

Q.P. Code : 02939

[Time: 2½ Hours]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Figures to the right indicate marks assigned to the question.

Q. 1 A) **Attempt any two of the following-** (10)

- i) Differentiate between lepromatous and tuberculoid leprosy.
- ii) With reference to the diagnosis of HIV infection discuss ELISA test.
- iii) Elaborate on the clinical manifestation of syphilis.
- iv) With reference to *S.aureus* discuss briefly a) extracellular enzymes and b) TSST.

B) **Answer any five of the following-** (05)

- i) Name the nucleic acid of Hepatitis B virus.
- ii) Name the scientist who classified haemolytic streptococci based on the nature of carbohydrate antigen present in cell wall.
- iii) Name one skin infection caused by *S.aureus*.
- iv) Name the pigment produced by *Ps. aeruginosa*.
- v) What is indeterminate type of leprosy?
- vi) Name one drug to treat avian influenza.
- vii) Give the name of the causative agent of swine influenza.
- viii) Name one drug to treat HIV infection.
- ix) Name the receptor of HIV.
- x) Name one standard test for the diagnosis of syphilis.

Q. 2 A) **Write short notes on any two of the following-** (10)

- i) Give an account of macrolide antibiotics.
- ii) Write a note on the E test.
- iii) Elaborate on the mode of action, range of activity and mechanism of resistance of sulphonamides.
- iv) Explain giving examples how the inactivation of a drug may lead to resistance.

B) **Do as directed for any five of the following-** (05)

- i) Name any one component of quality assurance programme.
- ii) What is meant by accreditation of laboratories?
- iii) Give one example of semisynthetic penicillin.
- iv) What is cotrimoxazole?
- v) What is the target of the activity of quinolones?
- vi) Name an antimycobacterial agent.
- vii) What is total quality management?
- viii) Which enzyme is targeted by the β -lactam antibiotics?
- ix) Name the scientist who is regarded as the father of chemotherapy.
- x) What is a primary sensitivity test?

[P.T.O]

- Q. 3 A) Answer any two of the following-** (10)
- With the help of a diagram explain the steps involved in direct and indirect ELISA technique.
 - Write a short note on the steps involved in complement fixation test.
 - Explain the functions of immune stimulating complexes and microencapsulation delivery systems in vaccine preparation.
 - Write a short note on live viral vector vaccines.
- B) Attempt any five of the following-** (05)
- State true or false: Prozone phenomenon occurs due to antigen excess.
 - Name a live polio vaccine
 - Define a synthetic vaccine.
 - Define toxoid
 - List two adjuvants used in vaccine preparation.
 - List two fluorescent dyes.
 - State true or false: BCG is an inactivated vaccine.
 - Give the significance of passive agglutination test.
 - What is rocket electrophoresis?
 - State true or false: Precipitation is a reaction between soluble antigen and an antibody.
- Q. 4 A) Attempt any two of the following-** (10)
- Describe in detail the antigenic structure of ABO blood groups.
 - Write a note on immunological mechanism of type I hypersensitivity reactions.
 - What is meant by graft rejection? Give clinical manifestations of hyperacute graft rejection.
 - Discuss the types and causes of autoimmune anaemias.
- B) Do as directed for any five of the following-** (05)
- Why is the Rhesus blood group called so?
 - Name the scientists who demonstrated human allergic reactions.
 - State use of Coomb's serum.
 - Define immune tolerance.
 - Name two immunologically privileged sites for grafting.
 - What is an autograft?
 - What is meant by Plasmapheresis?
 - Give two examples of systemic autoimmune diseases.
 - Explain the term – contact dermatitis.
 - Name two immunosuppressive drugs
- Q. 5 Attempt any three of the following-** (15)
- Write a short note on haemolysin produced by *S. pyogenes*.
 - Discuss the life cycle of malarial parasite.
 - Write a note on tetracyclines.
 - How would you detect synergistic activity between two antimicrobial agents?
 - Discuss the characteristics of an ideal vaccine.
 - Discuss hybridoma technology for monoclonal antibody production
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