

**KALYANI MAHAVIDYALAYA
CITY CENTRE COMPLEX, KALYANI, NADIA
TEST EXAMINATION 2016
DEPARTMENT OF MICROBIOLOGY
PAPER I**

F.M: 50

Time: 2 hrs

(Use separate sheet for different groups)

GROUP A

- I. Answer the following: (5X1)
- a. What are prions?
 - b. What are coacervates?
 - c. Explain “animalcules”?
 - d. What is bioterrorism?
 - e. How are viruses different from bacteria?
- II. Answer any three: (4X5)
- a. Write a note on: i. contribution of Alexander Flemming ii. Endosymbiotic Hypothesis of origin of life . 2.5+2.5
 - b. What is Koch Postulate? Write a short note on RNA World. 3+2
 - c. What is chemical evolution? Explain about primordial cell. 2.5+2.5
 - d. Father of antiseptic surgery is..... Mention his contribution. 2+3
 - e. Differentiate lytic cycle and lysogenic cycle of viruses. 5
 - f. Write short note on i. Oparin hypothesis or Miller Urey experiment ii. viral proteins. 2.5+2.5

GROUP B

- I. Answer any ten questions (5X1)
- A. Name one pleomorphic organism.
 - B. What are porin proteins?
 - C. Name one endospore forming bacteria.
 - D. What are inclusion bodies?
 - E. What is pseudomurein?
- II. Answer any three questions (5X2)
- A. Distinguish between flagellin and pilin protein.
 - B. Distinguish between Gram +ve and Gram –ve bacteria.
 - C. Write a short note on acidocalcisome.
 - D. Write a short note on functions of cell membrane.
 - E. What are the main functions of capsule?
- III. Answer the following: (2X5)
- A. Draw the structure of flagella.
 - B. What are the different stages of spore formation?

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PAPER II**

F.M: 50

Time: 2 hrs

(Use separate sheet for different groups)

GROUP A

1. Answer any five: 5×1=5

- A) What is isozymes?
- B) What is non protein enzyme?
- C) Define chiral carbon atom.
- D) Give example of two basic amino acid
- E) What are polysaccharides?
- F) What is polysome?
- G) What is pH?

2. Answer any five: 5 ×2=10

- A. Difference between pK_1 & pK_2 .
- B. Why DNA is called acid?
- C. What is ampholytes?
- D. What are apoenzyme & co enzyme?
- E. What is turn over number?
- F. What is E. C. NUMBER?
- G. Write down the importance of quaternary structure in protein.

3. Answer any three 3×5=15

- A. Classify enzyme with example.
- B. Graphically represent UN, NON & COMPETITIVE INHIBITION.
- C. Describe double helical structure of DNA.
- D. CLASSIFY ENZYME on the basis of R group with example.

GROUP B

I. Answer the following questions briefly. (5X1)

- a. What is sedimentation coefficient?
- b. Name an instrument to measure OD.
- c. What is half-life of a radioactive material?
- d. What colour does proline develop on reaction with ninhydrin.
- e. Name a method to separate a mixture of plant pigments.

II. Answer the following questions in brief. (Any three) (3X5)

- a. State Lambert-Beer's law.
- b. Write the principle of affinity chromatography.
- c. Describe the process of paper chromatography with diagram.
- d. Calculate mean and standard deviation of the following data.
3,6,7,3,11,12,23,25,10,18,25 and 30
- e. Define median, median and mode for simple series as well as grouped series along with the formula.