

IMMUNO REVISION PAPER -2

1. Which of the following does not protect body surfaces:

- A Skin.
- B Mucus.
- C Gastric acid.
- D Salivary amylase**
- E Gut microflora

2. Pattern recognition receptors (PRR) include:

- A LPS.
- B PAMPs.
- C Lipoteichoic acid.
- D Lectin-like molecules.**
- E Unmethylated CpG sequences

3. The mononuclear phagocyte system does not include:

- A Monocytes.
- B Kupffer cells.
- C Kidney mesangial cells.
- D Lymph node medullary macrophages.
- E Endothelial cells.**

4. A polymorphonuclear neutrophil (PMN):

- A Is a bone marrow stem cell.
- B Is closely similar to a mast cell.
- C Contains microbicidal cytoplasmic granules.**
- D Is not a professional phagocytic cell.
- E Has granules which stain with eosin.

5. Which of the following is not produced following activation of the NADPH oxidase microbicidal pathway

- A O₂ -
- B O₂
- C H₂O₂
- D NO**
- E OH

6. Neutrophil defensins are:

- A Anti-toxins.
- B Oxygen-dependent.
- C Enzymes.
- D Glycolipids.
- E Peptide antibiotics.**

7. The TLR9 pattern recognition receptor recognises:

A CpG motifs.

B Gram +ve peptidoglycan.

C Mycobacterial lipoarabinomannan.

D Gram -ve LPS.

E dsRNA.

8. Complement component C3 is cleaved by:

A C3b

B C3bBb

C Factor B

D Factor D

E Factor H

9. The membrane attack complex consists of:

A OH.

B Colicins

C C3b3b,Bb

D C5b,6,7,8,9

E Properdin

10. C3b:

A Is chemotactic.

B Is an anaphylatoxin.

C Opsonizes bacteria.

D Directly injures bacteria.

E Is the inactive form of C3.

11. Acute inflammation characteristically involves:

A Constriction of arterioles.

B Capillary endothelial cell enlargement.

C Influx of macrophages.

D Influx of mast cells.

E Influx of neutrophils.

12. Lysozyme:

A Is a cytoplasmic organelle.

B Activates complement.

C Is a proteolytic enzyme.

D Splits peptidoglycan.

E Is released by mast cells.

13. Which of the following is not an acute phase protein:

A Serum amyloid P component.

B Chondroitin sulfate.

C C-reactive protein.

D Mannose binding lectin.

E Fibrinogen.

14. Interferons:

A Are found only in mammalian species.

B Are divided into 5 main families.

C Induce enzyme synthesis in the target cell.

D Only affect infected cells.

E Are specific for individual viruses.

15. Natural killer (NK) cells do not:

A Respond to interferon.

B Contain perforin.

C Contain tumor necrosis factor (TNF).

D Kill only by damaging the target cell outer membrane.

E Contain serine proteases.

16. Eosinophils do not:

A Stain with basic dyes.

B Contain a major basic protein.

C Contain peroxidase.

D Give a respiratory burst on activation.

E Have C3b receptors.

17. Polymorphonuclear neutrophils attack bacteria:

A Exclusively by oxygen-dependent mechanisms.

B Exclusively by oxygen-independent mechanisms.

C By phagocytosis.

D By secreting complement.

E By secreting interferon.

18. A complement component which is strongly chemotactic for neutrophils is:

A C9

B C5a

C C3

D C3b

E C5b

19. With no therapeutic intervention, the outcome most likely for a transplanted skin graft obtained from an unrelated donor who is HLA identical with out therapeutic intervention.

A Acute rejection

B Chronic rejection

- C Graft vs host disease
- D Hyperacute rejection
- E Long term success

20. Failure of immune system to respond against a self epitope in an aggressive way is associated with

- A Autoimmunity
- B Positive selection
- C Negative selection
- D Suppression

E Tolerance

21. _____ results from deliberate inactivation or destruction of lymphocytes bearing BCRs or TCRs that recognize and bind self epitopes

- A Hypersensitivity
- B Autoimmunity
- C Molecular mimicry
- D Positive selection

E Self-tolerance

22. A 25-year-old man is exposed to the roundworm *Ascaris* but does not develop clinical signs of infection. Which of the following mechanisms is likely to be responsible for his resistance to infection?

- A. Antibody-mediated destruction of worm-infected host cells
- B. CTL-induced apoptosis of worm-infected host cells
- C. Complement-mediated lysis of worm attached to host tissues

D. IgE-mediated type I hypersensitivity disrupting worm attachment

- E. Phagocytosis of worms followed by necrosis of phagocytes

23. A previously healthy 8-month-old girl with fever and wheezing is diagnosed with respiratory syncytial virus (RSV) infection. Assuming that this is the child's first exposure to RSV, which of the following mechanisms will most likely operate to clear the infection?

- A. CD4+ T cell-mediated necrosis of infected cells
- B. Complement-mediated lysis of infected cells

C. Cytotoxic T cell-induced apoptosis of infected cells

- D. MHC I presentation of viral peptides on CD8+ T cells
- E. Virus-specific antibodies that neutralize free virus

24. In response to the lipopolysaccharide from a gram-negative bacterial infection, local host phagocytes release proinflammatory cytokines, including IL-6, which then stimulates hepatic synthesis and release of

A. C-reactive protein.

- B. Chemokines.
- C. complement.
- D. immunoglobulins.
- E. interleukins.

25. Which of the following is the predominant immunoglobulin isotype secreted in the human MALT?

- A IgA**
- B IgG
- C IgM
- D IgD
- E IgE

26. A 14-month-old boy who has not received any recommended vaccines remains healthy despite his daily association with several other children for the past year at a home day care facility. Which of the following mechanisms best explains why he has not contracted diphtheria, measles, pertussis, or polio?

- A. Herd immunity**
- B. Genetic drift
- C. Genetic shift
- D. Immune evasion
- E. Tolerance

27. Which of the following types of vaccines would most likely evoke the best and most long-lasting protective immune response against rubeola (measles)?

- A. Attenuated vaccine**
- B. DNA vaccine
- C. Extract vaccine
- D. Killed vaccine
- E. Recombinant vaccine

28. The complement is fixed best by which of the following immuno-globulins

- a) IgG₂
- b) IgM**
- c) IgA
- d) IgD

NB: All classes of Ig do not fix complement. Only IgM, IgG 3, 1 and 2 (in that order) fix complement, but not IgG 4, IgA, IgD or IgE.