

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2023

Course: Pathogenesis of infectious diseases

Program: MSc. Microbiology

Course Code: HSMB 7020

Semester: II

Duration: 03 hrs.

Max. Marks: 100

Instructions:

S. No.	Section A	Marks	Cos
	<b>Short answer questions/ MCQ/T&amp;F (20Qx1.5M= 30 Marks)</b>		
1	..... is the virulence factor of peptic ulcer causing pathogen.	1.5	CO1
2	Name an infectious agent which causes non-invasive diarrhea.	1.5	CO1
3	Pick sexually transmitted disease from below.  A. Syphilis B. Gonorrhoea C. Cervical cancer D. All of the above	1.5	CO1
4	Staphylococcus aureus sepsis has spread in nurse due to caregiver. Which potential part of body has this microbe come from? a) Colon b) Nose c) Hand d) Throat	1.5	CO1
5	'Zika infections show materno-fetal transmission. Comment on the statement briefly.	1.5	CO2
6	Which part of the body contains largest number of microorganisms? a) Stomach b) Small intestine c) Large intestine d) Mouth	1.5	CO1
7	Pick the inhibitor of dihydrofolate reductase a. Dihydropteroate synthetase b. Trimethoprim c. Transferase d. Flucytosine	1.5	CO3

8	Disease that affects many people at different countries is termed as a) Sporadic b) Epidemic c) Pandemic d) Endemic	1.5	CO1
9	Name a virus which undergoes latent infections in human body.	1.5	CO2
10	The capacity of a given strain of microbial species to produce disease is known as a. Pathogen b. Infection c. Virulence d. None of these	1.5	CO3
11	The first antibody to contact mucosa invading microorganisms is a. IgG b. IgM c. IgA d. IgD	1.5	CO1
12	What is Piedra? Name the causative agent	1.5	CO4
13	Differentiate between varicella and zoster.	1.5	CO4
14	Which of the following RNA virus is a highly contagious respiratory pathogen that can easily spread from person to person? a) Coronavirus b) Dengue virus c) Epstein Barr virus d) Hepatitis B virus	1.5	CO4
15	Which of the following bacteria is an endospore-forming bacteria that is also a common foodborne pathogen? a) <i>Bordetella pertusis</i> b) <i>Clostridium botulinum</i> c) <i>Klebsiella pneumoniae</i> d) <i>Streptococcus pneumoniae</i>	1.5	CO3
16	Which of the following is the example of encapsulated gram-positive bacteria? a) <i>Clostridium perfringens</i> b) <i>Klebsiella pneumoniae</i> c) <i>Streptococcus pneumoniae</i> d) <i>Haemophilus influenzae</i>	1.5	CO3
17	Define opportunistic pathogens. Name anyone.	1.5	CO1
18	Name the innate features of human gut mucosa that avert pathogens.	1.5	CO1
19	Give one method to diagnose worm infection	1.5	CO5

20	What is meant by dimorphic fungi? Comment briefly and give an example.	1.5	CO4
<b>Section B</b> <b>(4Qx5M=20 Marks)</b>			
1	Write causative agent, diagnosis and pathogenesis of Herpes.	5	CO2
2	Differentiate between pathogenesis of Giardiasis and Amebiasis.	5	CO5
3	Describe pathogenesis of various superficial mycosis.	5	CO4
4	A 19-year-old male living in a tropical region of India visited the hospital. He came with a lesion on the lower part of the left leg that according to him first appeared about a week before visiting the hospital. A skin biopsy test was performed and the infection was diagnosed to be a parasitic infection. Which of the following is a vector-borne disease that can be transmitted to humans by the bite of infected sandflies? Explain in brief its pathogenesis, life cycle, diagnosis and treatment.	5	CO5
<b>Section C</b> <b>(2Qx15M=30 Marks)</b>			
1	A patient had a recent blood transfusion. And he started to show Jaundice like symptoms. Based on this answer the following:  (i) Which infection does it look like and what is the probable causative agent? (1) (ii) What is the pathogenesis of this disease? (4) (iii) Are there other agents that cause similar disease? How do they differ with each other (6) (iv) Write few symptoms of the disease and its diagnosis. (4)	15	CO2
2	A child suffered from continuous skeletal muscle spasms which were nearly incurable. However, a solution was injected into the baby and it started to show improvement in symptoms. Based on your knowledge in pathogenesis :  (i) Identify the disease and its causative agent. (2) (ii) What could be the predisposing factors for child to have acquired this infection? (2) (iii) Is this infectious agent culturable; if so how? (2) (iv) Give pathogenesis, symptoms and diagnosis of the disease. (6)	15	CO3

	(v) What was possibly given to the child that he showed improvement in symptoms? (2) (vi) Is this disease preventable? (1)		
<b>Section D</b> <b>(2Qx10M=20 Marks)</b>			
1.	With the help of illustration and text; write pathogenesis of Filariasis. What is meant by definitive host for filariasis?	10	CO5
2	Explain pathogenesis, diagnosis and treatment of Syphilis with suitable illustrations.	10	CO3