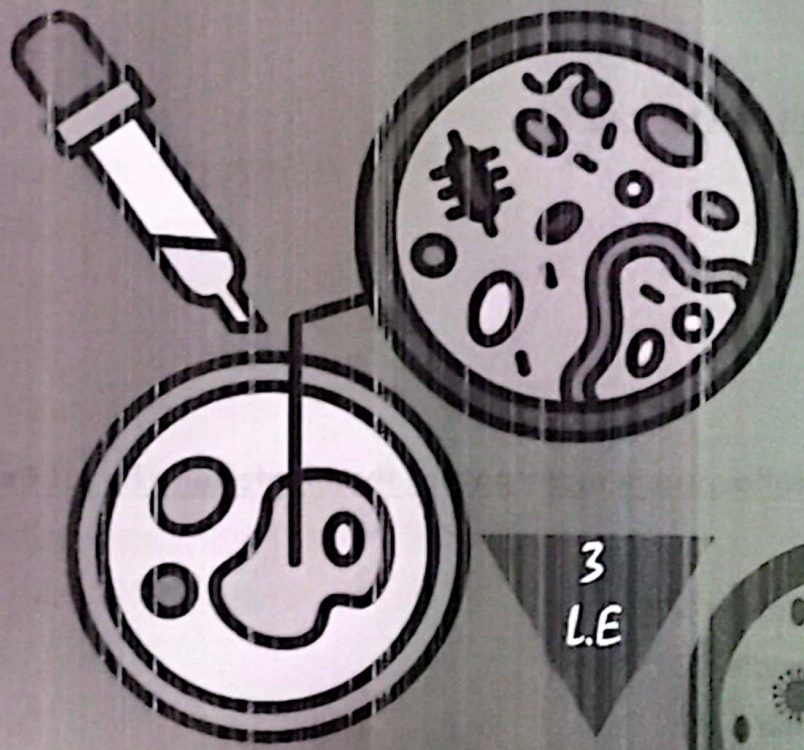
Level 1 – Semester 2

Microbiology



HIS

3 L.E

mcq - 1

2024

Dr. A.G.

1- Which of the following is considered anaphylactic hypersensitivity?

a- Type i

b- Type II

c- Type III

d- Type IV

2- Which of the following is considered immune complex hypersenitivty?

a) Type i

b) Type II

c) Type III

d) Type IV

3- Hay fever is an example of

A. Type i

B. Type II

C. Type III

D. Type IV

4- Which of the following is more potent than histamine by 1000x

a- Tryptase

b- Leukotriene C4 D4

c- Prostaglandin D2

d- Leukotriene B4

1	2	3	4
A	C	A	B

5- What is the cause of edema and pain in type I hypersensitivity?

a) Tryptase

b) Leukotriene C4, D4

c) Prostaglandin D2

d) Leukotriene B4

6- ID injection of allergen leads to induration at the site within 15 mins It is called

A- Delayed type hypersensitivity

B- Tuberculin test

C- Dick test

D- Prick test

E- Schick test

7- What is the main action of cromolyn sodium ?

a- Block histamine receptors

b- Block leukotriens

c- Bronchodilator

d- Mast cell degranulation inhibitor

8- What is the result of long term immunotherapy?

a- Increase level of IgE

b- Rise of IgG1

c- Neutralize IgM

d- Rise of IgG4

e- Decrease IgG4

5	6	7	8
C	D	D	D

9- What is the cytotoxic hypersensitivity?

a) Type i

b) Type II

c) Type III

d) Type IV

10-What is the cause of killing cells by lysis when antigen antibody on the surface of cells

a- Macrophage activation

b- IGE and mast cells

c- Complement intravascular hemolysis

d- Killer cells

e- T cells

11- ABO incompatibility is an example of

a) Type i

b) Type II

c) Type III

d) Type IV

12-The following manifestation of infant born with Erythroblastosis foetalis except

a- Anaemia

b- Jaundice after week

c- HSM

d- Encephalopathy

e- Mother is Rh negative

9	10	11	12
B	C	B	B

13-Idiopathic thrmobocytopenic purpura is an example of

a) Type i
b) Type II
c) Type III
d) Type IV

14-Tuberculin test is an example of

A. Type i
B. Type II
C. Type III
D. Type IV

15-What is the main antigen in type I hypersensitivity

a- Cell surface
b- Soluble
c- Tissue
d- Organs
e- Exogenous

16-What is the response time in type III hypersensitivity

a- 30 mins
b- 3 hours
c- 48 hours
d- 3 days
e- 15 mins

13	14	15	16
B	D	E	B

17-What is the type of hypersensitivity transferred by T cells

A. Type I

B. Type II

C. Type III

D. Type IV

18-Which of the following type of hypersensitivity mediated by complement and neutrophils

a. Type I

B. Type II

C. Type III

D. Type IV

19-Which of the following type of hypersensitivity not mediated by antibodies

a) Type I

b) Type II

c) Type III

d) Type IV

20- what is the main cells associated with type 1 hypersensivity?

a- neutrophils

b- lymphocytes

c- macrophages

d- mast cells

e- dendritic cells

17	18	19	20
D	C	D	D

21- Which of the following is considered preformed mediator in type 1 hypersensitivity?

a- leukotriene b 4

b- leukotriene c4

c- tryptase

d- prostaglandin

e- leukotriene d 4

22- which of the following is inhibitor of mast cell degranulation?

a- bronchodilators

b- chromolyn sodium

c- steroids

d- epinephrine

e- antihistaminics

23- which of the following types of hypersensivity associated with chronic eczema?

a- Type i

b- Type II

c- Type III

d- Type IV

24- Pollen would most likely evoke which type of hypersensitivity response::

a- Cytotoxic (Type I)

b- Immune complex (Type III)

c- immediate type (I)

d- Cell Mediated Type IV)

21	22	23	24
C	B	D	C

25- Which of the following bind to mast cells and cross-link, resulting in de-granulation and release of histamine?

a- IgM

b- IgD

c- IgG

d- IgE

26- Rheumatoid arthritis represents what type of hypersensitivity?

a) Type I

b) Type II

c) Type III

d) Type IV

25	26
D	C

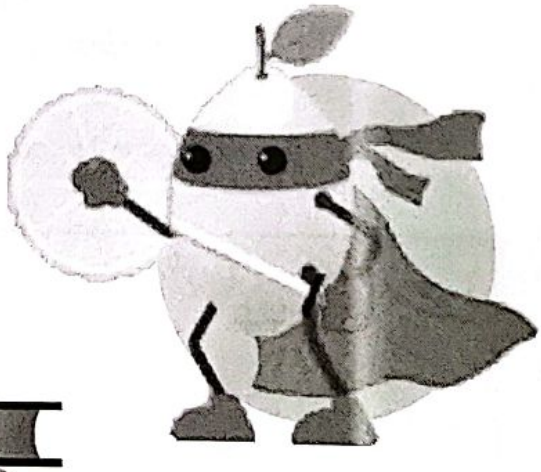
A.Elbelkasi

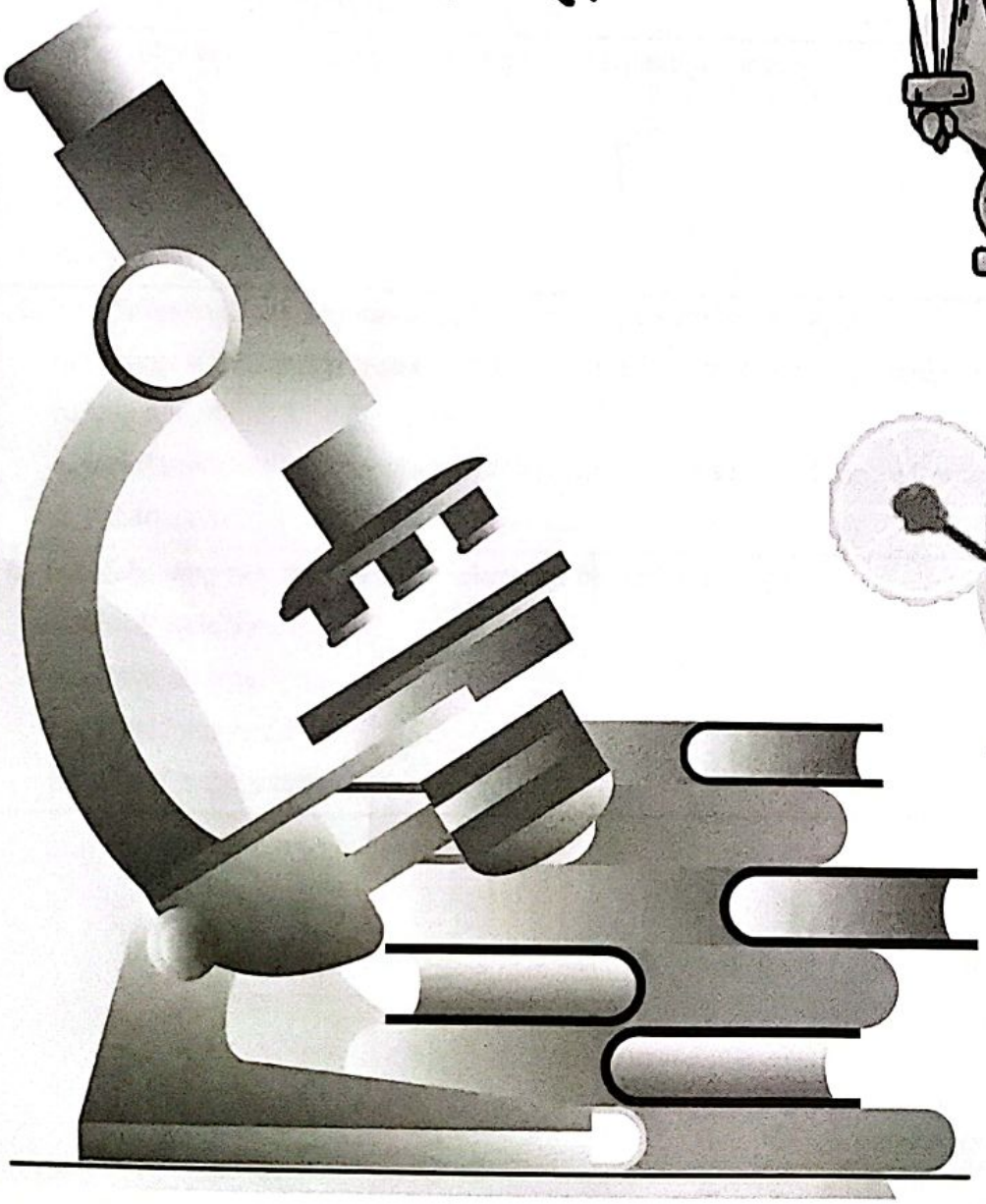
CAPSULES in MicroBiology

1st year

Tolerance & autoimmune

Lecture 2 (MCQ)





BERLIN

1- The following are immunologic features of tolerance EXCEPT a. It's an active Ag-dependent process in response to the Ag b. It's specific c. Maintenance of immunological tolerance requires persistence of Ag d. It can exist in T cells only	**D**
2- The following are theories of autoimmunity except: a. Sequestered antigen. b. Escape of auto-reactive clones. c. Lack of helper T cells. d. Cross reactive antigens.	**C**
3- The following are theories of autoimmunity except: a. Sequestered antigen b. Escape of auto-reactive clones c. Lack of helper T cells d. Cross reactive antigens	**C**
4- The following tissues contains sequestered antigen except: a. Testes b. Thyroid c. brain e. eye	**B**
5. The followings are Immunologic features of tolerance except: a. It is an active antigen-dependent process in response to the antigen. b. It is specific. c. Maintenance of immunological tolerance requires persistence of antigen. d. It can exist in T-cells only.	**D**
6. The following are theories for tolerance induction except: a. Clonal deletion b. Clonal anergy c. Clonal ignorance d. lack of suppressor cells	**D**

7- Sequestered antigen theory in autoimmunity means a. Abnormality increased immune response b. Deficiency of T suppressor cells. c. Release of some late developing or hidden antigen d. Some antigens cross react with self-antigens e. Some autoreactive cells escape from the thymus	**C**
8- Failure of self tolerance lead to a. hypersensitivity b. immunodeficiency c. Malignant tumor d. Autoimmune disease e. Benign tumor	**D**

Cases

1

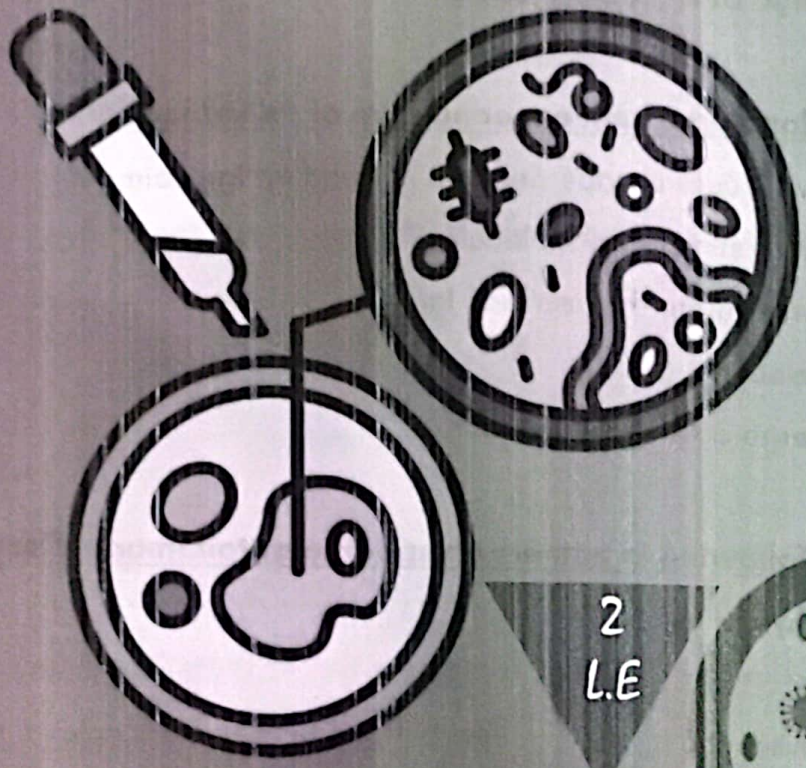
- A 5-year-old male child presented to the emergency department at 2 AM with vomiting and abdominal pain. He had a 2-week history of polyuria and polydipsia, accompanied by a 700 grams weight loss and blurred vision. His medical history was unremarkable.
- Results of hospital laboratory studies revealed that the patient's initial blood glucose level was 1192 mg/dL, presence of sugar, keto acids in urine and presence of autoantibodies in blood . A family history of diabetes and SLE was reported.

2

- Mrs. Hala is 37 years old mother who has developed episodes of painful small joints of both hands and wrists over the last 3 months. Pain and early morning stiffness stopped her from performing her housework. small joints appeared swollen. Liver and spleen were injured, investigation revealed a raised C-reactive protein (CRP) level, a latex test for rheumatoid factor (RF) was positive and antinuclear antibodies (ANA) were detected.

Level 1 – semester 2

Microbiology



HIS

2 L.E

MCQ - 2

2024

Dr. A.G.

1- What is meant by clonal deletion

a) Absence of co stimulatory molecules
b) B cells downregulate their surface IgM
c) Negative selection
d) B cells undergo DNA recombination

2- What is the receptor editing mechanism of immune tolerance

a) Absence of co stimulatory molecules
b) B cells downregulate their surface IgM
c) Negative selection
d) B cells undergo DNA recombination

3- What is the clonal ignorance mechanism of tolerance?

a) Autoreactive B cells escape deletion not find antigen die out
b) Absence of co stimulatory molecules
c) B cells downregulate their surface IgM
d) Negative selection
e) B cells undergo DNA recombination

4- Which of the following is non organ specific autoimmune disease

a) Hashimoto thyroiditis
b) DM
c) Hemolytic anaemia
d) Thryombocytopenia
e) SLE

1	2	3	4
C	D	A	E

5- When thymus not full functionally to eliminate self reactive cells

a) Tolerance
b) Pathogenicity
c) Tumor immunology
d) Autoimmunity
e) Non responsiveness

6- Which of the following not mechanism of autoimmunity?

a) Sequestered antigen
b) Lack of regulatory T cells
c) Cross reactive antigens
d) Clonal anergy
e) Escape of autoreactive clones

7- When b cells exposed to self antigen , down regulate their surface igM, It is called

a- clonal deletion
b- clonal ignorance
c- clonal anergy
d- receptor editing
e- anti-idictype antibody

8- what is the exact mechanism that autoreactive t cells are eliminated in thymusfollowing interaction with self antigen?

a- clonal deletion
b- clonal ignorance
c- clonal anergy
d- receptor editing
e- anti-idictype antibody

5	6	7	8
D	D	C	A

9- the mechanism of tolerance that occur in b cells when undergo DNA rearrangement?

a- clonal deletion

b- clonal ignorance

c- clonal anergy

d- receptor editing

e- anti-idiotype antibody

10-A state of T lymphocyte non-responsiveness that occurs due to lack of co-stimulatory molecules on the antigen presenting cells is known as

a) Allergy.

b) Anergy.

c) Apoptosis.

d) Autoimmunity.

e) Hypersensitivity

11- Which of the following cells have been implicated in the prevention of autoimmunity?

a) Antigen presenting cells.

b) B cells.

c) Regulatory T cells.

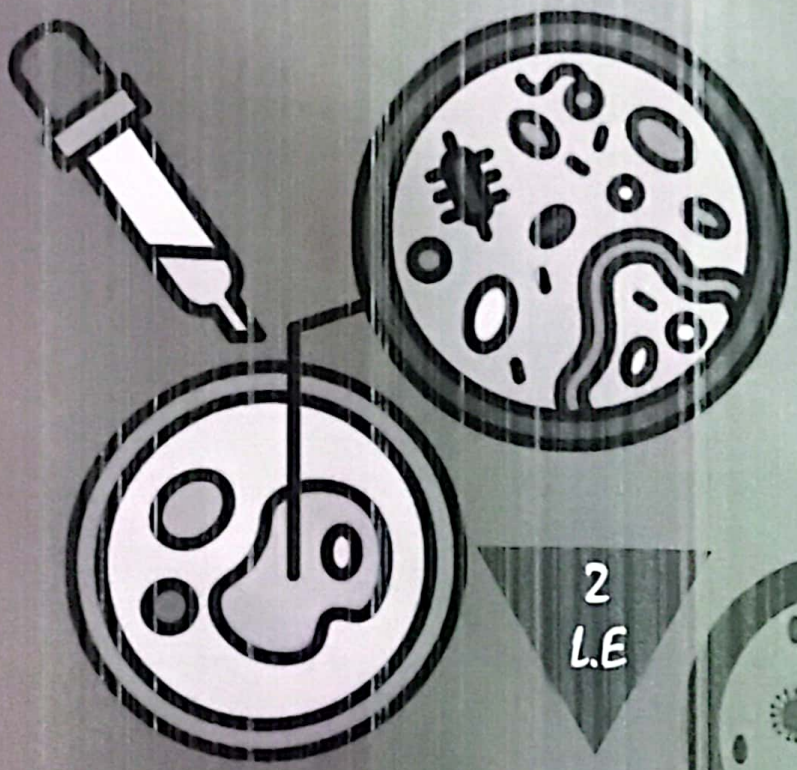
d) Dendritic cells.

e) NK cells.

9	10	11
D	B	C

Level 1 – Semester 2

Microbiology



HIS

2
L.E

MCQ - 3

2024

Dr. A.G.

1- **which of the following subfamilies Epstein Barr virus belongs to?**

a- beta herpervirinae

b- gamma herpesvirinae

c- delta herpesvirinae

d- alpha herpesvirinae

2- **Cytomegalovirus belongs to which of the following subfamilies**

a- beta herpervirinae

b- gamma herpesvirinae

c- delta herpesvirinae

d- alpha herpesvirinae

3- **varicella zoster virus belongs to which of the following**

a- beta herpervirinae

b- gamma herpesvirinae

c- delta herpesvirinae

d- alpha herpesvirinae

4- **which of the following viruses associated with Kaposi sarcoma?**

a- HHV-4

b- HHV-2

c- HHV-8

d- HHV-3

e- HHV-6

1	2	3	4
B	A	D	C

5- which of the following describe genome of Epstein Barr virus?

a- single strand RNA

b- Double strand DNA

c- Double strand RNA

d- Single strand DNA

e- Both DNA,RNA genome

6- The envelope of Epstein Barr virus is characterized by the following

a- lipoprotein spikes

b- lipid covering

c- glycoprotein spikes

d- non enveloped

e- enveloped without capsid

7- What is the main mode of transmsision in epstein barr virus?

A- sexual contact

B- blood transfusion

C- organs transplantation

D- iv addicts

E- infected saliva

8- Downy cells are characteristic cells appears with which of the following viruses?

a- cytomegalovirus

b- herpes simplex type 1

c- rubella virus

d- mumps virus

e- Epstein Barr virus

5	6	7	8
B	C	E	E

9- Downy cells are abnormal ..... cells appear in Epstein Barr virus

a- b lymphocytes

b- dendritic cells

c- macrophages

d- t lymphocytes

e- neutrophils

10-The latency of epstein barr virus occurs in which of the following cells?

a- b lymphocytes

b- dendritic cells

c- macrophages

d- t lymphocytes

e- neutrophils

11- Which of the following viruses associated with oral hairy leukoplakia?

a- cytomegalovirus

b- Epstein Barr virus

c- herpes simplex type 1

d- rubella virus

e- mumps virus

12-Which of the following describe genome of HIV ?

a) single strand RNA

b) Double strand DNA

c) Double strand RNA

d) Single strand DNA

e) Both DNA,RNA genome

9	10	11	12
D	A	B	A

13-what is the most powerful weapon of HIV?

a- live insice macrophages.

b- antigenic variability

c- cause flu like illness.

d- transformed by breast feeding

14-AIDS syndrome is confirmed when CD4 T cells count

a- below 500

b- above 200

c- below 100

d- above 500

e- below 200

15-Detection of p24 antigen by ELISA is used to diagnose which of the following viruses?

A. HIV

B. HBV

C. Rota

D. Ebola

E. RSV

16-Latency of EBV virus occurs in which of the followings?

a. Monocytes

b. Trigeminal ganglia

c .Sacral ganglia

d. B lymphocytes

e. Dorsal ganglia

13	14	15	16
B	E	A	D

Level 1 – semester 2

Microbiology

HIS

MCQ - 4

2024

Dr. A.G.

1- **Graft between 2 genetically dissimilar members of the same species is called which of the following techniques?**

a- Autograft

b- Isograft

c- Allograft

d- Xenografts

2- **Graft between 2 members of different species is called which of the following techniques?**

a- Xenografts

b- Autograft

c- Isograft

d- Allograft

3- **Graft between 2 genetically identical individuals is called which of the following techniques?**

a- Autograft

b- Isograft

c- Allograft

d- Xenografts

4- **Transplantation gene responsible for slow rejection?**

a- MHC

b- APC

c- IFN

d- TNF

e- minor HC

1	2	3	4
C	A	B	E

5- which of the following mechanisms associated with hyperacute graft rejection?

a- grafts contain donor antigen presenting cells

b- activate recipient T cells.

c- preformed natural antibodies

d- These T cells migrate to all tissues including graft

e- The graft contains immunologically competent cells

6- Graft versu host disease occurs dur to which of the following?

a- grafts contain donor antigen presenting cells

b- activate recipient T cells.

c- preformed natural antibodies

d- These T cells migrate to all tissues including graft

e- The graft contains immunologically competent cells

7- Uptake of graft antigens by recipient APC cause the following rejections?

a- Hyperacute graft rejection

b- Acute rejection

c- Chronic (long term) rejection

d- Graft-versus-host disease (GVHD)

8- Passenger APCs cause the following rejections?

a- Hyperacute graft rejection

b- Acute rejection

c- Chronic (long term) rejection

d- Graft-versus-host disease (GVHD)

5	6	7	8
C	E	C	B

9- Antibodies react with antigens on vascular endothelial cells and activate complement associated with which of the following?

a) Hyperacute graft rejection
b) Acute rejection
c) Chronic (long term) rejection
d) Graft-versus-host disease (GVHD)

10-Peptides from both MHC & minor histocompatibility antigens are presented by recipient antigen presenting cells cause the following?

a- Chronic (long term) rejection
b- Hyperacute graft rejection
c- Acute rejection
d- Graft-versus-host disease (GVHD)

11- Auto graft is a type of graft that can occur between:

a) Two genetically identical individuals
b) Two genetically dissimilar animals of the same species.
c) Two animals of different species
d) Two sites within the same individual.
e) Two organisms from different phyla

12-Acute graft rejection occurs as a result of presence of:

a) Donor antigen presenting cells in the graft.
b) Preformed antibodies in blood
c) Recipient antigen presenting cells reaching the graft
d) Immunologically competent T and B cells present in the graft
e) Circulating natural killer cells

9	10	11	12
A	A	D	A

13-The best successful type of graft transplantation is ?

a- Xenografts

b- Autograft

c- Isograft

d- Allograft

14-The ideal donor for graft survival is

a- animal

b- non-identical twins

c- identical twin

d- cadaver

15-Recipient preparation should be .....after transplant

a- HLA matching

b- ABO compatibility

c- lymphocyte compatability test

d- isolation with antibiotics

13	14	15
C	C	D

Important MCQ on Microbiology (HIS)

1. Which of the following is considered anaphylactic hypersensitivity? a- Type I b- Type II c- Type III d- Type IV	**A**
2. Which of the following is considered immune complex hypersensitivity? a- Type I b- Type II c- Type III e- Type IV	**C**
3. Hay fever is an example of: a- Type I b- Type II c- Type III d- Type IV	**A**
4. Which of the following is more potent than histamine by 1000x? a- Tryptase b- Leukotriene C4, D4 c- Prostaglandin D2 d- Leukotriene B4	**B**
5. What is the cause of edema and pain in type I hypersensitivity? a- Tryptase b- Leukotriene C4, D4 c- Prostaglandin D2 e- Leukotriene B4	**C**
6. ID injection of allergen leads to induration at the site within 15 mins It is called: a- Delayed type hypersensitivity b- Tuberculin test c- Dick test d- Prick test e- Schick test	**D**

7. What is the main action of chromolyn sodium ? *a- Block histamine receptors* *b- Block leukotriens* *c- Bronchodilator* *d- Mast cell degranulation inhibitor*	***D***
8. What is the result of long term immunotherapy? *a- Increase level of IgE* *b- Rise of IgG1* *c- Neutralize IgM* *d- Rise of IgG4* *e- Decrease IgG4*	***D***
9. What is the cytotoxic hypersensitivity? *a- Type I* *b- Type II* *c- Type III* *d- Type IV*	***B***
10. What is the cause of killing cells by lysis when antigen antibody on the surface of cells: *a- Macrophage activation* *b- IGE and mast cells* *c- Complement intravascular hemolysis* *d- Killer cells* *e- T cells*	***C***
11. ABO incompatibility is an example of: *a- Type I* *b- Type II* *c- Type III* *d- Type IV*	***B***
12. Idiopathic thrmobocytopenic purpura is an example of: *a- Type I* *b- Type II* *c- Type III* *d- Type IV*	***B***

13. The following manifestation of infant born with Erythroblastosis foetalis except: a- Anaemia b- Jaundice after week c- HSM d- Encephalopathy e- Mother is Rh negative	**B**
14. Tuberculin test is an example of: a- Type I b- Type II c- Type III d- Type IV	**D**
15. What is the main antigen in type I hypersensitivity: a- Cell surface b- Soluble c- Tissue d- Organs e- Exogenous	**E**
16. What is the response time in type III hypersensitivity: a- 30 mins b- 3 hours c- 48 hours d- 3 days e- 15 mins	**B**
17. What is the type of hypersensitivity transferred by T cells: a- Type I b- Type II c- Type III d- Type IV	**D**
18. Which of the following type of hypersensitivity not mediated by antibodies: a- Type I b- Type II c- Type III d- Type IV	**D**

19. Which of the following type of hypersensitivity mediated by complement and neutrophils: a. Type I b- Type II c- Type III d- Type IV	C
20. What is meant by clonal deletion : a- Absence of co stimulatory molecules b- B cells downregulate their surface IgM c- Negative selection d- B cells undergo DNA recombination	C
21. What is the receptor editing mechanism of immune tolerance: a- Absence of co stimulatory molecules b- B cells downregulate their surface IgM c- Negative selection d- B cells undergo DNA recombination	D
22. What is the clonal ignorance mechanism of tolerance? a- Autoreactive B cells escape deletion not find antigen die out b- Absence of co stimulatory molecules c- B cells downregulate their surface IgM d- Negative selection e- B cells undergo DNA recombination	A
23. Which of the following is non organ specific autoimmune disease: a- Hashimoto thyroiditis b- DM c- Hemolytic anaemia d- Thryombocytopenia e- SLE	E
24. When thymus not full functionally to eliminate self-reactive cells a- Tolerance b- Pathogenicity c- Tumor immunology d- Autoimmunity e- Non responsiveness	D

25. Which of the following not mechanism of autoimmunity? a- Sequestered antigen b- Lack of regulatory T cells c- Cross reactive antigens d- Clonal anergy e- Escape of autoreactive clones	D
26. Acute graft rejection occurs due to: a. bone marrow rejecting the host b. Th 1 activating macrophages c. the presence of passenger leukocytes in the graft d. the presence of pre-formed antibodies e. uptake of graft antigens by antigen presenting cells	C
27. Acute graft rejection: a. occurs few hours after transplantation b. It is due to preformed antibodies c. grafts contain passenger leukocytes which travel to the draining lymph nodes and activate recipient T d. all of the above	C
28. A graft (2 genetically dissimilar individuals of the same species is called: a. Autograft b. Syngraft c. Isograft d. Allograft e. Xenograft	D
29. Which mechanism of the following is responsible for the development of Hyperacute rejection: a. Direct cytotoxicity by NK cells b. Passenger leukocytes present in the graft travel to draining LN and recipient T cell c. Performed Abs react with antigens on vascular endothelial cells and activate complement d. The immunologically competent cells present in graft attack host tissue e. Uptake of graft\antigens by recipient APC and presentation on self MHC	C

30. Hyperacute graft rejection: *a. Occurs few days after transplantation* *b. It is due to new formed antibodies* *c. Antibodies react with antigens on vascular endothelial cells and activate complement* *d. all of the above*	**C**
31. Chronic graft rejection: *a. Occurs 10-20 after transplantation* *b. It is due to preformed antibodies* *c. Effectors are usually Th1 cells that activate macrophages to cause tissue injury and scarring* *d. all of the above*	**C**
32. Graft-versus-host disease occurs in the following conditions: *a. The host possess histocompatibility antigens that the graft lack* *b. The graft contains immunologically competent cells* *c. The host is immunologically incompetent* *d. all of the above*	**D**
33. Autograft is a type of graft that can occur between: *a. Two sites within the same individual.* *b. Two genetically dissimilar animals of the same species.* *c. Two genetically identical individuals* *d. Two animals of different species* *e. Two organisms from different phyla*	**A**
34. Pollen would most likely evoke which type of hypersensitivity response: *a) Cytotoxic (Type II)* *b) Immune complex (Type III)* *c) immediate type (I)* *d) Cell Mediated (Type IV)*	**C**
35. Failure of self-tolerance leads to: *a) Hypersensitivity* *b) Immunodeficiency disorders* *c) Malignant tumors* *d) Autoimmune diseases* *e) Benign tumors*	**D**

36. Which of the following types of cells are important effector cells in allergic reactions? a) Monocytes b) Basophils c) Dendritic cells d) Lymphocytes e) Neutrophils	**B**
37. Autograft is a type of graft that can occur between: a) Two sites within the same individual. b) Two genetically dissimilar animals of the same species. c) Two genetically identical individuals d) Two animals of different species e) Two organisms from different phyla	**A**
38. Which of the following can explain occurrence of autoimmunity: a) Clonal deletion b) Clonal anergy c) Production of Treg immune cells d) Receptor editing e) Release of sequestered antigen	**E**
39. Non-organ-specific autoimmune diseases include: a) Rheumatoid arthritis b) Type I diabetes mellitus c) Autoimmune haemolytic anaemia d) Autoimmune thrombocytopenia e) Hashimoto thyroiditis	**A**
40. What is immunological tolerance? a) It is a state of unresponsiveness to antigens b) It is the failure of the immune system to defend against any disease or infection. c) It is a state of undesirable reactions produced by the normal immune system. d) It is a state of rejection of foreign implanted tissue. e) It is a state of responsiveness to self-antigens.	**A**

41. Which of the following bind to mast cells and cross-link, resulting in de-granulation and release of histamine? a) IgM b) IgG c) IgD d) IgE	**D**
42. Graft between 2 genetically dissimilar members of the same species is called which of the following techniques? a- Autograft b- Isograft c- Allograft d- Xenografts	**C**
43. Which of the following is considered immune complex hypersenitivty? a- Type I b- Type II c- Type III e- Type IV	**C**
44. Which of the following subfamilies Epstein Barr virus belongs to? a- beta herpervirinae b- gamma herpesvirinae c- delta herpesvirinae d- alpha herpesvirinae	**B**
45. Graft between 2 members of different species is called which of the following techniques? a- Xenografts b- Autograft c- Isograft d- Allograft	**A**
46. Which of the following is more potent than histamine by 1000x a- Tryptase b- Leukotriene C4, D4 c- Prostaglandin D2 d- Leukotriene B4	**B**

47. Graft between 2 genetically identical individuals is called which of the following techniques? a- Autograft b- Isograft c- Allograft d- Xenografts	**B**
48. Transplantation gene responsible for slow rejection? a- MHC b- APC c- IFN d- TNF e- minor HC	**E**
49. ID injection of allergen leads to induration at the site within 15 mins. It is called: A- Delayed type hypersensitivity B- Tuberculin test C- Dick test D- Prick test E- Schick test	**D**
50. Cytomegalovirus belongs to which of the following subfamilies a- beta herpervirinae b- gamma herpesvirinae c- delta herpesvirinae d- alpha herpesvirinae	**A**
51. What is the main action of cromolyn sodium ? a- Block histamine receptors b- Block leukotriens c- Bronchodilator d- Mast cell degranulation inhibitor	**D**
52. Graft versus host disease occurs dur to which of the following? a- grafts contain donor antigen presenting cells b- activate recipient T cells. c- preformed natural antibodies d- These T cells migrate to all tissues including graft e- The graft contains immunologically competent cells	**E**

53. The mechanism of tolerance that occur in b cells when undergo DNA rearrangement? a- clonal deletion b- clonal ignorance c- clonal anergy d- receptor editing e- anti-idiotype antibody	**D**
54. Which of the following mechanisms associated with hyperacute graft rejection? a- grafts contain donor antigen presenting cells b- activate recipient T cells. c- preformed natural antibodies d- These T cells migrate to all tissues including graft e- The graft contains immunologically competent cells	**C**
55. What is the cause of killing cells by lysis when antigen antibody on the surface of cells? a- Macrophage activation b- IGE and mast cells c- Complement intravascular hemolysis d- Killer cells e- T cells	**C**
56. When b cells exposed to self antigen , down regulate their surface igM, It is called: a- clonal deletion b- clonal ignorance c- clonal anergy d- receptor editing e- anti-idiotype antibody	**C**
57. Tuberculin test is an example of which of the following? A. Type I B. Type II C. Type III D. Type IV	**D**

58. The envelope of Epstein Barr virus is characterized by the following: a- lipoprotein spikes b- lipid covering c- glycoprotein spikes d- non enveloped e- enveloped without capsid	**C**
59. Uptake of graft antigens by recipient APC cause the following rejections? a- Hyperacute graft rejection b- Acute rejection c- Chronic (long term) rejection d- Graft-versus-host disease (GVHD)	**C**
60. What is the main antigen in type I hypersensitivity? a- Cell surface b- Soluble c- Tissue d- Organs e- Exogenous	**E**
61. What is the exact mechanism that autoreactive t cells are eliminated in thymus following interaction with selfantigen? a- clonal deletion b- clonal ignorance c- clonal anergy d- receptor editing e- anti-idiotype antibody	**A**
62. Passenger APCs cause the following rejections? a) Hyperacute graft rejection b) Acute rejection c) Chronic (long term) rejection d) Graft-versus-host disease (GVHD)	**B**
63. Which of the following type of hypersensitivity not mediated by antibodies a) Type I b) Type II c) Type III d) Type IV	**D**

64. Antibodies react with antigens on vascular endothelial cells and activate complement associated with which of the following? a) Hyperacute graft rejection b) Acute rejection c) Chronic (long term) rejection d) Graft-versus-host disease (GVHD)	**A**
65. What is the main mode of transmission in Epstein Barr virus? A- sexual contact B- blood transfusion C- organs transplantation D- iv addicts E- infected saliva	**E**
66. Which of the following not mechanism of autoimmunity? a- Sequestered antigen b- Lack of regulatory T cells c- Cross reactive antigens d- Clonal anergy e- Escape of autoreactive clones	**D**
67. Peptides from both MHC & minor histocompatibility antigens are presented by recipient antigen presenting cells cause the following? a- Chronic (long term) rejection b- Hyperacute graft rejection c- Acute rejection d- Graft-versus-host disease (GVHD)	**A**
68. Auto graft is a type of graft that can occur between: a) Two genetically identical individuals b) Two genetically dissimilar animals of the same species. c) Two animals of different species d) Two sites within the same individual. e) Two organisms from different phyla	**D**
69. Which of the following types of hypersensivity associated with chronic eczema? a- Type I b- Type II c- Type III d- Type IV	**D**

70. What is the main cells associated with type 1 hypersensivity? a- neutrophils b- lymphocytes c- macrophages d- mast cells e- dendritic cells	D
71. Which of the following is considered preformed mediator in type 1 hypersensitivity? a- leukotriene b 4 b- leukotriene c4 c- tryptase d- prostaglandin e- leukotriene d 4	C
72. Which of the following is inhibitor of mast cell degranulation? a- bronchodilators b- chromolyn sodium c- steroids d- epinephrine e- antihistaminics	B
73. What is meant by clonal deletion a- Absence of co stimulatory molecules b- B cells downregulate their surface IgM c- Negative selection d- B cells undergo DNA recombination	C
74. When thymus not full functionally to eliminate self-reactive cells a- Tolerance b- Pathogenicity c- Tumor immunology d- Autoimmunity e- Non responsiveness	D
75. The best successful type of graft transplantation is? a- Xenografts b- Autograft c- Isograft d- Allograft	C

76. Downy cells are characteristic cells appears with which of the following viruses? a- cytomegalovirus b- herpes simplex type 1 c- rubella virus d- mumps virus e- Epstein Barr virus	**E**
77. Acute graft rejection occurs as a result of presence of: a) Donor antigen presenting cells in the graft. b) Preformed antibodies in blood c) Recipient antigen presenting cells reaching the graft d) Immunologically competent T and B cells present in the graft e) Circulating natural killer cells	**A**
78. Which of the following is non organ specific autoimmune disease? a- Hashimoto thyroiditis b- DM c- Hemolytic anaemia d- Thryombocytopenia e- SLE	**E**
79. The latency of Epstein Barr virus occurs in which of the following cells? a- b lymphocytes b- dendritic cells c- macrophages d- t lymphocytes e- neutrophils	**A**
80. The ideal donor for graft survival is a- animal b- non-identical twins c- identical twin d- cadaver	**C**
81. What is the receptor editing mechanism of immune tolerance a- Absence of co stimulatory molecules b- B cells downregulate their surface IgM c- Negative selection d- B cells undergo DNA recombination	**D**

82. Recipient preparation should be .....after transplant a- HLA matching b- ABO compatibility c- lymphocyte compatibility test d- isolation with antibiotics	**D**
83. Which of the following viruses associated with oral hairy leukoplakia? a- cytomegalovirus b- Epstein Barr virus c- herpes simplex type 1 d- rubella virus e- mumps virus	**B**
84. AIDS syndrome is confirmed when CD4 T cells count: a- below 500 b- above 200 c- below 100 d- above 300 e- below 200	**E**
85. Detection of P24 antigen by ELISA used to diagnose: a- HIV b- HBV c- Rotavirus d- Ebola virus e- RSV	**A**
86. What is the clonal ignorance mechanism of tolerance? a- Autoreactive B cells escape deletion not find antigen die out b- Absence of co stimulatory molecules c- B cells downregulate their surface IgM d- Negative selection e- B cells undergo DNA recombination	**A**
87. Which of the following can explain occurrence of autoimmunity? a. Clonal deletion b. Clonal anergy c. Production of Treg immune cells d. Receptor editing e. Release of sequestered antigen	**E**

88. An 8-year-old female with a known allergy to peanuts ingests a cereal containing peanuts. Within minutes, she develops hypotension and sever bronchoconstriction. These findings suggest which of the following events? *a. Type I hypersensitivity reaction* *b. Type II hypersensitivity reaction* *c. Type III hypersensitivity reaction* *d. Type IV hypersensitivity reaction* *e. Type V hypersensitivity reaction*	**A**
89. Which of the following is a clonal deletion? *a. A state of DNA recombination in B cells when they encounter a self Ag to change their specificity.* *b. A state of tolerance induced when failure of negative selection takes place* *c. A state of tolerance when T cells reactive to self- antigen never encounter the appropriate antigen because it is sequestered, and these cells die out.* *d. A state of tolerance when the antigen may induce suppressor T cells.* *e. Lack of co-stimulatory molecules (B7-1 or B7-2) and so absence of co-stimulatory signal.*	**B**
90. The presentation of intact MHC alloantigen by migrating donor APCS in the graft is the immunological mechanism behind which of the following? *a. Acute rejection* *b. Chronic rejection* *c. Graft versus host disease* *d. Hyperacute rejection* *e. Indirect alloantigen recognition*	**A**
91. Systemic lupus erythematosus is: *a. caused by type I hypersensitivity reaction* *b. type III hypersensitivity (immune complex)* *c. caused by Hypersensitivity to tobacco products* *d. caused by bacterial infection* *e. caused by viral infection*	**B**

92. In type I hypersensitivity mechanism of action, it involves the production of which of the following immunoglobulin in response to certain allergens? a. IgE b. IgG c. IgM d. IgA e. IgD	**A**
93. Epstein-Barr virus induces lymphoma by: a. immortalization of B cells b. increase white blood cell count c. presence of atypical lymphocytes d. production of heterophile antibodies. e. production of lytic viral infection	**A**
94. Hyperacute graft rejection occurs as a result of presence of: a. donor antigen presenting cells in the graft. b. preformed antibodies in blood c. recipient antigen presenting cells reaching the graft d. immunologically competent T and B cells present in the graft e. circulating natural killer cells	**B**
95. Autoimmunity diseases developed due to lack of: a. T helper cells b. B cells c. macrophages d. T regulatory cells e. natural killer cells	**D**
96. Which of the following NOT occur in the first phase of HIV infection? a. Fever b. Muscle and joint aches and pain c. Susceptibility to opportunistic infections d. Swollen glands e. Weight loss	**C**

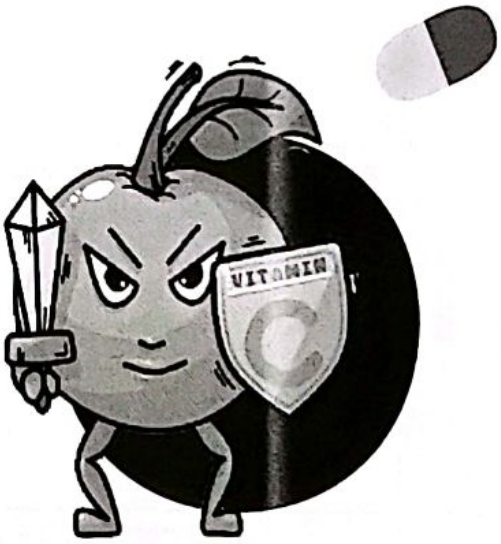
A.Elbelkasi

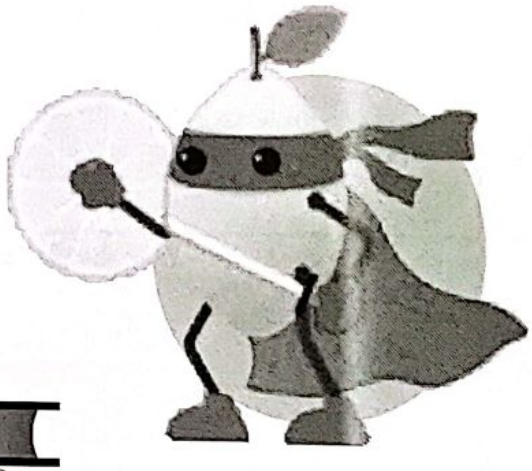
CAPSULES in MicroBiology

1st year

Hypersensitivity

Lecture 1 (MCQ)





BERLIN

1- The mechanism of action of type I hypersensitivity involves: a. production of IgE, in response to certain antigens. b. production of IgG, in response to certain antigens. c. production of IgM, in response to certain antigens. d. production of IgA, in response to certain antigens.	**A**
2- Hypersensitivity to drugs like penicillin and hypersensitivity and hypersensitivity to pollen grains are both a. Mediated by IgM antibody b. Mediated by IgE antibody c. Mediated by IgG antibody d. Mediated by IgA antibody e. Mediated by IgD antibody	**B**
3- An RH negative mother gives birth to an RH positive child who is completely normal. At birth of 2nd child (Rh positive), he show jaundice & anemia his lesion are caused by a. Type I hypersensitivity b. Type II hypersensitivity c. Type III hypersensitivity d. Type VI hypersensitivity e. Viral infection	**B**
4- What's the mechanism of immunotherapy in the treatment of type I hypersensitivity a. Block leukotriene receptor b. increase suppressor T cells c. Rise in allergen-specific IgG blocking antibodies d. Stabilize mast cell e. Stop production of IgA	**C**
5- Immediate hypersensitivity usually involves which one of the following a. Mast cell b. Ab to mast cell c. Platelets d. IgG	**A**
6- Type I hypersensitivity can be blocked by a. Histamine b. IgA myeloma c. Sodium cromoglycate d. IL-5	**C**

7- The mechanism of action of type I hypersensitivity involves: a. production of IgE, in response to certain antigens. b. production of IgG, in response to certain antigens. c. production of IgM, in response to certain antigens. d. product on of IgA, in response to certain antigens.	**A**
8- Diagnostic tests for immediate hypersensitivity involve: a. Skin (prick and intradermal) tests. b. Measurement of Total IgE by ELISA c. Measurement of specific IgE antibodies by ELISA. d. all of above.	**D**
9- Treatment of type I hypersensitivity involve the following EXCEPT: a. Avoidance of exposure. b. Symptomatic treatment. c. Immunotherapy. d. Radiation	**D**
10- In type III hypersensitivity, Soluble Ag-antibody complexes are deposited on the vascular basement membrane and stimulate a. C5a. b. C1 c. C5b d. C3b	**A**
11- Serum sickness in an example of: a . Hypersensitivity I b. Hypersensitivity II c. hypersensitivity III d. Hypersensitivity IV	**C**
12- atopic dermatitis is an example of: a. Hypersensitivity I b. Hypersensitivity II c. hypersensitivity III d. Hypersensitivity IV	**A**

13- Erythroblastosis faetalis is example of: a. Hypersensitivity I b. Hypersensitivity II c. hypersensitivity III d. Hypersensitivity IV	**B**
14- Arthus reaction is an example of: a . Hypersensitivity I b. Hypersensitivity II c. hypersensitivity III d. Hypersensitivity IV	**C**

Questions Nzre

1- Type IV hypersensitivity

2- Type II hypersensitivity (Mechanism – clinical types)

3- Type I hypersensitivity (Mechanism)

4- Immune Complex Hypersensitivity **(18)**

- **Clarify Ag & Ab in this hypersensitivity**
- **Mechanism**
- **Give 2 Examples**

Cases

1

A 15-year-old girl presented with frequent coughing for the past 2 days, a prolonged wheezing attack, and a feeling of tightness in her chest. Her symptoms had been especially severe at night. She had experienced several episodes of 'wheezy bronchitis' as a child and eczema as an infant. She lived at home with her mother, father, and two sisters and a pet cat. Both her parents smoked cigarettes, her father suffered from hay fever, and her older sister had a history of sinus infection in the past. On examination, she was tired and unwell, with a rapid respiratory rate and tachycardia. There was no evidence of pneumonia. Investigations showed normal haemoglobin but a raised white cell count (14 x 109/l). Her sputum contained many eosinophils. A chest X-ray was normal but lung function tests showed reversible airways obstruction. Skin tests showed an immediate reaction to six common antigens and the IgE level was higher more than normal. She continues to have periodic attacks of the same symptoms, although they are controlled, in part, by prophylactic inhaled steroids and beta2-adrenergic stimulants (salbutamol).

a- What is your suggestive diagnosis?

Allergic asthma

b- What is the underlying immunologic mechanism of the case?

Write Type 1 hyper sensitivity

2

Mrs suzane has the blood group O, Rhesus negative (RhD negative), and her husband Mr Josef is blood group A, Rhesus positive (RhD positive). They have had three children, of which the first one was normal (unaffected) while the remaining two were very ill shortly after birth and died. They were deeply icteric at 4 hours of life, lethargic and severely anemic.
Examination revealed pallor with no extravasation of blood and enlarged liver and spleen.
Investigation revealed, very high serum bilirubin (unconjugated) in the blood of both babies.

a- What is your suggestive diagnosis?

Erythroblastosis fetalis (Rh incompatibility)

b- The disease is an example to which type of hypersensitivity?

Type II

c- What is the prophylaxis which can be used in similar Rh negative womens who have Rh positive partners?

Anti RH