



# UNIVERSITY OF THE PUNJAB

B.A. / B.Sc. Part – II  
Supplementary Examination - 2018

Roll No. ....

Subject: Microbiology-II  
PAPER: A

TIME ALLOWED: 2 Hrs. & 20 Min.  
MAX. MARKS: 40

*Attempt this Paper on Separate Answer Sheet provided.*

*NOTE: Attempt any FOUR questions. All questions carry 10 marks.*

- Q.4 Define Immunity. Name two types of immunity and explain the process of phagocytosis in detail? (10)
- Q.5 Write short notes on any two: (5+5=10)
- Hepatitis A
  - Salmonella typhi
  - Mycobacterium tuberculosis
- Q.6 Write a note on any one sexually transmitted disease? (10)
- Q.7 Describe complement system and its types involved in the lysis of bacterial cell? (10)
- Q.8 Explain different stages of Plasmodium falciparum? (10)
- Q.9 Differentiate between endotoxins and exotoxins? Describe the mechanism of action by toxins produced by Vibrio cholera? (10)
- Q.10 Define the following: (5x2=10)
- Heptens
  - Virulence
  - Inflammation
  - Pathogens
  - Antibodies



Subject: Microbiology-II  
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TIME ALLOWED: 40 Min.  
MAX. MARKS: 30

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. Division of marks is given in front of each question.  
This Paper will be collected back after expiry of time limit mentioned above.

Q.1 MCQs:

(13)

- i. Involved in allergies:  
(a) IgG (b) IgM  
(c) IgA (d) IgE
- ii. Main antibody of both primary and secondary immune response:  
(a) IgG (b) IgM  
(c) IgA (d) IgE
- iii. Which of the following are the isoantigens:  
(a) Blood group antigens (b) Human leucocyte antigens  
(c) Rickettsia antigens (d) A & B
- iv. *Corynebacterium diphtheria* is \_\_\_\_\_ and club shaped.  
(a) Gram positive cocci (b) Gram positive rods  
(c) Gram negative rods (d) Gram negative cocci
- v. Main antibody of the complement system:  
(a) IgG (b) IgM  
(c) IgA (d) IgE
- vi. \_\_\_\_\_ are the antigenic determinants that characterize classes and subclasses of heavy and light chains.  
(a) Isotypes (b) Idiotypes  
(c) Allotypes (d) Monotypes
- vii. Which of the following immunoglobulin is present in highest concentration in plasma:  
(a) IgG (b) IgM  
(c) IgA (d) IgE
- viii. Which element is important in maintaining the structure of immunoglobulin:  
(a) P (b) S  
(c) Ca (d) Fe
- ix. Immunoglobulin J chain is:  
(a) Only produced by T cells (b) Only produced by neutrophils  
(c) Only produced by IgE for histamine release  
(d) Associated with multimeric forms of IgM and IgA
- x. Variable region domains are:  
(a) Needed to bind complement  
(b) Located at the N-terminus of the heavy chain only  
(c) Transport across placenta  
(d) Necessary for specific recognition of antigens

P.T.O.

- xi. *Pseudomonas aeruginosa* contain \_\_\_\_\_ pigments:  
 (a) Pycocyanin (b) Fluorescein  
 (c) Fluorochromes (d) A & B (e) All of the above
- xii. *Vibrio cholera* produce toxins that bind to the \_\_\_\_\_ and cause rice water diarrhoea.  
 (a) GIT mucosal lining (b) Nerve cell  
 (c) Muscle cell (d) Hepatocytes
- xiii. *Bacillus anthracis* produce toxins that bind to the \_\_\_\_\_ to cause anthrax.  
 (a) GIT mucosal lining (b) Nerve cell  
 (c) Muscle cell (d) Hepatocytes

**Q.2 Cross Matching**

(7)

Haptens	Asthma
Antibody	Retrovirus
Adjuvant	Alum
AIDs	Antigenic shift and drift
Rabies	B Cells
Influenza virus	Penicillin
Hypersensitivity	Rhabdoviridae

**Q.3 Draw and label WHITE BLOOD CELLS which are the major immune cells? (10)**