. Fungal partner of endomycorrhiza belongs to zygomycetes or phycomycetes
  - A. Only a & c are correct
  - B. Only b & c are correct
  - C. Only c is correct

D. All are correct

## **Answer: B**



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**32.** Symptom not seen in plants due to viruses is

A. Mosaic formation

B. Leaf rolling and curling

C. Yellowing, vein clearing

D. Root knot

## **Answer: D**



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**33.** Viruses possess all the following properties, except

- A. They are non-cellular organisms
- B. Possess both DNA and RNA
- C. Capsid protects nucleic acid

D. Have inert crystalline structure outside

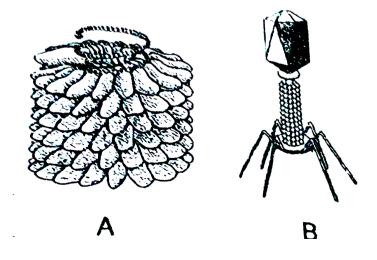
living cells

**Answer: B** 



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**34.** Identify A and B given below.



A. A - DNA virus - Cauliflower mosaic virus

B - RNA virus - Pox virus

B. A - RNA virus - T.M.V

B - DNA virus -  $T_4$  bacteriophage

C. A - RNA virus - Hepatitis B virus

B - Reterovirus - T.M.V

D. A - Reterovirus - Hepatitis B virus

B - RNA virus -  $T_4$  bacteriophage

#### **Answer: B**



35. Read the following statements carefully and identify correct statements w.r.t. Lichens
a. The association cannot tolerate air pollution, especially due to sulphur dioxide
b. Lichens are annuals and their growth is slow
c. The fungal partner mostly belongs to ascomycetes.

d. Soredia are most efficient means of asexual reproduction

e. Orchids seldom occur without this association

f. Foliose lichens are pioneers of succession in

a water body.

A. c,d,f

B. a,c,d,f

C. a,b,e

D. a,c,d

**Answer: D** 



1. Which one of the following is wrong for fungi

A. They are eukaryotic

B. All fungi possess a purely cellulosic cell
wall

C. They are heterotrophic

D. They are both unicellular and multicellular

## Answer: B

- 2. Methanogens belong to
  - A. Eubacteria
  - B. Archaebacteria
  - C. Dinoflagellates
  - D. Slime moulds

**Answer: B** 



3. Select the wrong statement.

A. The walls of diatoms are easily destructible

B. Diatomaceous earth's is formed by the cell walls of diatoms

C. Diatoms are chief producers in the oceans

D. Diatoms are microscopic and float passively in water

## **Answer: A**



- 4. Select the wrong statement.
  - A. Bacterial cell wall is made up of peptidioglycan
  - B. Pili and fimbriae are mainly involved in motility of becterial cells
  - C. Cyanobacteria lack flagellated cells

D. Mycoplasma is a wall-less microorganism

## **Answer: B**



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**5.** Which one of the following statements is wrong?

A. Phycomycetes are also called algal fungi

B. Cyanobacteria are also called blue-green algae

- C. Golden algae are also called desmids
- D. Eubacteria are also called false bacteria

**Answer: D** 



- **6.** Chrysophytes, Euglenoids, Dinoflaegellates and Slime moulds are included in the kingdom
  - A. Animalia
  - B. Monera

- C. Protista
- D. Fungi

# **Answer: C**



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**7.** One of the major compnents of cell wall of most fungi is

- A. Hemicellulose
- B. Chitin

C. Peptidoglycan

D. Cellulose

**Answer: B** 



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**8.** The primitive prokaryotes responsibel for the production of biogas from the dung of ruminant animals include

A. Eubacteria

- B. Halophiles
- C. Thermoacidophiles
- D. Methanogens

#### **Answer: D**



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**9.** Which of the following statements is worng for viroids

A. Their RNA is of high molecular weight

- B. They lack a protein coat
- C. They are smaller than viruses
- D. They causes infections

#### **Answer: A**



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- 10. Choose the wrong statement
  - 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. Moreis and truffles are poisonous mushrooms

Answer: D



11. In which group of organisms the cell walls form two thin overlapping shells which fit together

- A. Slime moulds
- B. Chrysophytes
- C. Euglenoids
- D. Dinofagellates

## **Answer: B**



- 12. Choose the wrong statement
  - A. Mosaic disease in tobacco and AIDS in human being are caused by viruses
  - B. The viroids were discovered by D.I.

    Ivanowski
  - C. W.M. Stanley showed that viruses could be crystallized
  - D. The term Contagium vivum fluidum was coined by M.W. Beijerinek

#### **Answer: B**



- **13.** The imperfect fungi which are decomposers of litter and help in mineral cycling belong to:
  - A. Ascomycetes
  - B. Deuteromycetes
  - C. Basidiomycetes
  - D. Phycomycetes

#### **Answer: B**



- 14. Pick up the wrong statement
  - 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

#### **Answer: A**



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# **15.** Which one of the following matches is correct?

(1	1) Agaricus	Parasitic fungus	Basidiomycetes	
(2	Phyto- phthora	Aseptate mycelium	Basidiomycetes	
(3)	) Alternaria	Sexual reproduction	Deuteromycetes	
(4)	Mucor	absent Reproduction by conjugation	Ascomycetes	



<b>16.</b> The guts of cow and buff	falo possess
-------------------------------------	--------------

- A. Cyanobacteria
- B. Fucus spp
- C. Chlorella spp
- D. Methanogens

**Answer: D** 



**17.** five kingdom system of classification suggested by R.H whittaker is not based on

A. Presence or absence of a well defined nucleus

B. Mode of reproduction

C. Mode of nutrition

D. Complexity of body organisation

### **Answer: B**



### 18. Archaebacteria differ from eubacteria in

- A. Cell membrane structure
- B. Mode of nutrition
- C. Cell shape
- D. Mode of reproduction

#### **Answer: A**



**19.** Which of the following shows coiled RNA strand and capsomeres

- A. Polio virus
- B. Tobacco mosaic virus
- C. Measles virus
- D. Retrovirus

**Answer: B** 



- 20. Viruses have
  - A. DNA enclosed in a protein coat
  - B. Prokaryotic nucleus
  - C. Single chromosome
  - D. Both DNA and RNA

### **Answer: A**



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21. The motile bacteria are also to move by

- A. Fimbriae
- B. Flagella
- C. Cilia
- D. Pili

### **Answer: B**



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**22.** Pigment-containing membranous

extensions in some cyanobacteria are

- A. Basal bodies
- B. Pneumatophores
- C. Chromatophores
- D. Heterocysts

### **Answer: C**



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23. Which statement is wrong for viruses

- A. They have ability to synthesize nucleic acids and proteins
- B. Antibiotics have no effect on them
- C. All are parasites
- D. All of them have helical symmetry

#### **Answer: D**



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24. The cyanobacteria are also referred to as:-

- A. Slime moulds
- B. Blue green algae
- C. Protists
- D. Golden algae

### **Answer: B**



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**25.** Which one single organism or the pair of organisms is correctly assigned to its or their named taxonomic group?

- A. Yeast used in making bread and beer is a fungus
  - B. Nostoc and Anabaena are examples of protista
- C. Paramecium and Plasmodium belong to the same kingdom as that of Penicillium
- D. Lichen is a composite organism formed from the symbiotic association of an alage and a protozoan

# Answer: A

**26.** How many organism in the list given below are autotrophs Lactobacillus, Nostoc, Chara, Nitrosomonas, Nitrobacter, Streptomuces, Sacharomyces, Trypanosoma, Porphyra Wolfia

- A. Four
- B. Five
- C. Six
- D. Three

### **Answer: C**



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**27.** In the five - kingdom classification Chlamydomonas and Chlorella have been included in

- A. Protista
- B. Alage
- C. Plantae
- D. Monera

### **Answer: A**



- **28.** Which one of the following organisms is not an example of eukaryotic cells
  - A. Amoeba proteus
  - B. Paramecium caudatum
  - C. Escherichia coli
  - D. Euglena viridis

### **Answer: C**



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- 29. Membrane bound organelles are absent in
  - A. Plasmodium
  - B. Saccharomyces
  - C. Streptococcus
  - D. Chalmydomonas

**Answer: C** 



**30.** Single-celled eukaryotes are included in Kingdom

A. Monera

B. Protista

C. Fungi

D. Archaea

Answer: B



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- **31.** Virus envelope is known as
  - A. Core
  - B. Capsid
  - C. Virion
  - D. Nucleoprotein

**Answer: B** 



- 32. Algae have cell wall made up of:
  - A. Cellulose, hemicellulose and pectins
  - B. Cellulose, galactans and mannans
  - C. Hemicellulose, pectins and proteins
  - D. Pectins, cellulose and proteins

### Answer: B



**33.** Some hyperthermophilic organisms that grow in highly acidic (pH2) habitats belong to the two groups

- A. Liverworts and yeasts
- B. Eubacteria and archaea
- C. Cyanobacteria and diatoms
- D. Protists and mosses

### **Answer: B**



# 34. Infectious proteins are presents in

- A. Satellite viruses
- B. Gemini viruses
- C. Prions
- D. Viroids

### **Answer: C**



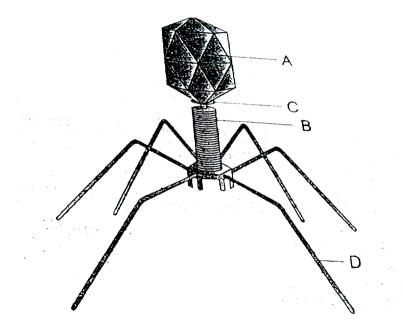
# 35. Black rust of wheat is caused by

- A. Alternaria solani
- B. Ustilago nuda
- C. Puccinia graminis
- D. Xanthomonas oryzae

### **Answer: C**



**36.** Given below is the diagram of a bacteriophage. In which one of the options all the four parts A, B, C and D are correct?



A. A B C DTail fibres Head Sheath Collar

B. A B C D
Sheath Collar Head Tail fibres

c.  $\frac{A}{\text{Head}}$   $\frac{B}{\text{Sheath}}$   $\frac{C}{\text{Collar}}$   $\frac{D}{\text{Tail fibres}}$ 

D.  $\frac{A}{\text{Collar}}$   $\frac{B}{\text{Tail fibres}}$   $\frac{C}{\text{Head}}$  Sheath

# Answer: C



37. Select the correct combination of the statement of the statement (A-D) regarding the characteristics of certain organisms

(A) Methanogens are Archaebacteria which

- produce methane in marshy areas
- (B) Nostoc is a filamentous blue-green algae which fixes atmospheric nitrogen
- (C) Chemosynthetic autotrophic bacteria synthesize cellulose from glucose
- (D) Mycoplasma lack a cell and cen survive without oxygen

The correct statement are

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

D. (a), (b), (d)

### **Answer: D**



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38. T.O. Diener discovered a

A. Free infectious DNA

B. Infectious protein

C. Bacteriophage

D. Free infectious RNA

#### **Answer: D**



- **39.** Which one is the wrong pairing for the disease and its causal organism
  - A. Black rust of wheat Puccinia graminis
  - B. Loose smut of wheat Ustilago nuda
  - C. Root-knot of vegetables Meloidogyne
  - D. Late blight of potato Alternaria solani

### **Answer: D**



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**40.** Which of the following is a symbiotic nitrogen fixer?

A. Azotobacter

B. Frankia

C. Azolla

D. Glomus

### **Answer: B**



- **41.** Thermococcus, Methanococcus and Methanobacterium exemplify:
  - A. Bacteria that contain a cytoskeleton and ribosomes
  - B. Archaebacteria that contain protein homologous to eukaryotic core histones

C. Archaebacteria that lack any histones resembling those found in eukaryotes but whose DNA is negatively supercoiled

D. Bacteria whose DNA is relaxed or positively supercoiled but which have a cytoskeleton as well as mitochondria

### Answer: C



**42.** Cellulose is the major component of cell walls of

- A. Saccharomyces
- B. Pythium
- C. Xanthomonas
- D. Pseudomonas

**Answer: B** 



- **43.** In the light of recent classification of living organisms into three domains of life (bacteria, archea and eukarya), which one of the following statements is true about archaea
  - A. Archaea completely differ from prokaryotes
    - B. Archaea resemble eukarya in all respects
  - C. Archaea have some novel features that are absent in other prokaryotes and eukaryotes

D. Archaea completely differ from both prokaryotes and eukaryotes

### **Answer: C**



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**44.** Bacterial leaf blight of Rice is caused by

A. Erwinia

B. Xanthomonas

C. Pseudomonas

D. Alternaria

### **Answer: B**



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# **45.** Biological organisation starts with

- A. Atomic level
- B. Submicroscopic molecular level
- C. Cellular level
- D. Organismic level

### **Answer: B**



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- 46. Which of the following is a slime mould
  - A. Anabaena
  - B. Rhizopus
  - C. Physarum
  - D. Thiobacillus

**Answer: C** 

**47.** Which one of the following statements about mycoplasma is wrong

A. They cause disease in plants

B. They are also called PPLO

C. They are pleomorphic

D. They are sensitive to penicillin

**Answer: D** 



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**48.** Which pair of the following belongs to basidiomycetes

A. Morchella and Mushrooms

B. Birds' nest fungi and Puffballs

C. Puffballs and Claviceps

D. Peziza and Stink horns

**Answer: B** 



# **49.** Ergot of rye is caused by a species of

- A. Claviceps
- B. Phytophthora
- C. Uncinula
- D. Ustilago

### **Answer: A**



**50.** The thalloid body of a slime mould (Myxomycetes) is known as

A. Protonema

B. Plasmodium

C. Fruiting body

D. Mycellium

**Answer: B** 



**51.** The bacterium (Clostridium botulinum) that causes botulism is

- A. A facultative anaerobe
- B. An obligate anaerobe
- C. A facultative aerobe
- D. An obligate aerobe

**Answer: B** 



**52.** Which of the following environment conditions are essential for optimum growth of Mucor on a piece of bread

A. Temperature of about  $25\,^{\circ}\,C$ 

B. Temperature of about  $5\,^{\circ}\,C$ 

C. Relative humidity of about 5%

D. Relative humidity of about 95%

E. A shady place

F. A brightly illuminated place

Choose the answer from the follwoing options

A. A, C and E only

B. A, D and E only

C. B, D and E only

D. B, C and F only

**Answer: B** 



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**53.** Curing of tea leaves is brought about by the activity of

A. Bacteria

B. Mycorrhiza

- C. Viruses
- D. Fungi

**Answer: A** 



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54. What is common about Trypanosoma,

Noctiluca Monocystis and Giardia

- A. These are all unicellular protists
- B. They have flagella

- C. They produce spores
- D. These are all parasites

## **Answer: A**



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# **55.** Barophillic prokaryotes

A. Grow slowly in highly alkaline frozen

lakes at high altitudes

- B. Occur in water containing high concentrations of barium hydroxide
- C. Grow and multiply in very deep marine sediments
- D. Readily grown and divides in sea water enriched in any soluble salt of barium

Answer: C



**56.** Auxospores and hormocysts are formed respectively by

A. Several diatoms and a few cyanobacteria

B. Several cyanobacteria and several diatoms

C. Some diatoms and several cyanobacteria

D. Some cyanobacteria and many diatoms

**Answer: A** 



**57.** all of the following statements concerning the actinomycetous filamentous soil bacterium Frankia are correct except that Frankia

A. Can induce root nodules on many plant species

B. Can fix nitrogen in the free-living state

C. Like Rhizobium, it usually infects its host

plant through root hair deformation and

stimulates cell proliferation in the host's cortex

D. Forms specialized vesicles in which the nitrogenase is protected from oxygen by a chemical barrier involving triterpene hopanolds

## Answer: B



**58.** Which unicellular organism has a macronucleus for trophic function and one or more micronuclei for reproduction ?

- A. Euglena
- B. Amoeba
- C. Paramoecium
- D. Trypanosoma

## **Answer: C**



**59.** For retting of jute, the fermenting microbe used is

- A. Helicobacter pylori
- B. Methophilic bacteria
- C. Streptococcus lactin
- D. Butyric acid bacteria

**Answer: D** 



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

- A. Plantae
- B. Protista
- C. Monera
- D. Fungi

## **Answer: C**



**61.** In five kingdom system the main basis of classification is

- A. Structure of nucleus
- B. Mode of nutrition
- C. Structure of cell wall
- D. Asexual reproduction

## **Answer: B**



**62.** In which kingdom would you include archaea and nitrogen fixing organisma in the five kingdom classification

- A. Plantae
- B. Fungi
- C. Protista
- D. Monera

## **Answer: D**



**63.** Maximum nutritional diversity is found in the group

- A. Monera
- B. Plantae
- C. Fungi
- D. Animalia

**Answer: A** 



**64.** Specialised cells for fixing atmospheric nitrogen in Nostoc are

- A. Akinetes
- B. Heterocysts
- C. Hormogonia
- D. Nodules

**Answer: B** 



## 65. Nuclear membrane is absent in

- A. Volvox
- **B.** Nostoc
- C. Penicillium
- D. Agaricus

### **Answer: B**



**66.** The most abundant prokaryotes helpful to humans in making curd from milk and in production of antibiotics are the ones categorised as

- A. Chemosynthetic autotrophs
- B. Heterotrophic bacteria
- C. Cyanobacteria
- D. Archaebacteria

#### **Answer: B**



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**67.** Organisms called Methanogens are most abundant in a

A. Hot spring

B. Sulphur rock

C. Cattle yard

D. Polluted stream

**Answer: C** 



**68.** Which of the following is mainly produced by the activity of anaerobic bacteria on sewage

A. Marsh gas

B. Laughing gas

C. Propane

D. Mustard gas

## **Answer: A**



**69.** A peculiar odour found in marshy areas and cow sheds is of gas produced by

A. Mucoplasma

B. Archaebacteria

C. Slime moulds

D. Cyanobacteria

**Answer: B** 



**70.** Organisms, which fix atmospheric nitrogen in the soil, fall under the category of

- A. Bacteria
- B. Green algae
- C. Soil fungi
- D. Mosses

**Answer: A** 



- A. Plasmid vector
- B. Phage vector
- C. Cosmid
- D. F-factor



**72.** Many blue-green algae occur in thermal springs (hot water springs). The temperature tolerance of these algae have been attributed to their

- A. Mitochondrial structure
- B. Importance of homopolar bonds in their proteins
- C. Cell wall structure
- D. Modern cell organization



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**73.** For the first time, the bacteria were observed by

- A. Robert Koch
- B. A.V. Leeuwenhoek
- C. W.H. Stanley
- D. Louis Pasteur



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**74.** A number of organic compounds can be decomposed by

- A. Photoheterotrophs
- B. Pseudomonas
- C. Photolithotrophs
- D. Chemoheterotrophs



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**75.** What are the sex organs provided in some bacteria ?

- A. Sex pili
- B. Plasmid
- C. Circular DNA
- D. Gametes

## **Answer: A**



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**76.** BGA (blue green algae) are included in which of the following groups ?

- A. Bryophytes
- B. Prokaryotes
- C. Protista
- D. Fungi



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77. Which type of DNA is found in bacteria?

A. Circular DNA

B. Membrane bound DNA

C. Straight DNA

D. Helical DNA

**Answer: A** 

**78.** A few organism are known to grow and multiply at temperature of  $100-105^{\circ}\,C$ . They belong to

- A. Thermophilic sulphur algae
- B. Hot spring blue-green algae
- C. Thermophilic subaerial fungi
- D. Marine archaebacteria

Answer: B

## **79.** DNA of E.Coli:

- A. Double stranded and linear
- B. Double stranded and circular
- C. Single stranded and linear
- D. Single stranded and circular

**Answer: B** 



**80.** In photosynthetic bacteria, the pigments occur in

- A. Chromoplasts
- B. Chromatophores
- C. Leucoplasts
- D. Chloroplasts

**Answer: B** 



## 81. What is true for Archaebacteria

- A. All are halophiles
- B. All are photosynthetic
- C. All are fossils
- D. Oldest living beings

## **Answer: D**



- 82. What is true for cyanobacteria?
  - A. Oxygenic with nitrogenase
  - B. Oxygenic without nitrogenase
  - C. Non oxygenic with nitrogenase
  - D. Non oxygenic without nitrogenase

#### **Answer: A**



**83.** Organisms which obtain energy by the oxidation of reduced inorganic compounds are called

- A. Photoautotrophs
- B. Chemoautotrophs
- C. Saprozoic
- D. Coproheterotrophs

## **Answer: B**



- **84.** Which statement is correct for bacterial transduction : -
  - A. Transfer of some genes from one bacteria to another bacteria through
  - B. Transfer of genes from one bacteria to another bacteria by establishing contact
  - C. Bacteria obtained its DNA directly from mother cell

D. Bacteria obtained DNA from other external source

**Answer: A** 



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**85.** Chromosomes in a bacterial cell can be 1 in number and

A. Are always circular with more  $G\equiv C$ 

content

B. Are always linear with more  $G \equiv C$  content

C. Can be either circular or linear, but never both within the same cell

D. Can be circular as well as linear within the same cell

Answer: A



**86.** Viruses that infect bacteria, multiply and cause their lysis, are called

- A. Lysozymes
- B. Lipolytic
- C. Lytic
- D. Lysogenic

**Answer: C** 



- **87.** The most well studied bacterial- plant relationship is that of
  - A. Cyanobacterial symbiosis with some aquatic ferns
  - B. Gall formation on certain angiosperms

    by Agrobacterium
  - C. Nodulations of Sesbania stems by nitrogen fixing bacteria
  - D. Plant growth stimulation by phosphatesolubilising bacteria

#### **Answer: B**



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88. What is true for photolithotrophs?

- A. Obtain energy from radiations and hydrogen from organic compounds
- B. Obtain energy from radiations and hydrogen from inorganic compounds
- C. Obtain energy from organic compounds

D. Obtain energy from inorganic

compounds

**Answer: B** 



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**89.** The protists have

A. Only free nucleic acid aggregates

B. Membrane bound nucleoproteins lying

embedded in the cytoplasm

- C. Gene containing nucleoproteins
  - condensed together in loose mass
- D. Nucleoprotein in direct contact with the rest of the cell substance

### Answer: B



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**90.** Which of the following organisms possessses characteristics of a plant and an animal?

- A. Euglena
- B. Paramoecium
- C. Bacteria
- D. Mycoplasma

### **Answer: A**



- 91. Capillitium is present in the sporangium of
  - A. Dictyostelium

- B. Polysphondylium
- C. Physarum
- D. Navicula



- **92.** Which one of the following is true for fungi
  - A. They are phagotrophs
  - B. They lack a rigid cell wall

- C. They are heterotrophs
- D. They lack nuclear membrane



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**93.** When there are two haploid nuclei per cell in some fungi before the formation of diploid, this stage is called

A. Diplotene

- B. Diplophase
- C. Dikaryophase
- D. Dikaryote



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**94.** Which is linked to discovery of Bordeaux mixture as fungicide ?

A. Black rust of wheat

- B. Bacterial leaf blight of rice
- C. Downy mildew of grapes
- D. Loose smut of wheat



- **95.** Black rust of wheat is caused by
  - A. Albugo candida
  - B. Puccinia graminis tritici

- C. Ustilago nuda
- D. Cleviceps purpurea

**Answer: B** 



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**96.** The smut of maize is caused by

- A. Ustilago avenae
- B. Ustilago nuda
- C. Ustilago hordei

D. Ustilago maydis

#### **Answer: D**



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### 97. Puccinia forms uredia and

- A. Telia on wheat leaves
- B. Aecia on barberry leaves
- C. Pycnia on barberry leaves
- D. Aecia on wheat leaves

### **Answer: A**



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**98.** Columella is a specialized structure found in the sporangium of

- A. Spirogyra
- B. Ulothrix
- C. Rhizopus
- D. Penicillium



# **Watch Video Solution**

# 99. Dikaryotisation occurs in Puccinia on

- A. Upper surface of Barberry leaf
- B. Lower surface of Barberry leaf
- C. Upper surface of wheat leaf
- D. Lower surface of wheat leaf

#### **Answer: A**

**100.** Adhesive pad of fungi penetrate the host with the help of:-

A. Mechanical pressure and enzymes

B. Hooks and suckers

C. Softening by enzymes only

D. Only by mechanical pressure

**Answer: A** 



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**101.** Which fungal disease spreads by seed and flowers?

A. Loose smut of wheat

B. Corn smut

C. Covered smut and bariey

D. Soft rot of potato

**Answer: A** 



**102.** Which of the following secretes toxins during storage condition of crop plants

- A. Aspergillus
- B. Penicllium
- C. Fusarium
- D. Colletotrichum

**Answer: A** 



## 103. Mycorrhiza exhibits the phenomenon of

- A. Parasitism
- **B.** Symbiosis
- C. Antagonism
- D. Endemism

### **Answer: B**



## 104. Mycorrhiza is correctly described as

A. Parasitic association between roots and some fungi

B. Symbiotic relationship between fungi and roots of higher plants

C. Symbiosis of algae and fungi

D. Relation of ants with the stem of some trees

**Answer: B** 

# 105. VAM is an example of

- A. Endomycorrhiza
- B. Ectoparasitism
- C. Endoparasitism
- D. Ectomycorrhiza

**Answer: A** 



## 106. An example of endomycorrhiza is

- A. Nostoc
- **B.** Glomus
- C. Agaricus
- D. Rhizobium

### **Answer: B**



### 107. Satellite RNA are present in some

- A. Plant viruses
- **B.** Viroids
- C. Prions
- D. Bacteriophages

### **Answer: A**



**108.** A cell-coded protein that is formed in response to infection with most animal viruses is called

- A. Histone
- B. Antibody
- C. Interferon
- D. Antigen

### **Answer: C**



## 109. Tobacco Mosaic Virus (TMV) genome is

- A. Single stranded RNA
- B. Double stranded DNA
- C. Single stranded DNA
- D. Double stranded RNA

#### **Answer: A**



# 110. Tailed bacteriophages are

- A. Motile on surface of bacteria
- B. Non-motile
- C. Motile on surface of plant leaves
- D. Actively motile in water

### **Answer: B**



### 111. Viruses posses

- A. Ribosomes to synthesize protein
- B. Organelles for its vital mechanisms
- C. Either DNA or RNA
- D. None of these

### **Answer: C**



## 112. Enzymes are not found in

- A. Fungi
- B. Algae
- C. Virus
- D. Cyanobacteria

### **Answer: C**



113. Viruses are living, because they

A. Multiply in host cells

B. Carry anaerobic respiration

C. Carry metabolic activities

D. Cause infection

**Answer: A** 



**114.** Viruses are no more "alive" than isolated chromosomes because

- A. They require both RNA and DNA
- B. They both need food molecules
- C. They both require oxygen for respiration
- D. Both require the environment of a cell to replicate

### **Answer: D**



**115.** Tobacco mosaic virus is elongated rof like with size

A. 
$$300 \times 10 \text{ nm}$$

$$\mathrm{B.\,300}\times5\,\mathrm{nm}$$

$$\text{C.}~300\times18~\text{nm}$$

D. 
$$700 \times 30 \text{ nm}$$

### **Answer: C**



**116.** Which one of the following statements about viruses is correct

A. Viruses possess their own metabolic system

B. All viruses contain both RNA and DNA

C. Viruses are obligate parasites

D. Nucleic acid of viruses is known as capsid

**Answer: C** 

**117.** Which of the following statements is not true for retroviruses

- A. DNA is not present at any stage in the life cycle of retroviruses
- B. Retroviruses carry gene for RNAdependent DNA polymerase
- C. The genetic material in mature retroviruses is RNA

D. Retroviruses are causative agents for

certain kinds of cancer in man

**Answer: A** 



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118. The causative agent of mad-cow diesase is

a

A. Virus

B. Bacterium

C. Prion

D. Worm

### **Answer: C**



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**119.** Which one of the following statement about lichens is wrong?

A. These grow very rapidly (2 cm per day)

- B. They show fungal and algal symbiotic relationships
- C. Some of its species are eaten is reindeers
- D. These are pollution indicators

**Answer: A** 



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120. Most of the lichens consist of

- A. Green algae and ascomycetes
- B. Brown algae and higher plant
- C. Blue green algae and basidiomycetes
- D. Red algae and ascomycetes

#### **Answer: A**



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**121.** Which of the following is the use of lichens in case of pollution?

- A. They promote pollution
- B. Lichens are not related with pollution
- C. They treat the polluted water
- D. They act as bioindicators of pollution

#### **Answer: D**



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**122.** Lichens are well known combination of an alga and a fungus where fungus has

- A. A saprophytic relationship with the alga
- B. An epiphytic relationship with the alga
- C. A parasitic relationship with alga
- D. A symbiotic relationship with alga

#### **Answer: D**



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**123.** There exists a close associatin between the algae and the fungus within a lichen. The fungus

- A. Provides protection, anchorage and absorption for the algae
- B. Provides food for the alga
- C. Fixes the atmospheric nitrogen for the alga
- D. Releases oxygen for the alga

#### Answer: A



**124.** What is the genetic material in influenza virus?

A. Double helical DNA

B. RNA

C. Single helix DNA

D. None of these

**Answer: B** 



## 125. The sexual reproduction is absent in

- A. Spirogyra
- **B.** Nostoc
- C. Ulothrix
- D. Volvox

#### **Answer: B**



**126.** Which of the following fungi contains hallucinogens

- A. Morchella esculenta
- B. Amanita muscaria
- C. Neurospora sp.
- D. Ustilago sp.

**Answer: B** 



characteristic of

A. Rhodospirillum

B. Spirogyra

C. Chlamydomonas

D. Ulva

**Answer: A** 



**128.** A location with luxuriant growth of lichens on the trees indicates that the

- A. Trees are very healthy
- B. Trees are heavily infested
- C. Location is highly polluted
- D. Location is not polluted

Answer: D



# Assignment Section D Assertion Reason Type Questions

**1.** A : Slime moulds have the characters of both plants and animals

R: Reproductive phase is animal like and vegetative phase is plant like.

A. If both assertion & reason are true and

the reason is the correct explanation of

the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### **Answer: C**



**2.** A: Methanogens can show symbiotic association with eukaryotic organisms.

R: They are used for the production of biogas.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### **Answer: B**



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**3.** A : Lichens do not grow in polluted area having  $SO_2$ .

R: Lichens secrete carbonic acid and oxalic acid on barren rocks.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

the reason is not the correct explanation of the assertion

B. If both assertion & reason are true but

C. If assertion is true statement but reason

is false

D. If both assertion and reason are false statements

#### **Answer: B**



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**4.** A : Secondary mycelium of Agaricus is binucleated.

R: Secondary mycelium is formed by somatogamy of primary mycelium.

- A. If both assertion & reason are true and the reason is the correct explanation of the assertion
- B. If both assertion & reason are true but the reason is not the correct explanation of the assertion
- C. If assertion is true statement but reason is false
- D. If both assertion and reason are false statements

#### **Answer: A**



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**5.** A : Phycobiont is dominant parent in lichens.

R : Algal component in the dual organisms can be eukaryotic only.

A. If both assertion & reason are true and

the reason is the correct explanation of

the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### Answer: D



**6.** A : Unicellular eukaryotes are included in Monera.

R : Unicellular eukaryotes have 70S cytoribosomes.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### **Answer: D**



**7.** A : Slime moulds form fruiting bodies under unfavourable conditions.

R: Naked plasmodium is formed during favourable conditions.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

the reason is not the correct explanation of the assertion

B. If both assertion & reason are true but

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### **Answer: B**



**Watch Video Solution** 

**8.** A: DNase can inhibit the process of transformation.

R: Transformation is absorption of DNA segment from the surrounding medium by a living bacterium.

- A. If both assertion & reason are true and the reason is the correct explanation of the assertion
- B. If both assertion & reason are true but the reason is not the correct explanation of the assertion
- C. If assertion is true statement but reason is false
- D. If both assertion and reason are false statements

#### **Answer: B**



### **Watch Video Solution**

**9.** A : MLOS are pleomorphic and non-motile monerans.

R : They are resistant to antibiotics like penicillin.

A. If both assertion & reason are true and the reason is the correct explanation of

the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### Answer: B



10. A: Majority of bacteria are autotrophs.

R : Chemoheterotrophic nutrition is absent in bacteria.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason

is false

D. If both assertion and reason are false statements

#### **Answer: D**



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11. A: Holophytic protistans are important phytoplanktons and they contibute 80% of the total photosynthesis.

R: They lack chemosynthetic nutrition nad utilize non sulphur organic compound as the source of electron and proton in carbon assimilation.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### **Answer: C**



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**12.** A : Sexual spores in pink mould are meiospores produced endogenously.

R : They develop flask shaped fruiting body in sexual life cycle.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

the reason is not the correct explanation of the assertion

B. If both assertion & reason are true but

C. If assertion is true statement but reason

is false

D. If both assertion and reason are false statements

#### **Answer: B**



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**13.** A : Azotodesmic lichens are biofertilisers enriching nitrogen contents in soil.

R: This ability is due to the presence of heterocystous blue-green algae as phycobiont component.

- A. If both assertion & reason are true and the reason is the correct explanation of the assertion
- B. If both assertion & reason are true but the reason is not the correct explanation of the assertion
- C. If assertion is true statement but reason is false
- D. If both assertion and reason are false statements

#### **Answer: A**



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**14.** A : Viroids are not included in five kingdom system.

R: They are non-cellular.

A. If both assertion & reason are true and

the reason is the correct explanation of

the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason is false

D. If both assertion and reason are false statements

#### Answer: A



**15.** A: Viruses which infect animals generally possess ssRNA or dsRNA or dsDNA.

R: Phytophagineae generally contain dsDNA.

A. If both assertion & reason are true and the reason is the correct explanation of the assertion

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion

C. If assertion is true statement but reason

is false

D. If both assertion and reason are false statements

**Answer: C** 

