

Topic :- Biological Classification

- 1 **(b)**
Photosynthetic bacteria contain bacterial chlorophyll as a light trapping pigment molecule that absorbs light between 800 to 925 nm, depending on the species of bacteria.
- 2 **(b)**
Slime moulds are saprophytic protists. In slime moulds, spores possess true walls. The spores are dispersed by air. They are extremely resistant and survive for many years even under adverse conditions
- 3 **(a)**
Penicillin was discovered by **Alexander Fleming** from *Penicillium natatum* fungus. *Penicillium* is called green mould, which belongs to class-Ascomycetes. Today, penicillin is also obtained from *Penicillium crysogenum*.
- 4 **(c)**
Thermococcus, *Methanococcus* and *Methanobacterium* are archaeobacteria with negatively supercolled DNA as in eukaryotes but lacking histones
- 5 **(d)**
Temperate phages are the avirulent lysogenic phages whose nucleic acids get incorporated in the bacterial DNA (lysogenization). When these phages infect bacteria, the phage genome interated tobacterial chromosome and bacterial cell undergoes many divisions.
- 6 **(c)**
Mushrooms (*Agaricus* sp.) are common edible fungi. Their fruiting bodies are used for eating
- 7 **(d)**
Animal cells do not have cell walls. Plants contains chloroplast (cholrophyll) and can make their own food. Animals cannot make their own food and are dependent on plants and other animals for food
- 8 **(d)**Euglenoids

- 9 **(c)**
Five kingdom classification is proposed by RH Whittaker. The classification did not differentiated between the heterotrophic group fungi and the autotrophic green plants, through they also showed a characteristic differences in their walls composition-the fungi had chitin, while the green plants had cellulose
- 10 **(d)**
Slime mould forms an aggregation called *Plasmodium*, which may grow and spread over several feet. During unfavourable conditions, the *Plasmodium* differentiates and forms fruiting bodies bearing spores at their tips. Spores are extremely resistant and survive for many years
- 11 **(a)**
In Deuteromycetes, some members are saprophytes or parasites, while a large number of them are decomposers of litter and help in mineral cycling
- 12 **(a)**
Teichoic acid is present in cell wall of Gram positive bacteria. It is acidic polymer consisting of carbohydrate, phosphate and an alcohol. It binds metals, acting as receptor sites for some viruses and maintaining cells at low pH to prevent degradation of cell walls by self-produced enzymes.
- 13 **(c)**
Gonyaulax.
Some dinoflagellates, such as *Gymnodinium* and *Gonyaulax* grows in large number in the seas and make the water look red and causes the red tides
- 14 **(d)**
Kingdom-Protista includes all unicellular eukaryotic organisms like crysophytes, dinoflagellates, euglenoids, slime moulds, protozoans, etc
- 15 **(a)**
The conidia and conidiophores are aseptate while mycelium and setae are septate.
- 16 **(a)**
As per Ainsworth's system of classification, *Rhizopus* comes under class-Zygomycetes (sub-division-Zygomycotina).
- 17 **(c)**
Hepatitis-B virus contains double stranded DNA, while Hepatitis-C, Hepatitis-E, Hepatitis-A and HIV contain single stranded RNA.
- 18 **(b)**

Trypanosoma gambiense causes west and central African sleeping sickness or Gambian fever. It is a fatal infection of the nervous and lymphatic systems that is endemic in certain parts of Africa. The vector of the flagellate is the tse-tse fly *Glossina*

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(d)

Paramecium coudatum contains a smaller diploid micro-nucleus for reproduction and a large polyploid macro-nucleus which leads to metabolism.

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(c)

The kingdom-Monera includes all prokaryotes, mycoplasma, bacteria, Actinomycetes and cyanobacteria of blue-green algae

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

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