

**MICROBIOLOGY**

**PAPER-III**

Time: 3 hours  
Max. Marks:100

MICRO/J/19/18/III

**Important Instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

**Write short notes on:**

1. Enumerate the leishmanial diseases and their vectors in India. Briefly discuss visceral leishmaniasis and the challenges in management of visceral leishmaniasis in India. 4+6
2. a) Enumerate the malarial parasites causing disease in India. 3+7  
b) Drug resistance in malaria in India.
3. a) Enumerate the parasitic agents causing meningoencephalitis. 4+6  
b) Eosinophilic meningoencephalitis.
4. a) Enumerate the trematode infections with etiological agents prevalent in India. 4+6  
b) Lung fluke infection in India.
5. Enumerate the agents causing intestinal coccidial infections in man. Give an outline of laboratory diagnosis of these infections. 3+7
6. Changing epidemiology of influenza virus outbreaks. 10
7. Human papilloma virus infection and its prevention. 6+4
8. a) Enumerate the oncogenic viruses. 2+8  
b) Viral oncogenesis.
9. a) Draw a labelled diagram of human immunodeficiency virus (HIV). 4+6  
b) Molecular epidemiology of HIV infection in India.
10. Current status of re-emergence of measles virus infections and its prevention. 5+5

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