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SEAT No. _____

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SARDAR PATEL UNIVERSITY
B. Sc. EXAMINATION
SEMESTER - 5 MICROBIOLOGY
SUBJECT CODE: US05CMIC05

Paper Title: Microbial Diversity and Ecology

Date: ~~11/04/2019~~ 11/04/2019
THURSDAY

Time: 10:00 a.m. to 1:00 p.m.
Total marks: 70

Note: (1) All the questions are compulsory. (2) Figures on the right indicate marks.

Q.1

Answer the following.

10

- 1 _____ fungi is used in baking and brewing industries.
(a) *Aspergillus flavus* (b) *Pythium debaryanum*
(c) *Saccharomyces cerevisiae* (d) All of the these
- 2 The central septal pore in the hyphae of basidiomycetes is known as _____.
(a) Dolipore (b) Basidiospore
(c) Conidiophores (d) sporangiospore
- 3 _____ is the intracellular absorptive structure developed by plant parasitic fungi.
(a) Appressorium (b) Parenthosome
(c) Sclerotium (d) Haustorium
- 4 Viroids are naked pieces of _____.
(a) proteins (b) lipids
(c) SS RNA (d) DS DNA
- 5 The mean number of phage particles liberated per infected bacterium is _____.
(a) burst time (b) burst size
(c) burst bacterium (d) burst number
- 6 _____ contain only protein component.
(a) Viruses (b) Bacteria
(c) Viroids (d) Prions
- 7 _____ are unable to make ATP.
(a) *Chlamydia* (b) *Mycoplasma*
(c) *Rickettsia* (d) *Actinomycetes*
- 8 Reticulate bodies are found in _____.
(a) Rickettsiales (b) Chlamydiales
(c) Mycoplasmatales (d) None of the these
- 9 Except _____, all are known as positive interactions among microbes.
(a) Commensalism (b) synergism
(c) Mutualism (d) Predation
- 10 _____ interactions of microbes act to maintain community stability.
(a) Neutral (b) Negative
(c) Positive (d) (a) and (c) both

(P.T.O)

(1)

Q.2	Answer the following questions. (Any ten)	20
1	Enlist asexual reproduction methods in fungi.	
2	What is holocarpic and eucarpic thallus?	
3	What is sclerotium? Give an example of fungi producing sclerotia.	
4	Draw neat and labelled diagram of HIV	
5	Describe morphology of pox virus.	
6	Give two examples of diseases caused by eukaryotes and prions.	
7	Define Oxygenic and anoxygenic phototrophic bacteria. Give examples of each.	
8	Give four names of bacteria metabolizing sulphur compounds .	
9	Why do Mycoplasmas pass through bacteriological filters?	
10	Define : (1) commensalism (2) synergism	
11	Define : (1) autochthonous population (2) ecosystem	
12	What is competition interaction among microbes?	
Q.3	(a) Describe in detail sexual reproduction in fungi.	07
	(b) Explain "9+2" structure of fungal flagella.	03
	OR	
Q.3	(a) Write an exhaustive note on nutrition in fungi.	07
	(b) Write importance of fungi in medicine.	03
Q.4	(a) Write in detail on HBV	07
	(b) Describe physical properties of Pox viruses.	03
	OR	
Q.4	(a) Describe the structural genes of HIV.	07
	(b) Write about the resistance of HIV.	03
Q.5	(a) Write a note on Actinomycetes	06
	(b) Explain characteristics of the genera Spirochetes.	04
	OR	
Q.5	(a) Write in detail on Methanogenic bacteria and extreme Halophiles.	06
	(b) Describe about Thermoacidophiles.	04
Q.6	Explain in detail; the positive obligate relationship among microbes.	10
	OR	
Q.6	Explain co-metabolism, predation and amensalism interactions among microbes.	10

— X —
 (2)