DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 1

Topic :- Biological classification

1 **(a)**

Osmoregulation in *Paramecium* is a function of contractile vacuole. *Paramecium*contains two contractile vacuoles, which have fixed positions near the body ends in ectoplasm of aboral side. Each vacuole contains a definite unit membrane covering called vacuolar condensation membrane.

2 **(b)**

Fungi imperfecti includes *Alternaria, Tricoderma* and *Colletotrichum*

3 **(a)**

Yeast are unicellular, degenerated, non-mycelial, saprophytic fungi possessing no hyphae. But sometimes, chain of buds is formed during rapid growth, which may give false appearance of a mycelium and called as pseudomycelium

4 **(a)**

The bacillariophycean members (diatoms) are microscopic, eukaryotic, unicellular or colonial coccoid algae. These algae are sexually reproduced by the formation of auxospores in most cases. Homocysts are formed by few cyanobacteria.

5 **(c)**

HIV (Human Immunodeficiency Virus) is a retrovirus. The name retrovirus comes from the fact that it has two single strands of genomic RNA and enzymereverse transcriptase which converts virus RNA into a single strand of DNA.

6 **(b)**

Commonly known forms of class-Basidiomycetes are mushroom, bracket fungi or puffballs. The mycelium is branched and septate.

The asexual spores are generally not found, but vegetative reproduction by fragmentation is common. Sex organs are absent, but plasmogamy is brought about by the fusion of two vegetative or somatic cell of different strains or genotypes.

The resultant structure is dikaryotic, which ultimately gives rise to basidium. Karyogamy and meiosis take pleace in the basidium producing four basidiospores. The basidiospores are exogenously produced on the basidium. The basidia are arranged in fruiting bodies called basidiocarps

7 **(a)**

Tree, shrubs and herbs.

Aristotle was the earliest to attempt a more scientific basis for classification. He used simple morphological characters to classify plants into trees, shrubs and herbs. He also divided animals into two groups, those which had red blood and those that did not

8 **(b)**

Citrus canker is a disease affecting citrus species that is caused by the bacterium *Xanthomonas axonopodis*

9 **(d)**

Some viral families (Picornaviridae, Togaviridae, Rhabdoviridae, Reoviridae, Retroviridae, etc) contain RNA (either single or double stranded) as their genetic material.

10 **(a)**

The genus *Trypanosoma* is parasitic in the blood of most of the vertebrates. *Trypanosoma gambiense*causes African sleeping sickness.

11 **(a)**

Bacteria are simple in structure but complex in behavior

12 **(a)**

The Gram stain is named after the developer **Christian Gram**. About 75% of known bacteria are Gram negative

e.g., *Salmonella*, *Pseudomonas*, *Vibrio*, *Helicobacter*, *Haemophilus*, *Escherichia*.

13 **(c)**

Structurally, viruses are very diverse, varying widely in size, shape and chemical composition. The nucleic acid of the virus is always located within the virion particle and is surrounded by a protein shell called the capsid. The complete complex of nucleic acid and protein, packaged in the virion is called the virus nucleocapsid.

14 **(a)**

The **fungi** are achlorophyllous, heterotrophic organisms, which cannot prepare their own food. They live as either parasites or saprophytes. However, some forms live symbiotically with other green forms. So, parasitic and saprophytic conditions are more familiar in fungi.

15 **(a)**

Bacteriophage is the virus which causes infection of bacteria. It releases lysozyme during penetration phase.

16 **(b)**

*Cladonia rangiferina*is reindeer moss. It is a furticose lichen. It is used as food for reindeer, musk, ox and other wild animals of the Arctic Tundra zone.

17 **(b)**

Bacteria are prokaryotes. In five kingdom system of classification of **R H Whittaker**, all prokaryotes are included in kingdom-Monera.

18 **(c)**

The genus-*Azotobacter* comprises large, free-living, Gram negative, obligately aerobic, rod-shaped bacteria which are capable of fixation of nitrogen non-symbiotically. *Rhizobium*is a symbiotic nitrogen fixing bacteria, *Nitrosomanas* is a nitrifying bacteria, while *Pseudomonas* sp. is denitrifying bacteria.

19 **(b)**

In rhabdoviruses (rabies, virus, wheat mosaic virus), para myxoviruses (mumps virus, sendai virus), picornaviruses (polio virus), orthomyxovirus (influenza virus), the genetic material is single stranded RNA (ssRNA).

20 **(d)**

Agaricus belongs to class-Basidiomycetes. *Agaricus* is a genus of mushrooms containing both edible and poisonous species

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**a**	**b**	**a**	**a**	**c**	**b**	**a**	**b**	**d**	**a**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**a**	**a**	**c**	**a**	**a**	**b**	**b**	**c**	**b**	**d**