DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 3

Topic :- Biological Classification

1 **(d)**

The members of fungal class-Myxomycetes are called slime moulds. In the vegetative phase of their cycle, these are devoid of cell wall and are either a free living, multinucleate, amoeboid, slimy mass of protoplasm (*ie*, Plasmodium) or an aggregation of *Amoeba* (Pseudoplasmodium).

2 **(a)**

Halophiles are named so because they usually occur in salt rich substrata like salt pans, salt beds and salt marches, *e.g.*, *Halobacterium* and *Halococcus*

3 **(a)**

In the **lytic** cycle, a virus enters a cell and causes it to produce viral nucleic acid and protein coats. After this viral parts are assembled, the new virus particles may burst from the host cell or may leave the host cell by budding. In the **lysogenic** cycle, viruses enter into a long-term relationship with the cells they infect, their nucleic acid replicate as the cells multiply.

4 **(b)**

Potato leaf roll and leaf curl of papaya caused by viruses.

5 **(c)**

Euglenoids are unicellular flagellate protists. Their cell wall do not contain cellulose. The body is covered by thin and flexible pellicle. The pellicle is composed of fibrous elastin protein, small amount of lipid or/and carbohydrate. The euglenoids have two flagella, usually one long and one short. They are photosynthetic in the presence of sunlight. In dark even photosynthetic forms can behave like heterotrophic, predating on smaller organisms (holozoic) or feeding on organic remains (saprobic)

6 **(b)**

All archaebacteria share certain key characteristics:
(i) Their cell wall lack peptidoglycan (important component of cell wall of eubacteria).
(ii) Lipids in cell membrane of archaebacteria have different structure than those in all other organisms
(iii) Archaebacteria has distinct ribosomal RNA sequence.
(iv) Some genes of archaebacteria possess, introns unlike those of other bacteria.

7 **(a)**

Blast of rice or paddy is caused by the fungus *Pyricularia oryzae* of class-Deuteromycetes. *Magneporthe grisea*is perfect stage of *P.oryzae*. Red rot of sugarcane is caused by fungus *Colletotrichum falcatum* and its perfect stage is *Glomerella tucumanensis*.

8 **(b)**

Some bacteria like *Staphylococcus*, *Micrococcus*, *Salmonella*, *Pseudomonas*,*Escherichia*, *Clostridium*, etcsecret endotoxins which spoil food stuff and cause food poisoning.

9 **(a)**

All viruses are obligate parasites, as these are active, can multiply and show the living properties only when they have entered their host cell. The term obligate indicates some type of restriction in an organism's way of life from which it cannot depart and survive (*e.g.*, a virus and its host).

10 **(a)**

R H Whittaker (1969, an American taxonomist divided all the organisms into five kingdoms. These are kingdom-Monera, Protista, Fungi, Plantae and Animalia. Of these only kingdom-Monera contains prokaryotic organisms, whereas rest **four kingdoms** contain eukaryotic organisms.

11 **(b)**

MW Beijerink (1898) demonstrated that the extract of the infected plants of tobacco could cause infection in healthy plants and called the fluid as *Contagium vivum fluidum* (infectious living fluid)

12 **(a)**

Blakeslee (1904), while working with *Mucor* sp observed the heterothalism.

13 **(a)**

The rocky and barren place is deficient in water and lacks any organic matter, having only minerals in disintegrated or weathered state, the pioneer to colonies this primitive substration are **crustose** types of **lichen.**

Crustose lichens→ Foliose lichens → Moss→ Herbs → Shrub → tree.

14 **(b)**

Asexual spores formed by *Colletotrichum falcatum* (fungi imperfacti), *Sphaerotheca* (Ascomycetes) and *Rhizopus stolonifer*(Zygomycetes), all are unicellular, uninucleate, rounded to oval structures.

15 **(b)**

Bacterial cell wall is made up of peptidoglycan, protein, non-cellulosic carbohydrates, lipids, amino acid, etc.
Archaebacteria are characterised by the absence of peptidoglycan in their wall. Instead, the wall contains proteins and no-cellulosic polysaccharides.
Thermoacidophiles have duel ability to tolerate high temperature as well as high acidity. They often live in hot sulphur springs, where the temperature may be as high as 80°C and pH as low as 2, *e.g.*, *Thermoplasma, Thermoproteus*

16 **(a)**
Fungi are very large and divergent group of organisms. They lack chlorophyll, therefore, heterotrophic in nature. Their cell wall is formed of chitin (fungus cellulose).

17 **(c)**
Many fungi secrete antibiotics. The first antibiotic penicillin was discovered by Alexander Fleming in 1929 from *Penicillium notatum*. Now, penicillin is also extracted from *P.chrysogenum*.

18 **(c)**
Citrus canker is caused by an aerobic rod-shaped monotrichous bacterium, *Xanthomonas citri* (now known as *Xanthomonas axonopodis*).

19 **(d)**
Protista shows gametic and zygotic meiosis not sporic meiosis.

20 **(a)**
Trypanosoma, *Noctiluca*, *Monocystis* and *Giardia* are all unicellular protists.

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