PRINT

Qn No. 1 *Chapter Name:5. Soldiers of Defense*

Qn.
“Nobody can receive blood from every body”

To substantiate this statement, choose suitable facts from those given below.

a) Antibody of the donor’s blood and the antigen of the recipient‘s blood react with each other to form blood clot

b) Blood clot is formed due to reaction of the antigen and antibody of the donor’s blood with the blood of the recipient.

c) Antigen of the donor’s blood and the antibody of the recipient‘s blood react with each other to form blood clot.

Hint.
.c) Antigen of the donor’s blood and the antibody of the recipient‘s blood react with each other to form blood clot.

Marks :(1)

Hide Answer

Qn No. 2 *Chapter Name:5. Soldiers of Defense*

Qn.
There are four main types of blood group in human beings

a) What is the basis of giving separate names to each of them?

b) What is the basis for classifying blood group into positive and negative?

c) What is the importance of antibodies in blood transfusion

Hint.
.a) The basis of blood grouping is the presence of antigen A and antigen B in red blood cells.

b) The blood group in which Rh factor (Antigen D) is present is known as positive blood group and those without Rh factor is called negative blood group.

c)On receiving unmatching blood, the antigen present in the donor's blood and the antibody present in the recipient's blood will react with each other and form a blood clot

Marks :(3)

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Qn No. 3 *Chapter Name:5. Soldiers of Defense*

Qn.
Evaluate the statements given below and analyse the importance of each.

a)calcium ions are required for clotting of blood .

b) In some instances connective tissues are used to to heal the wound..

c) Lysomes help in phagocytosis.

Hint.
.a) Thromboplastin can convert the plasma protein prothrombin into thrombin only in the presence of calcium ions

b)In cases when new similar tissues cannot be formed, the connective tissue heals the wound.

c) The enzymes of lysosome destroy the pathogens

Marks :(3)

Hide Answer

Qn No. 4 *Chapter Name:5. Soldiers of Defense*

Qn.
Name the antigens which help to detect A positive blood group.

Hint.
.Antigens A, and D(Rh factor)

Marks :(3)

Hide Answer

Qn No. 5 *Chapter Name:5. Soldiers of Defense*

Qn.
Find out the processes involved in the specific defence mechanism of the body from those given below

a)Identifies the antigens and defends them

b) Defends all pathogens and toxins..

c) Detoxifies the toxins produced by the antigens.

Hint.
a)Identifies the antigens and defends them.

c) Detoxifies the toxins produced by the antigens.

Marks :(2)

Hide Answer

Qn No. 6 *Chapter Name:5. Soldiers of Defense*

Qn.
Arrange the facts regarding inflammatory response in the correct order

.-Germs enter through wounds.

- Blood capillaries dilate.

-Chemicals are produced

- Neutrophils and monocytes engulf and destroy germs

-White blood cells reach the wound site through the walls of the capillaries.

Hint.
.-Germs enter through wounds.

-Chemicals are produced

- Blood capillaries dilate.

-White blood cells reach the wound site through the walls of the capillaries.

- Neutrophils and monocytes engulf and destroy germs

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Marks :(4)

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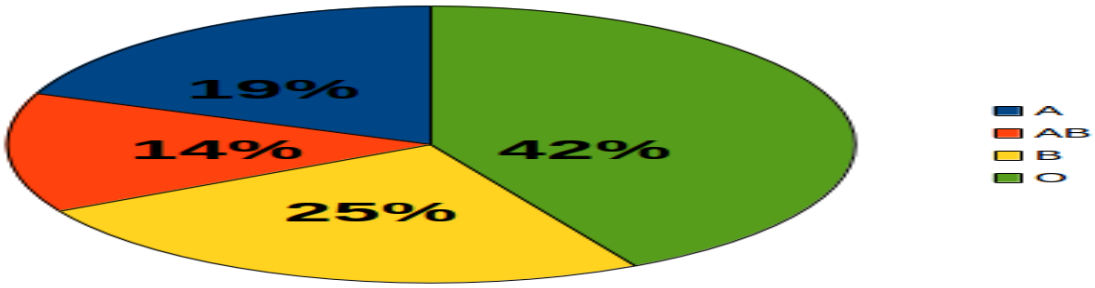
Qn No. 7 *Chapter Name:5. Soldiers of Defense*

Qn.
A pie diagram showing the blood group of the people of a particular area is given below.

Analyse it and answer the questions.
(http://qbms.scert.kerala.gov.in/frontend/apps/modules/QUESTIONS/tb_questions_approve/view_question.php?qid=Mjkw&sub_type=Mg==&lang=MQ==)



a)What is the percentage of blood group having only antibody 'a' ?

b) Write the percentage of blood group with both the antigens

Hint.
a) 25%

b) 14%

Marks :(2)

Hide Answer

Qn No. 8 *Chapter Name:5. Soldiers of Defense*

Qn.
choose the correct combinations in the table given below

	process	Factors involved	function
A	Vaccination	antigens	Formation of antobody
B	cloting of blood	fibrinogen	Converts prothrombin to thrombin
C	vaccination	antibodies	Formation of antibodies
D	Clotting of blood	fibrinogen	Fibrin threads are formed

Hint.
.

	process	Factors involved	function
A	Vaccination	antigens	Formation of antobody
D	Clotting of blood	fibrinogen	Fibrin threads are formed

Marks :(2)

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Qn No. 9 *Chapter Name:5. Soldiers of Defense*

Qn.
Complete the table by giving the name of the lymphocytes which defend the antigens given in the box as the headings and arrange the antigens appropriately in the table.

toxins, Virus, cancer affected cells, bacteria

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Hint.

T Lymphocyte	B Lymphocyte
Virus, cancer affected cells	toxins, bacteria

Marks :(4)

Hide Answer

Qn No. 10 *Chapter Name:5. Soldiers of Defense*

Qn.
A table indicating antigen and antibody in different blood groups is given. If there is a mistake in the table, rewrite it.

Blood Group	Antigen		Antibody	
	A	B	a	b
A	√	X	√	√
B	√	√	√	X
AB	√	√	√	√
O	X	X	√	√

Use only the symbols √ (yes) and X (no)

Hint.

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Blood Group	Antigen		Antibody	
	A	B	a	b
A	√	X	X	√
B	X	√	√	X
AB	√	√	X	X
O	X	X	√	√

Marks :(4)

Hide Answer

Qn No. 11 *Chapter Name:5. Soldiers of Defense*

Qn.
Analyse the blood groups and answer the questions

AB+ve, AB-ve, B+ve, A+ve, O-ve

a) Choose the blood group which contain "Rh" factor and antibody "a" .

b)Choose the blood group in which Rh factors is absent and two types of antibodies are present.

Hint.
.a) B positive

b) O negative

Marks :(2)

Hide Answer

Qn No. 12 *Chapter Name:5. Soldiers of Defense*

Qn.
Some defence mechanisms which prevent the entry of germs are given in column A.

Complete column B writing the functions of the defence mechanisms given in column A

Defence mechanism	Function
sebum	
keratin	
mucus in the respiratory tract	
Wax in the ear	

Hint.
.

Defence mechanism	Function
.	

sebum	Sebum produced by the Sebaceous gland makes the skin oily and water proof.
keratin	prevents the entry of germs.
mucus in the respiratory tract	destroys germs that enter the respiratory tract
Wax in the ear	prevents the entry of germs.

Marks :(4)

Hide Answer

Qn No. 13 ***Chapter Name:5. Soldiers of Defense***

Qn.
The antigens present on the surface of RBC has a prominent role in detecting blood group. Substantiate this statement.

Hint.
Antigens A, B and Rh on the surface of RBCs are used for blood group determination.

Blood with antigen A is considered to be A group, blood with antigen B is B group and blood with Rh antigen is considered to be positive group.

If A and B antigens are present, then it is AB blood group, and if there are no A and B antigens, then it is O blood group.

Marks :(3)

Hide Answer

Qn No. 14 ***Chapter Name:5. Soldiers of Defense***

Qn.
Analyse the hints related to defence mechanism in plants given below .

Explain the hints writing two examples each

a) Different molecules produced by body tissues.

b)Characteristic features of the body structure.

Hint.
a) Different molecules produced by body tissues.- Chemical substances such as lignin, cutin, suberin, etc. produced by body tissues provide rigidity to the cell wall.. The germs are prevented from entering through the cell membrane by callose.

b) Characteristic features of the body structure.-The cuticle of the surface of leaves prevents the entry of germs through leaves. Bark protects the inner cells. Wax covering Protects the inner cells

Marks :(4)

Hide Answer

Qn No. 15 ***Chapter Name:5. Soldiers of Defense***

Qn.
A blood group without antigens is used in blood transfusion in some instances. Name the blood group?

Hint.

.a) O negative

Marks :(3)

Hide Answer

Qn No. 16 ***Chapter Name:5. Soldiers of Defense***

Qn.
Name the lymphocytes which stimulates other white blood cells and destroys pathogens. Write two other functions of it.

Hint.
.B Lymphocytes.

1. Destroy the bacteria by disintegrating their cell membrane.
2. Neutralise the toxin of the antigens.

Marks :(2)

Hide Answer

Qn No. 17 ***Chapter Name:5. Soldiers of Defense***

Qn.
Identify the statements related to the chemical callose

a)The germs that have crossed the cell wall are prevented

b) Provides rigidity to cell wall.

c) Prevents the entrymof pathogens through the surface of leaf

Hint.
.a)The germs that have crossed the cell wall are prevented

Marks :(1)

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Qn No. 18 ***Chapter Name:5. Soldiers of Defense***

Qn.
Identify the relationship between the words and fill in the blanks

a)Antibiotic : Alexander flemming

b) Vaccination : .....

Hint.
.Edward Jenner

Marks :(1)

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Qn No. 19 *Chapter Name:5. Soldiers of Defense*

Qn.
Analyse the hints given below and identify the treatment methods.

a) Use of medicines from nature

b) Use of antibiotics

Hint.
a) Ayurveda

b) Alopathy

Marks :(2)

Hide Answer

Qn No. 20 *Chapter Name:5. Soldiers of Defense*

Qn.
Name the secretions which destroy pathogens which are present in each the parts given below

a) Skin

b) Tear

c) Stomach

Hint.
a) Skin- Sebum produced by the Sebaceous gland

b) Tear - Lysozyme

c) Stomach - HCl

.

Marks :(3)

Hide Answer

Qn No. 21 *Chapter Name:5. Soldiers of Defense*

Qn.
Explain the role of the factors which are given below in defending diseases.

a.Lysosome

b.lysozyme

Hint.
a.Lysosome- enzymes of lysosome kill the germs iln the process of phagocytosis.

b.lysozyme - Lysozyme, an enzyme found in tears and saliva, has antimicrobial properties.

Marks :(2)

Hide Answer

Qn No. 22 **.** *Chapter Name:5. Soldiers of Defense*

Qn.
Antigen D has a critical role in blood transfusion

Evaluate this statement considering a A +ve donor and a A --ve recipient

Hint.
.Antigen D, or Rh factor, is an antigen in the cell surface of red blood cells. If this is present, the blood is called positive blood. When A +ive blood is delivered to A --ve recipient, the reaction takes place as antigen D enter the A--ve blood and form antibodies. Therefore, the presence of antigen D in the bloodstream is also crucial.

Marks :(2)

Hide Answer

Qn No. 23 ***Chapter Name:5. Soldiers of Defense***

Qn.
There are different methods in plants to prevent the entry of germs.

Justify the statement giving two evidences related to cell wall .

Hint.
.Chemical substances such as lignin, cutin, suberin, etc.
provide rigidity to the cell wall. The germs that have crossed the cell wall are prevented from entering through the cell membrane by callose

Marks :(2)

Hide Answer

Qn No. 24 ***Chapter Name:5. Soldiers of Defense***

Qn.
Substantiate the below given statements giving one suitable example to each

A- "Body has natural defence mechanisms to defend pathogens”

B- "There are artificial methods also to defend pathogens"

.

Hint.
A- .Non specific defense saliva, tears, hydrochloric acid in the stomach, wax in the ears, keratin in the skin, phagocytosis.

Specific defense involve T and B lymphocytes.

B - Vaccination (Vaccines that act as antigens and produce antibodies in the blood and there by destroy the germs)

Marks :(4)

Hide Answer

Qn No. 25 ***Chapter Name:5. Soldiers of Defense***

Qn.
From a given blood groups, identify the blood group without antigens and the blood group without antibodies.

A positive	**A negative**	**B positive**
. **O positive**	**O negative**	**AB positive**

Hint.
.without antigens - O negative

Without antibodies - AB positive

Marks :(3)

Hide Answer

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