

Question Paper Code: 94B05

B.E./B.Tech.DEGREEEXAMINATION, DEC 2021

FourthSemester

Biomedical Engineering

19UBM405 - PATHOLOGY AND MICROBIOLOGY

(Regulation2019)

Duration: Three hours

Maximum: 100Marks

AnswerALLquestions

PARTA-(10 x2=20Marks)

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| 1. Define Neoplasia | CO1-U |
| 2. Comparative analysis of dystrophic and metastatic calcification. | CO1- U |
| 3. Explain blot clotting factors with neat diagram. | CO1- U |
| 4. How do you differentiate Leukemia patients with normal human? | CO3- An |
| 5. Define Fluorescence microscope | CO1- U |
| 6. Why AFB staining is suitable for Mycobacterium species identification? | CO3- An |
| 7. Define Transduction. | CO1 - U |
| 8. Discuss on physical and chemical mutagens. | CO1 - U |
| 9. Define phagocytosis. | CO1- U |
| 10. Why antibodies are more specific to antigens? | CO3- An |

PART– B(5 x 16= 80 Marks)

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| 11. | a) Give a short note on pathologic calcification and examine different pathologic calcification and its types. | CO1-U | (16) |
| | OR | | |
| | b) Give a short note on apoptosis and enumerate different pathways of apoptotic process with neat sketch. | CO1 - U | (16) |

12. a) Explain the process of fluid and hemodynamic derangements. Investigate intrinsic and extrinsic pathways with neat diagram CO3 –An (16)
- OR
- b) Define hemostasis and thrombosis with neat diagram. Analyze how hemostasis is different from thrombosis. CO3 –An (16)
13. a) What do you mean TEM. How would you differentiate TEM from light microscope with neat diagram? CO1–U (16)
- OR
- b) How would you isolate pure culture from mixed population using spread and streak plate technique? CO1–U (16)
14. a) Give a brief note on microbial genetics. Explain different types of mutants and their impact on microbial growth? CO1 –U (16)
- OR
- b) Explain in detail on Bacterial genetic system. Distinguish transformation and transduction techniques with examples. CO1–U (16)
15. a) Give a brief note on immunology. How do you use antigen-antibody interaction as a model to study human immune system? CO3–An (16)
- OR
- b) Give a brief note on Immunological techniques. How do you use mono-clonal antibody technology for the bacterial treatment? CO3 -An (16)
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