



- [illegible]

**(ENGLISH)**

[ TIME ALLOWED—3 HOURS ]

(MARKS—100)

**MICROBIOLOGY AND SEROLOGY (THEORY-I)****Marks**1. (a) Fill in the blanks (any *five*) :—

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- (i) Staphylococci are ..... cocci.
  - (a) gram negative                      (b) gram positive.
- (ii) ..... are strict aerobes.
  - (a) gonococci                      (b) meningococci.
- (iii) ..... produce gas gangrene.
  - (a) Cl. tetani                      (b) Cl. welchii.
- (iv) VDRL test is ..... test.
  - (a) agglutination                      (b) neutralisation.
- (v) ..... are motile.
  - (a) Shigella                      (b) Salmonella.
- (vi) C. diphtheria is ..... .
  - (a) Sporulating                      (b) Non sporulating.

(b) Write *true* or *false* (any *five*) :—

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- (i) Z—N stain detects acid fast bacilli.
- (ii) Blood sugar is basal medium.
- (iii) Scarlet fever is caused by streptococcus pyogenes.
- (iv) Hot air oven is used to sterilize glassware.
- (v) Ethyl alcohol is used as disinfectant.
- (vi) Flagella are present in motile organisms.

(c) Write the extended form :—

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- (i) AST                      (ii) ELISA                      (iii) NA
- (iv) CD                      (v) ASO                      (vi) LF.

(d) Match the pair (any *five*) :—

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**' A ' Group****' B ' Group**

- (i) Streptococci                      (a) Cholera red reaction
- (ii) Staphylococci                      (b) Tuberculin test
- (iii) E. coli                      (c) ASO titre
- (iv) TB bacilli                      (d) Coagulase test
- (v) V. cholerae                      (e) Colony count.

2. Attempt any *two* of the following :— 16
- (a) Define antigen. What are types of antigen ?
  - (b) Describe Laboratory diagnosis of typhoid fever.
  - (c) Enlist chemical methods of sterilization Describe any one of it.
  - (d) Describe disc diffusion method of antibiotic sensitivity test.
3. Attempt any *two* of the following :— 16
- (a) Describe structure and working of autoclave.
  - (b) Describe gram staining. Name gram positive and negative bacilli.
  - (c) Describe morphology, cultural characteristics and biochemicals of proteus.
  - (d) Define antibody. Describe structure of antibody.
4. Answer in brief (any *two*) :— 16
- (a) Describe structure and working McIntosh-field's jar.
  - (b) Describe structure of spore. Name sporulating organisms.
  - (c) Enumerate different inoculation method. Explain lawn culture and its significance.
  - (d) Name different antigen antibody reactions with example. Describe precipitation reaction.
5. Write short notes (any *four*) :— 16
- (a) Flagella of a bacterium
  - (b) Hanging drop method
  - (c) Pathogenesis of cholera
  - (d) Mantoux test.
  - (e) Principle of Indole and methyl red test.
6. Attempt any *two* of the following :— 16
- (a) Describe anaerobic culture methods.
  - (b) Classify media. Write example of each type.
  - (c) Describe Wasserman test.
  - (d) What do you mean by acid fastness ? Describe acid fast staining.
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