

Topic :- Biological Classification

- 1 (a)
TMV is a plant virus and viruses can grow only in living host, not in artificial media.
- 2 (b)
The siliceous cell walls of diatoms are indestructible (*i.e.*, do not decay easily). They were collected over millions of years on the sea floors, called diatomite or diatomaceous earth or silica gel. These deposits may extend for several hundred metres in certain areas.
- 3 (a)
The common examples of class-Basidiomycetes are smut, rusts, mushrooms, toad stools, puff balls and pore fungi.
- 4 (d)
Kingdom-**Protista** includes a wide variety of unicellular, mostly aquatic eukaryotes. They are believed to have evolved from prokaryotic monerans and are the precursors from which higher organisms evolved.
- 5 (c)
The bacterial cell wall contains peptidoglycan or mucopeptide or murein with diaminopimelic acid, lipid and protein. Chemically, peptidoglycan is composed of N-acetyl glucosamine (**NAG**) and N-acetyl muramic acid (**NAM**).
- 6 (c)
Noctiluca (the night light) is a colourless dinoflagellate, which is an important constituent of coastal plankton of both temperate and tropical seas. This alga is famous for bioluminescence as it was the first dinoflagellate where bioluminescence was reported. The cellular slime moulds have the characters of both plants and animals. The reproductive phase is plant-like, as the spores have a cell wall composed of cellulose. However, vegetative phase is animal like having no cell wall and feeding like *Amoeba*.
- 7 (a)
VAM is **Vesicular-Arbuscular Mycorrhiza**, a symbiotic association of roots of higher plants with fungi, usually give benefit to plant by providing **phosphorus**.

- 8 **(d)**
Sporozoans includes diverse organisms that have an infectious spore like stage in their life cycle
- 9 **(d)**
Muscarine poisoning is caused by *Amanita* varieties. Early symptoms after injection of this chemical, within two hours include increased respiration, salivation, nausea, vomiting, abnormal pair, thirst and mucous.
- 10 **(d)**
All are correct. The members of flagellated protozoans are either free living or parasitic. They bears flagella. The parasitic forms of flagellated protozoans causes diseases such as sleeping sickness, *e.g.*, *Trypanosoma*
- 11 **(b)**
On the basis of locomotory organelles, the protozoans are divided into four groups. Flagellated protozoans, amoeboid protozoans, sporozoans and ciliated protozoans
- 12 **(a)**
Myxomycota constitutes first division of the kingdom fungi. These are distinguished from other fungi by the presence of a **vegetative phase** in their life cycle, which is devoid of cell wall and is either a free-living, multinucleate, amoeboid mass of protoplasm (Plasmodium) or an aggregation of amoebae in the form of slimy mass (during the vegetative phase), these are also called slime moulds. The spores are biflagellate in slime moulds.
- 13 **(a)**
Isogamous means similar in morphology
- 14 **(d)**
Viruses consist of nucleoprotein, *i.e.*, nucleic acid+protein.
- 15 **(d)**
Members of Ascomycetes are saprophytic, decomposers, parasitic or ceprophilous (growing on dung)
- 16 **(b)**
Endospores are highly resistant, physiologically dormant, single called structures formed usually inside a bacterium mother cell. The mature endospore is highly dehydrated, shows no metabolic activity and is resistant to heat, radiations or attack by enzymatic or chemical agents. Under favorable environmental conditions, the endospore germinates and vegetative cell comes out and grows.

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(a)

Bacterial blight of paddy or rice caused by *Xanthomonas oryzae*. It is a rod-shaped, aerobic, non-capsulated, non-spore forming, Gram negative bacterium. It has a single polar flagellum.

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(c)

Crop	Disease	Pathogen
Brinjal	Root knot	<i>Meloidogyne rubrilineans</i>
Citrus	Canker	<i>Xanthomonas citri</i>
Potato	Late blight	<i>Phytophthora infestans</i>
Pigeon pea	Seed gall	<i>Fusarium udum</i>

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(b)

Nitrosomonas converts NH_3 into nitrite and then, *Nitrobacter* converts nitrite into nitrate.

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(a)

In plants, nutrition is typically autotrophic. Parasite forms are heterotrophic. A few plants, such as *Drosera* and *Nepenthes*, are insectivorous to get additional nitrogen. Otherwise their principal nature is autotrophic.

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

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