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BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – B.Sc.(OTT)-2022
Course Name – Clinical Microbiology
Course Code - BOTTC201
(Semester II)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Write the treatment option for chronic Hepatitis B or C
a) Antiviral medication b) Liver transplantation
c) Both a) and b) d) None of the these

(ii) Select the term used for a severe and potentially life-threatening allergic reaction
a) Anaphylaxis b) Autoimmunity
c) Immunodeficiency d) Immunization

(iii) Name the virus that causes COVID-19
a) SARS-CoV-1 b) SARS-CoV-2
c) MERS-CoV d) None of the these

(iv) Write the common cause of uncomplicated urinary tract infections in women
a) Escherichia coli (E. coli) b) Staphylococcus aureus
c) Streptococcus pyogenes d) Pseudomonas aeruginosa

(v) Select the viruses which belong to the Coronavirus family
a) SARS b) MERS
c) Both SERs andMERS d) none of the thses

(vi) Identify the Father of microbiology
a) Alexander Fleming b) Leeuwenhoek
c) Louis Pasteur d) Robert Koch

(vii) Select how Phenol is antimicrobial agent
a) it can disrupt cell membrane structure b) it can prevent replication process
c) it can damage DNAstrand d) it can absorb water from cell

(viii) Identify what Antibiotic is

a) primary metabolite of microorganism
b) metabolic product of mammals
c) secondary metabolite of microorganism
d) metabolic waste of mammals

(ix) Identify the sexually transmitted bacterial disease

a) AIDS
b) Syphilis
c) Herpes
d) Hepatitis

(x) Select the categorization of Fungi

a) bugs and yeast
b) yeast and ticks
c) molds and yeast
d) algae and yeast

(xi) Illustrate the bacterial genera commonly found in the female genital tract

a) Lactobacillus
b) Escherichia
c) Pseudomonas
d) Mycobacterium

(xii) Write the example of a mechanical method of disinfection

a) Autoclaving
b) UV radiation
c) Filtration
d) Chemical disinfection

(xiii) Identify the antibiotic which is typically used to treat tuberculosis

a) Penicillin
b) Streptomycin
c) Tetracycline
d) Amoxicillin

(xiv) Choose the type of antibody which is found in secretions such as tears, saliva, and breast milk

a) IgA
b) IgD
c) IgE
d) IgG

(xv) Select the proper statement regarding Hepatitis C

a) It is a vaccine-preventable disease
b) It can be transmitted through sexual contact
c) It can lead to chronic liver disease
d) None of the these

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Give examples of nosocomial infection and explain them (3)
3. Discuss the consequences of using antibiotics inappropriately? (3)
4. Explain antigen and antibody reaction (3)
5. Discuss the morphological classification of the bacteria (3)
6. "Explain some alternative staining methods that can be used to identify microorganisms, and how do these differ from Gram staining in terms of their sensitivity and specificity?" (3)

OR

Explain antibiotic susceptibility testing, and what is its purpose in microbiology (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain the structure of COVID-19. Justify how it differs from other viruses. (5)
8. Discuss nosocomial infections. Discuss the most common types seen in healthcare settings (5)
9. "Write a note on human microbiome. What are some of the different types of microorganisms that make up this complex ecosystem?" (5)
10. Write a note on antibodies, how do they function in the immune system. (5)
11. Describe the risk factors for developing a UTI, and how can we reduce these risks. (5)

12. Explain the purpose of using a mordant in Gram staining. Give an example of a commonly used mordant. (5)

OR

Explain how patients and their families can help to prevent the spread of nosocomial infections while in the hospital, and what steps can be taken to promote patient safety and infection control. (5)

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