B.Sc.(N) [Post Basic (1st Year)]

BF/2009/06

Microbiology

[New Scheme-w.e.f. 2007 admission]

M.M. : 75 **Time : 3 Hours.**

Note**: Attempt FIVE questions only. Q.No. 1 is COMPULSORY.**

1A. **Give one word answer of the following**: [10x1=10]

1. Who invented basic tools, such as hot air oven and steam sterilizer?
2. Lipopolysaccharide is a major cell component of……bacteria.
3. Painless, hard, non-bleeding ulcer is seen in which stage of Syphilis……...
4. Destruction or inhibition of microorganisms in living tissues is known as…….
5. Which bacterial cell wall contains Sterols?
6. Anaphylactic reactions are `mediated by which class of Immunoglobulin?
7. Mycolic acid is present in the cell wall of……..
8. Quellung reaction is used for the diagnosis of…….
9. Albert's stain is used for the detection of…….
10. Negri bodies are found in the cells infected with the following virus…….

1B. **Pick up the most appropriate answer**: [5x1=5]

1. Most abundant class of *immunoglobulin* in the body is:
   a. Ig G
   b. Ig M
   c. Ig E
   d. Ig A
2. *β-hemolysis* is characteristic of:
   a. Streptococcus pyogenes.
   b. S. salivarius.
   c. S. pneumoniae
   d. Viridans streptococci.
3. Humans become most commonly infected with *Mycobacterium* tuberculosis most frequently by:
   a. Ingestion.
   b. Inhalation.
   c. Contact.
   d. Inoculation.
4. What is the colour of colonies of *Corynebacterium diphtheriae* on blood tellurite agar medium?
   a. White.
   b. Grey to black.
   c. Cream.
   d. Yellow.
5. What is the efficacy of the transmission of HIV by blood transfusion?
   a. 0.5-1%
   b. 2.5%
   c. 13-40%
   d. >90%

1C. **Fill in the blanks**: [4x1=4]

1. Mantoux test is used for the diagnosis of……
2. Dark ground microscopy is used for the diagnosis of …….
3. The colour of granules in *Madurella mycetomatis* is……..
4. Plastics are to be disposed of in which colour coded bag……..

2. **Write short notes on any FOUR of the following**: [4x3$^{1}/_{2}$=14]

a. Contributions of Robert Koch.
b. Hot air oven.
c. Prozone Phenomenon.
d. Type II hypersensitivity.
e. Typhoid vaccines.
f. Cryptococcus infections.
g. Differential media.
h. Ziehl-Neelsen stain.

3. Define Hypersensitivity. How do you classify various types of hypersensitivity reactions? Describe Type I reactions. [2+4+8=14]

4. Name different types of hospital wastes and describe in detail the various methods of disposal waste. [4+10=14]

5. Discuss the pathogenesis, laboratory diagnosis of Tuberculosis. Describe the Mantoux test and BCG vaccination. [4+5+2+3=14]

6. Name various Hepatitis causing viruses transmitted by Blood. Describe other routes of transmission, pathogenesis and laboratory diagnosis of Hepatitis C virus. [3+4+7=14]

7. **Write briefly on**: [7+7=14]

a. Laboratory diagnosis of Malaria.
b. Laboratory diagnosis of Aspergillosis.
