



शिवाजी कॉलेज, राजा गार्डन, रिंग रोड, नई दिल्ली - 110027
SHIVAJI COLLEGE, RAJA GARDEN, RING ROAD, NEW DELHI-110027

8 Pages



तारीख
DATE 16/04/2024

नाम NAME Saloni कक्षा CLASS B.Sc (H) Botany सेमेस्टर SEMESTER 4th

रोल नं. ROLL NO. 22/09018 विषय SUBJECT Microbiota (zoology) पेपर नं. PAPER NO.

*अतिरिक्त प्रयुक्त उत्तर पुस्तिकाओं की संख्या
No. of continuation books used

81
3

SAAs
Saloni

- Q-1: (a) TB caused by _____ [1x4]
(b) What is microbiota?
(c) Name the technique help in studying microbiota?
(d) Who discover vaccine for chicken pox?

Q-2

- (a) Diff b/w prokaryotic & eukaryotic cell?
(b) Basic classification of Bacteria (2x2)

Que-1

(a)

Mycobacterium tuberculosis. (1)

(b)

Microbiota → It is the range of microorganisms that can be found anywhere. anywhere means those smaller microorganisms those are cosmopolitan in nature. They can be pathogens, mutualistic or commercial. Microbiota includes bacteria, archaeobacteria, protists, fungi and viruses. They have been found to be crucial for (1) immunologic, hormonal and metabolic states of their host. This also can be considered as the study of above given micro-organisms.

(c)

Techniques helps in study of Microbiota —

- Gram staining is a process which is used to study Microbiota.
- Microscopy is also a technique to study by electron Microscope. (1)
- Acid fast staining process

(d)

Michiaki Takahashi invented vaccine of Chicken pox. (1)

Que-2

Prokaryotic cell

Eukaryotic cell.

- | | | |
|-----|---|--|
| (i) | It is Prokaryotic cell is smaller in size. | Eukaryotic cell is comparatively larger in size. |
| (2) | It is a primitive type of cell according to <u>endosymbiotic theory</u> . | It is an advanced type of cell acc. to <u>endosymbiotic theory</u> . |
| (3) | It lacks a true nucleus. | It contains a true nucleus. |
| (4) | This cell lacks membrane bound organelles for eg:- Ribosomes, Mitochondria. | This cell contains a membrane bound organelles. |
| (5) | It contains 70S ribosomes. | It contains 80S ribosomes. |
| (6) | Their DNA is mostly circular in shape. | They have linear DNA. |
| 7) | They have thin cell wall layer. | They have thick cell wall layers. |

02/04/24
1001
Sema
02/04/24
(b). Ans → Classification of Bacteria -
Classification of Bacteria is done
on different basis for eg:- on the
basis of gram staining, on the
basis of shapes of bacteria, etc.

1) ⇒ On the basis of Gram Staining - On
the basis of the bacteria activity of the
cell wall of bacteria of retaining capacity
of different strains. They are dividing
into 2 major categories:-

(1) Gram positive → Gram positive bacteria
are having a very thick cell wall
of peptidoglycan on their outer
surface. They retain crystal violet stain
eg: Lactobacillus Bacteria.

(2) Gram Negative - Gram negative bacteria
have a very thin layer of peptidoglycan
layer and also have an outer layer
as a thick layer. They retain
eg:- Escherichia coli safranin
stain.

→ On the basis of shapes -

1. Bacillus → They are basically rod shaped bacteria.
Eg:- Lactobacillus
2. Cocci - They are spherical or circular in shape.
Eg:- Staphylococcus and Streptococcus.
3. Spirilla - They are ~~comma~~ ^{spirally} shaped.
Eg:- Spirillum and Campylobacter.
- 4). Vibrio → They are in comma shaped.
Eg:- Vibrio cholerae.
- 5). Spirochetes → They are flexible spiral shaped.
Eg:- Treponema pallidum.

(2)