

Name:	
Enrolment No:	

UPES
End Semester Examination, December 2024

Program Name: Integrated BSC/MSC Microbiology
Course Name: Sexually Transmitted and Neglected Tropical Diseases
Course Code: HSMB8011

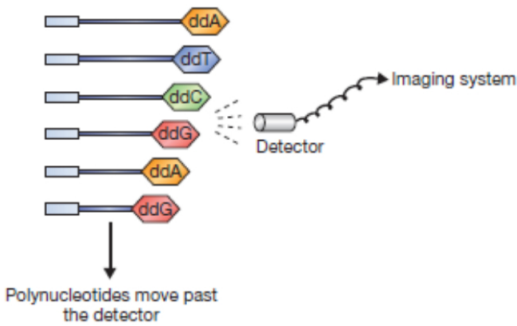
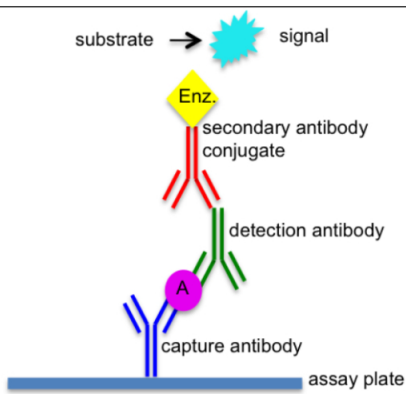
Semester: VII
Time : 3 hrs
Max. Marks : 100

Instructions: Read the questions carefully.

Q.No	Section A	(20x1.5=30 Marks)	COs
	MCQs/Short answer questions/True &False		
Q	Statement of question (each question carries 1.5 marks)		CO
Q 1	Which of the following is used to treat rubella? a) ZMR b) MMR c) RMR d) RAR	1.5	CO1
Q 2	Which of the following antiviral drug is used to treat the infection from herpes simplex virus? a) Aciclovir b) Azidothymidine c) Dideoxycytidine d) Dideoxyinosine	1.5	CO1
Q 3	Which of the following factor does not contribute to virus-associated oncogenesis? a) Age b) Height c) Diet d) Environment	1.5	CO1
Q 4	Which of the following enzyme maintains the ends of the chromosome? a) Ligase b) Polymerase c) Telomerase d) Protease	1.5	CO1
Q 5	Oncogenes are _____ a) anemia genes b) cancer genes c) thalassemia genes d) color blindness genes	1.5	CO1
Q 6	Which of the following protein is synthesized by human papilloma for cell transformation?	1.5	CO2

	a) E6 b) E5 c) E1A d) E1B		
Q 7	Adult T cell leukemia (ATL) is a tumor of _____ a) CD8 b) CD4 c) CD10 d) CD16	1.5	C02
Q 8	Which of the following method is used for the detection of antigen? a) ELISA b) Northern hybridization c) Dot-blot hybridization d) Boiling lysis	1.5	C02
Q 9	Proto-oncogenes can be transformed to oncogenes by all of the following mechanisms except _____ a) Elimination of their start signals for translation b) During a viral infection cycle c) Chromosomal rearrangements d) Chemically induced mutagenesis	1.5	C02
Q 10	Benign tumor invades into other tissues. a) True b) False	1.5	C02
Q11	Which of the following is a venereal disease, caused by a virus and can get transmitted by blood contact also? a) Syphilis b) Hepatitis-B c) Chancroid d) Trichomoniasis	1.5	C02
Q12	In males, urethritis is the principal result of _____ a) Gonorrhoea b) Syphilis c) Chlamydia d) Chancroid	1.5	C02
Q13	The site of infection in case of Gonorrhoea can be all except _____ a) Throat b) Vagina c) penis d) liver	1.5	C01
Q14	Which of the following disease is caused by a protozoan? a) Trichomoniasis b) Gonorrhoea c) Genital Warts d) Chancroid	1.5	C01
Q15	Which of the following is not a Sexually Transmitted Disease? a) Muscular Dystrophy b) Syphilis	1.5	C01

	c) Chancroid d) Trichomoniasis		
Q16	Which of the following virus affects the liver? a) HAV b) HIV c) HSV d) EBV	1.5	C01
Q17	HIV uses CCR5 as a coreceptor for successful infection. a) True b) False	1.5	C02
Q18	Which of the following is not a property of an ideal vaccine? a) It should be genetically stable b) It should have private support c) It should be affordable d) It should not have any side effects	1.5	C02
Q19	The process of producing a virus which causes a reduced amount of disease for use as a live vaccine is called _____ a) attenuation b) avirulent c) virulent d) adjuvant	1.5	C02
Q20	Who developed the treatment for poliovirus? a) Jonas Salk b) Albert Sabin c) Alexander Fleming d) Edward Jenner	1.5	C01
	Section B	(4x5=20 Marks)	C0
Q	Statement of question (each question carries 5 marks)		
Q 11	a) Briefly describe three viral Sexually transmitted infections (STIs). b) Describe the structure and genome of the HPV virus, with the help of a well-labeled diagram.	5 (3+2)	C02
Q 12	a) Briefly describe the types of cancers that are associated with high-risk HPV infections? b) Discuss varied type of vaccinations available for HPV infections.	5 (3+2)	C03
Q 13	a) What is Human Immunodeficiency Virus (HIV) known for, and what cells does it primarily infect? b) List the major classes of antiretroviral drugs used in the treatment of HIV infections. Give one example for each.	5 (1+4)	C02
Q 14	a) List the symptoms, transmission, and complications of dengue fever. b) Discuss the roles of organizations like WHO and CDC in tropical disease control and eradication.	5	C03

Section C		(2x15=30 Marks)	
Q	Statement of question (Case studies) (each question carries 15 marks)		CO
Q 16	<p>In relevance to the given diagram answer the following questions:</p>  <p style="text-align: center;">Polynucleotides move past the detector</p> <ol style="list-style-type: none"> What is the technique shown in the diagram above? Who discovered it? Briefly explain the principle on which the technique works. Compare between dNTPs and ddNTPs. What is a fluorophore? Which molecule is tagged with a fluorophore in this technique and why? What is the role of polyacrylamide slab gel, or a capillary gel system in this technique? 	<p>15 (3x5)</p> <p style="text-align: right;">CO3</p>	
Q 17	 <p>In relevance to the diagram given above, answer the following questions:</p> <ol style="list-style-type: none"> Identify the technique. What is the purpose of using a "capture antibody" in Sandwich ELISA? Explain why the term "sandwich" is used to describe this ELISA technique. Why is it important to block the plate after coating it with the capture antibody? <p>Design an experiment using this technique to detect a viral antigen in blood samples. List the reagents and steps required.</p>	<p>15 (2+3+3+3+4)</p> <p style="text-align: right;">CO4</p>	

Section D		(2x10=20 Marks)	
Q	Statement of question (each question carries 10 marks)		CO
Q1	a) What are the risks of vertical transmission of STIs from mother to child during pregnancy or childbirth? b) Why is early screening for STIs critical in reproductive health settings?	10 (5x2)	CO3
Q2	a) Briefly discuss how HPV interacts with FADD and caspase-8 to dysregulate the extrinsic apoptosis pathway. b) Describe the steps involved in the HIV life cycle, from viral entry to the production of new virions, with the help of a well labelled diagram.	10 (5x2)	CO4
