CBSE TEST PAPER-01

CLASS - XI BIOLOGY (Biological Classification)

General Instruction:

- All questions are compulsory.
- Question No. 1 to 3 carry one marks each. Question No. 4 to 6 carry two marks each. Question No. 7 and 8 carry three marks each. Question No. 9 carry five marks.

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1. Who introduced the five kingdom classification of organisms?

2. To which kingdom the multicellular decomposers belong?

3. Expand PPLO.

4. What is the basis of modern classification?

5. Give one example of a fungus as a soure of antibiotics?

6. How are viroids different from viruses?

7. Explain sexual reproduction in bacteria?

8. Discuss the salient features of viruses with the help of diagram?

9. Write the distinct characters of fungi & explain using a diagram.

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[ANSWERS]

1. R.H. Whittaker (1969)

2. Kingdom fungus.

3.Pleuro pneumonia like organisms.

4. Modern taxonomy is based on :-

a) Evolutionary relationship.

b) The similarities in the genetic codes of species.

c) Ecological characters and also mode of reproduction and nutrition.

5. Penicillium is the genus which is the source of an antibiotic penicillin. Penicillium is known as green & blue moulds. Penicillium chryosogenum (P.notatum) is utilized for production of antibiotic penicillin.

6.

VIRIODS	VIRUSES
i) Viriods are smaller than viruses & lack protein coat.	i) Viruses are non- cellular (acellular) organisms having protein coat.
ii) Genetic material is free RNA, which is infectious.	ii) Genetic material is RNA or DNA.

7. Bacteria do not have true sexual reproduction but they show genetic recombination by three ways:-

i) Conjugation:- It was discovered by Lederberg & Tatum. The donor or male call is identified by the presence of plasmid called F- factor in cells. Donor cell bears cylindrical hollow sex Pilli for attachment to recipient bacterium. Donor & recipient come in physical contact with the help of sex pilli. Plasmid or plant of donor DNA is transferred into recipient cell.

ii) Transformation :- It was discovered by Griffith by an experiment on mice infecting it by S.pneuomonae. It includes death of bacterial donor cell resulting in release of its DNA into external medium DNA gets fragmented & gets incorporated into metabolically active cells. Recipient cell after incorporation of donor DNA is known as recombination that expresses all its character together with character of donor cell.

iii) Transduction :- It was discovered by Zinder & Lederberg. Donor genes are transferred into recipient all by a virus. A phage causes lysis of bacterium & incorporates bacterial genes into phages then is liberated & they infect new bacterial genes.

8. Features of viruses:-

i) They are smaller then bacteria.

ii) They can be filtered and crystallized.

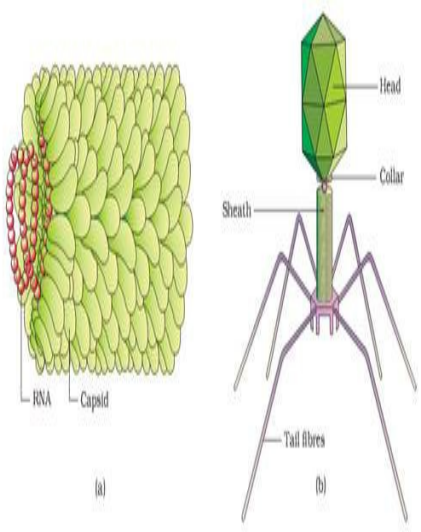
iii) They are able to reproduce in host cell by using enzymes & metabolic machinery of host cell

iv) DNA/RNA is their genetic material

v) These are obligate parasites, self replicating & non – cellular organisms.

vi) They have protein coat called capsid (unit is capsomere) that protects nucleic acid.

vii) They cause disease in plants like mosaic, leaf curling, leaf role, vein clearing etc.

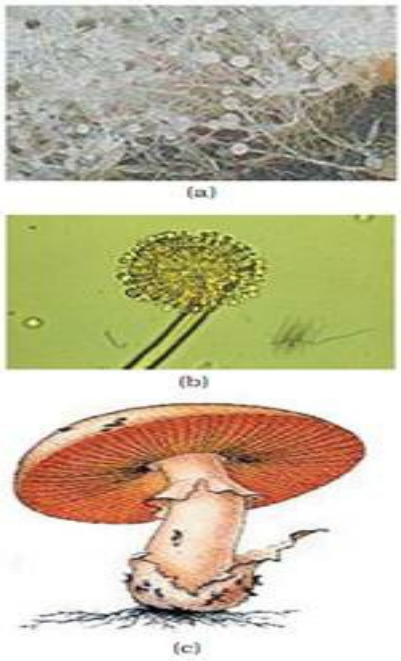


9. i) Cell type – eukaryotic.

ii) Cell wall – present but made up of chitin.

iii) Chloroplast – absent.

iv) Mitochondria – present



v) Nuclear envelope – present

vi) Tissues – present but limited, only yeast is a unicellular fungi, hyphae mycelium coenocytic, septate

vii) Motility – Cilia, flagella in some treat absent in most forms.

viii) Nutrition – Heterotrophic, saprophytes, parasites, absorb food or as symbionts in lichens

ix) Reproduction – fertilization or meiosis in sexual reproduction & fission, budding fragmentation, conidia formation etc in asexual reproduction.

x) Nervous system – absent

xi) Occurrence – air, water, soil, animals or plants

xii) Examples – yeast, Penicillium, Agaricus, Rhizopus, phytophthora, Asperigillus claviceps.