

F.Y.B.SC. SEM – I (CBCS - 2016 COURSE) : WINTER - 2017
SUBJECT: MICROBIOLOGY: STRUCTURE OF PROKARYOTES & EUKARYOTES
(MB – 12)

Day : Wednesday
Date : 01/11/2017

W-2017-0545

Time : 11.00 A.M. TO 02.00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

Q.1 A) Select the correct option and rewrite the sentences: [06]

- a) Example of round shaped bacterium is _____.
 - i) *Spirillum*
 - ii) *Vibrio*
 - iii) *Staphylococcus*
 - iv) *Bacillus*
- b) *Rickettsia prowazakii* develops _____.
 - i) Epidemic typhus
 - ii) Common cold
 - iii) AIDS
 - iv) Diarrhea
- c) Source of Agar agar is _____.
 - i) *Mycoplasma*
 - ii) *Chlamydia*
 - iii) Red algae
 - iv) Protozoa
- d) Example of continuous cell culture is _____.
 - i) HL – 8
 - ii) HeLa
 - iii) WI – 38
 - iv) Vero cell line
- e) Circular single stranded RNAs developing plant diseases are called as _____.
 - i) Viroides
 - ii) Rabies virus
 - iii) Prions
 - iv) HIV
- f) Bacterial ribosome is characterized by _____.
 - i) 70s
 - ii) 80s
 - iii) 100s
 - iv) 200s

B) Attempt the following: [06]

- a) Enlist arrangement of bacterial flagella.
- b) Give the significance of carboxysomes.
- c) Mention the merits and demerits of ‘Continuous cell culture’.
- d) Give any two uses of fungi.
- e) Write one example each of ssRNA virus and dsRNA virus.
- f) Give any two examples of capsulated bacteria.

P.T.O.

Q.2 Write short notes on **ANY THREE** of the following: [12]

- a) 'Fluid Mosaic Model' of bacterial cell membrane
- b) Primary cell culture
- c) Prions
- d) Bacterial gas vacuoles

Q.3 Attempt **ANY FOUR** of the following: [12]

- a) Give general characteristics of viruses.
- b) Draw a neat labeled diagram of bacterial endospore and mention its significance.
- c) Comment on the cell wall of Gram positive bacteria.
- d) Describe general properties of *Rickettsias*.
- e) With the help of neat labeled diagram explain structure of typical bacterial cell.

Q.4 Attempt **ANY TWO** of the following: [12]

- a) Discuss the general properties and significance of *Archaeobacteria*.
- b) Explain virus cultivation using 'Embryonated Egg'.
- c) Diagrammatically present bacterial flagellum and discuss its structure.

Q.5 Attempt **ANY TWO** of the following: [12]

- a) With the help of neat and labeled diagram discuss structure of 'T₄ Bacteriophage'.
- b) Give the general properties and significance of *Coxiella*.
- c) Explain the composition and functions of bacterial capsule.

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