

B.Sc. 5th Semester (Honours) Examination, 2022 (CBCS)**Subject : Zoology****Course : DSE-1(T2)****(Microbiology)****Time : 2 Hours****Full Marks : 40***The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.***Group-A**

1. Answer *any five* questions of the following: 2×5=10
- (a) Write the target cells and the receptors for HIV. 2
 - (b) Give two important functions of bacterial capsule. 2
 - (c) Explain—Typhoid can not be a zoonotic disease. 2
 - (d) Name any two fungal pathogens with medicinal importance. 2
 - (e) What is cytopathic effect? Is it lethal? 2
 - (f) How does F' plasmid differ from a regular F plasmid? 2
 - (g) Name one flavivirus that can cause disease to humans. Comment on its genetic material. 2
 - (h) What is the difference between epidemic and pandemic? 2

Group-B

2. Answer *any two* questions of the following: 5×2=10
- (a) Write the mode of action and symptoms of staphylococcal food poisoning. 2½+2½=5
 - (b) Describe the mode of action of acid-fast stain. 5
 - (c) Name any two normal microbiota present in the intestine of human body. Can a normal flora be an opportunistic pathogen?— Justify. 2+3=5
 - (d) Describe the structure of bacterial flagellum with suitable diagram. Differentiate between pili and fimbriae. 3+2=5

Group-C

3. Answer *any two* questions of the following: 10×2=20
- (a) Mention some features how bacterial chromosome differs from eukaryotic chromosomes. Describe F factor plasmid and its importance. 5+5=10
 - (b) With a schematic diagram describe the peptidoglycan structure of a Gram positive bacteria. Define spheroplasts. 8+2=10
 - (c) Differentiate enriched media from selective media. What is peptone? Why is it used in most of the media? Name one liquid medium. 6+2+1+1=10
 - (d) What are viroids? How do these differ from virus? In which way prion differs from both viroids and viruses? 2+2+6=10
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