A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 54B05

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fourth Semester

Biomedical Engineering

15UBM405- PATHOLOGY AND MICROBIOLOGY

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Which of the following types of necrosis is grossly opaque and chalky white CO1- R

   (a) Coagulation (b) Liquefaction (c) Caseous necrosis (d) Fat necrosis

2. Differentiation in cancer cells is incomplete and is called CO1- U

   (a) aplastic (b) anaplastic (c) neoplastic (d) dedifferentiation

3. Endospore is produced by_____ CO2- R

   (a) clostridium (b) bacillus (c) ecoli (d) both a and b

4. Which of the following medium is both selective and differential? CO2- U

   (a) EMB agar (b) MacConkey agar (c) bglb broth (d) all the above

5. Size of virus is _____ CO3- R

   (a) 10-100 nm (b)1-2µm (c) 100 µm (d)1-10Å

6. Which of the following is a retrovirus? CO3- R

   (a) HIV (b) Lenti virus (c) Murine Leukemia Virus (d) All the above

7. Corona virus contains_____ CO4- R

   (a) DNA (b) RNA (c) both (d) ss DNA

8. _____is a group of genes that are regulated as a unit, by the same regulatory gene that expresses a protein acting as a repressor or activator. CO4- R

(a) Operon (b) Regulon (c) housekeeping genes (d) inducible genes

9. Antibody titer refers to CO5- U

(a) concentration of antibody

(b) affinity of antibody

(c) specificity of antibody

(d) highest dilution giving positive results

10. Distemper virus is an example of ---------- CO5 U

(a) species specific innate immunity (b) individual specific innate immunity

(c) both (d) none

PART – B (5 x 2= 10Marks)

11. List the four aspects of the disease process form the core of pathology CO1- U

12. Define resolution CO2- U

13. Mention the various types of shocks. . CO3- U

14. Mention the types of mutation. CO4- U

15. Mention the types of antibodies. CO5- U

PART – C (5 x 16= 80Marks)

16. (a) Describe the various methods adopted in pathological calcification and decalcification CO1- U (16)

Or

(b) Write a detailed note on cancer biology. CO1- U (16)

17. (a) Summarize pure culture techniques for isolation of microorganisms. CO2- U (16)

Or

(b) Describe in detail about Transmission electron microscope with a neat diagram CO2- U (16)

18. (a) Write a detailed note on thrombosis by analysing the cause and effects of the same. CO3- U (16)

Or

(b) Explain the pathology of leukemias and lymphomas. CO3- U (16)

19.	(a)	Explain the structure of plasmid and its types.	CO4- U	(16)
		Or		
	(b)	Explain structural organization of HIV genome.	CO4- U	(16)
20.	(a)	Explain in detail about immune diffusion and immune electrophoresis.	CO5- U	(16)
		Or		
	(b)	What are the diseases caused by Bacteria, Fungia, Protozoal, Virus and Helminthes? Discuss it in detail.	CO5- U	(16)