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Total Pages—2

C/11/P.M.-BMLT/5th Seme./1

2011

3 Copy

BMLT

5th Semester Paramedical Examination

BLOOD TRANSFUSION & BLOOD BANK

PAPER—XV (Unit-29)

Full Marks : 35

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Question No. 1 and any three from the rest.

1. Answer any five of the following :

5×1

- (i) What is agglutinin?
- (ii) What do mean by the term "Reverse" blood grouping?
- (iii) Name two anticoagulants.
- (iv) What is plasma pheresis.
- (v) Who discovered 'ABO' blood group system?
- (vi) What is 'H' gene?
- (vii) What is Bombay 'O' *Group?*

(Turn Over)

2. What is 'Rh' antigen? What is HDN? Discuss the problem in details if foetus is Rh positive and mother is Rh negative. 2+2+6
3. Enumerate the criteria for selection and rejection of a 'Donor'. What are the tests that should be performed after collection of blood? 3+3+4
4. If blood group of father is 'O' positive and that of mother is 'B' positive, what are the possibilities of blood group of their offsprings. What is 'H' substance? 8+2
5. What is Direct? Write in details the procedure of "Indirect" Coombs test. What is the use of anti ~~anti~~ D antibody? 2+6+2
6. Write short notes on : 2x5
- (a) Changes of blood after storage ;
 - (b) Anti coagulants ;
 - (c) Blood transfusion reactions ;
 - (d) False +ve (positive) and false -ve (negative) results in blood grouping.
 - (e) Role of Technician in 'Blood Bank'.
-

2012

BMLT

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BLOOD TRANSFUSION & BLOOD BANK

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Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Question No. 1 and any three from the rest.

1. Answer any five of the following : 5×1

- (i) What is D^U antigen?
- (ii) What is hepatitis?
- (iii) What is Buffy coat?
- (iv) Define massive blood transfusion.
- (v) What is Alloimmunity?
- (vi) What is platelet pheresis?
- (vii) During blood grouping what should be added first in the test tube — the serum or the cells?
- (viii) Name any two fractions of blood.

2. (a) Name the major components of blood.
- (b) State the conditions (indications) for the transfusion of any 5 specific blood components to the patients.
- (c) Write the principle of storage of these components.

Hepatitis : → is a inflammation of the liver & presence of inflammatory cell in the tissue of the organ.

Hepa → A, B, C, D, E. [viral hepatitis is most common cause of hepatitis] (Turn Over)

warm antibodies → agglutinin can occur body temperature or near the body temperature. This type of Ab is called warm antibodies

cold antibodies → antibodies can also react with corresponding Ag in low temp. (5-20°C). This type of Ab is called cold antibody

idiopathic cold agglutinin disease : → some disease, in which a Ab can react with their corresponding Ag in extremely low temperature & leads hemolysis of RBC. This type of disease are called ICAD

U.K.S.

2012

2

3. (a) Name the blood transfusion reactions known to you.
(b) What is acute nonhaemolytic febrile blood transfusion reactions?
(c) What is haemosiderosis? 4+3+3
4. (a) Describe the steps for ABO blood grouping by test tube method.
(b) Describe the interpretation of results in such testing.
(c) What are the advantages of determining blood group by this method? 4+3+3
5. (a) What is autologous blood transfusion?
(b) Mention its advantages.
(c) In West Bengal how many of whole blood is collected from a voluntary blood donor?
(d) Which anticoagulant preservative solution is present in a collecting bag and what is the amount of such solution? 4+3+1+(1+1)
6. Answer any five : 5×2
- (i) How Anti Rh antibody differs from Anti-A and Anti-B antibodies?
 - (ii) Which blood group do you consider as universal blood donor and why?
 - (iii) What is Genotype?
 - (iv) State and explain Karl Landsteiner's law.
 - (v) What is Citrate toxicity?
 - (vi) What are the tests you must perform before certifying that the supplied unit is compatible with the blood of the intended recipient?
 - (vii) Write down the criteria for rejecting blood donor.

C/12/P.M./BMLT/5th Seme./15(Unit-29)

• Autologous blood transfusion :->

(auto means self, logus means related)

It is the collection of blood from a single patient & retransfusion back to the same patient when required.

TB-200

Citrate toxicity :->

It is a result of hyperglycemia & metabolic effect of excess citrate. More metabolism occur at kidney, liver & skeletal muscle.

U.K.S.

2012

2

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C/12/P.M./BMLT/5th Seme./15(Unit-29)

• autologous blood transfusion :-
(auto means self, logus means related)

It is the collection of blood from a single patient & retransfusion back to the same patient when required. TB-200

Citrate toxicity :-

It is a result of hyperglycemia & metabolic effects of excess citrate. These metabolites occur at kidney, liver & skeletal muscle.

cryoprecipitate → is a concentrated blood component made from plasma. usually a cloudy yellow color.

- i) contain specific protein involved in clotting
- ii) Fibrinogen

Total Pages—2

C/13/P.M./BMLT/5th Sem. /15(U-29)

Pilot tube → is a pressure measurement instrument used to measure fluid flow velocity.
Invented by French engineer.

2013

BMLT

Bombay 'O' →

5th Semester Paramedical Examination

BLOOD TRANSFUSION AND BLOOD BANK

① rare blood group occurring in east India.

PAPER—XV (Unit-29)

Full Marks : 35

② Red cell contain ABM Ag

Time : 2 Hours

& sera contain The figures in the right-hand margin indicate full marks.

Anti-A, anti-B & Candidates are required to give their answers in their own words as far as practicable.

anti-H.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any three questions from the rest.

1. Answer any five of the following : 5×1

- (i) What is Buffy coat?
- (ii) Define Massive blood transfusion.
- (iii) What is Alloimmunity?
- (iv) What is Plasma Pheresis?
- (v) What is minor cross matching?
- (vi) What is Bombay 'O'?
- (vii) What is cryoprecipitate?
- (viii) What is pilot tube?

massive blood transfusion →

In adult, replacement of >1 blood volume in 24 hours, or 50% of blood volume in 4 hours.

(Turn Over)

In children, transfusionally >40 ml/kg.

→ (mBT) → Trauma, surgery

Alloimmunity → is an immune response to foreign antigens from members of the same species.

Plasmapheresis → is a process in which the liquid in the blood or plasma is separated from the cells.

[In sick people, antibodies present in plasma which can attack to immune system of sick person.]

U.C.S.

2013

2

2. What is acute haemolytic febrile blood transfusion reaction? What measures will you take to prevent it? What is autologous blood transfusion? 3+3+4
3. Write down the composition of CPDA₁. Write down the actions of its main components. What is the optimal volume of CPDA, for 100 ml of whole blood? When stored at 2°C — 6°C how long blood can be preserved in CPDA₁? 4+4+1+1
4. Why washed RBC is used? How can it be prepared? How it is stored and how long it can be stored? Mention the indications of transfusion of washed RBC. 3+3+2+2
5. Discuss the problem in details of foetus is Rh positive and mother is Rh negative. Mention the changes of blood after storage. What precaution will you take to prevent transmission of HIV through blood transfusion? 6+2+2
6. Answer any five of the following : 5×2
 - (i) What is Phenotype?
 - (ii) State and explain Karl Land steiner's law.
 - (iii) Write down the criteria for selecting blood donors in West Bengal.
 - (iv) How Anti Rh antibody differs from Anti-A and Anti-B antibodies?
 - (v) What is false positive and false negative results in blood grouping?
 - (vi) What is direct Coomb's test?
 - (vii) If a recipient is 'O'-negative, what should be the donor's blood group (give reasons)?
 - (viii) What will be the approximate volume of blood in the body of a healthy female weighing 60 kg?

2014**BMLT****5th Semester Paramedical Examination****BLOOD TRANSFUSION & BLOOD BANK****PAPER—XV (Unit-29)***Full Marks : 35**Time : 2 Hours*

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Illustrate the answers wherever necessary.

Answer Q. No. 1 and any *three* questions from the rest.

1. Answer any *five* of the following : 5×1
- (i) What is the full form of CPDA?
 - (ii) What is 'H' substance?
 - (iii) What is 'Rh' responder?
 - (iv) What is Immuno dominant sugar?
 - (v) What is Major Cross matching?
 - (vi) What is D^u?
 - (vii) Who discovered 'ABO' Blood group system & in which year?

(Turn Over)

2019

2

es-2

2. Enumerate the important tests to be performed after collection of blood. What are the criteria for selection of a Donor? What is pilot tube?

4+4+2

3. Write down the procedure of blood collection. What are the common reactions encountered in donors after blood collection? What instructions are given to them.

4+4+2

4. What is anticoagulant? Enumerate the different anticoagulants used for blood storage mentioning their composition. Write down the changes observed in stored blood. What is the storage time of CPDA containing blood.

1+5+3+1

5. What are blood transfusion reactions? Mention the symptoms & Signs of haemolytic immunologic reactions. What is D-dimer?

3+5+2

6. Write down the short notes (any four) :

$2\frac{1}{2} \times 4$

(a) Plasma pheresis.

(b) HDN.

(c) Bombay 'o' blood group.

(d) Autologous blood transfusion.

(e) Indirect Coomb's test.

(f) False positive and False Negative reactions.

9.7.15
2015

BMLT

5th Semester Paramedical Examination
BLOOD TRANSFUSION & BLOOD BANKING

PAPER—XV (Unit-29)

Full Marks : 35

Time : 2 Hours

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Illustrate the answers wherever necessary.

Answer Q. No. 1 and any three questions from the rest.

- ✓ 1. Answer any five of the following : 5×1
- ✓ (a) What is ABO compatible blood?
 - ✓ (b) Which donor is eligible for whole blood donation?
 - ✓ (c) What do you mean by autologous blood donation?
 - ✓ (d) Why glycerol from frozen-thawed RBC is removed by extensive washing?
 - ✓ (e) Mention one potential complication of massive transfusion.
 - (f) What is cryoprecipitate
 - (g) What is cold red cell autoantibody?
 - ✓ (h) Who discovered blood group system?

(Turn Over)

2015

Page 2

- 2. (a) What is erythroblastosis foetalis ?
- (b) What is platelet rich plasma mention with its significance.
- (c) How platelet rich plasma is prepared? 3+3+4

- 3. (a) What is the basic structure of A/B antigen on RBC surface.
- (b) Enumerate the importance of tests that must be performed after blood collection. 5+5

- 4. (a) What is Bombay 'O' blood group ?
- (b) Describe briefly the different types of bag used in blood storage.
- (c) What is apheresis? How often can a donor give platelets? 2+4+2+2

- 5. (a) 'Appropriate handling and distribution of blood and blood products for patient's use is necessary'—justify the statement.
- (b) What is D^u ?
- (c) Mention the changes observed in stored blood.
- (d) What is D-dimer? 4+2+2+2

- 6. (a) What is mismatched blood transfusion.
- (b) Mention the disorders of mismatched transfusion.
- (c) State briefly the mechanism of action of CPDA. 3+3+4

OLD
2015
BMLT

20 16

**5th Semester Paramedical Examination
BLOOD TRANSFUSION & BLOOD BANKING**

PAPER—XV (Unit-29)

Full Marks : 35

Time : 2 Hours

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Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any three questions from the rest.

1. Answer any five of the following : 5×1

- (a) What is pilot tube ?
- (b) Write the importance of major cross matching ?
- (c) What is precursor antigen in ABO system ?
- (d) What is expiry days of CPDA-1 Anticoagulated blood.
- (e) Define cryoprecipitate.
- (f) Write the fulform of SDP and CPP.
- (g) Write the components of ACD and their function.
- (h) What do you mean by 'Bombay group O' ?

(Turn Over).

FSC -

15
22.2
32.8
2016
2.28

2. (a) What do you mean by D⁴ antigen?
(b) Write the importance of indirat coombs test and its procedure.
(c) How will you prepare 'Coombs Sensitized Cell'.
2+4+2+2
3. (a) What are the anticoagulants commonly used in 'Blood Bank'?
(b) Write their function.
(c) Enumerate the duration of days according to the anticoagulant used.
3+3+4
4. (a) What do you mean by compatibility test? Write the importance of compatibility in Blood Bank.
(b) How compatibility test is completed in 'Blood Bank'?
(c) What happen, if D⁴ positive blood is trasfuse to Rh negative patient?
2+4+2+2
5. (a) Write the criteria for 'Donar Selection'.
(b) Describe briefly the different types of bags used in 'Blood Bank'.
(c) How platelet rich plasma is prepared?
3+4+3
6. Write short notes on :
(a) Quality controll in 'Blood Bank';
(b) Storage of Blood ;
(c) Transfusion reaction.
4+3+3

VS/BMLT/XV/U-29/17

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BMLT 5th Semester Examination, 2016
BLOOD TRANSFUSION AND BLOOD BANK

PAPER – XV (U-29)

Full Marks : 40

Time : 2 hours

Answer Q. No. 1 and any three from the rest

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Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

UNIT – 29

1. Answer any five of the following : 2 × 5

(a) Name two anticoagulants and one additive solution used in Blood Bank.

(b) Write the Basic difference between forward grouping and Reverse grouping method.

(Turn Over)

(2)

(c) Write the importance of Apheresis process in Blood Bank.

(d) Which Antigen is known as mother Antigen and why?

(e) What do you mean by PRP and FFP?

(f) How Biomedical waste management do we in Blood Bank.

(g) Define compatibility test.

2. (a) Differentiate Anticoagulant and preservative solution used in Blood Bank.

(b) Write the composition of anticoagulants commonly used in Blood Bank with specific function.

(c) Enumerate the length or capacity of preservation of blood as per the use of different anticoagulants and preservatives.

2 + 6 + 2

3. (a) Write the criteria of Donar Rejection.

- (b) Discuss the mandatory test done before processing of blood for transfusion.
- (c) How do you calculate the donor's capacity to donate maximum volume of blood from his/her body weight. 2 + 4 + 4
4. (a) Define cross-matching with its clinical significance.
- (b) How will you perform major cross-matching ?
- (c) Describe indirect coomb's test. 2 + 2 + 3 + 3
5. (a) Describe briefly the preparation process of different components in Blood Bank.
- (b) Name the instruments used in Blood Bank (Component separation unit) with their proper function. 5 + 5
- _____

18
NEW

2017

BMLT

5th Semester Paramedical Examination

BLOOD TRANSFUSION AND BLOOD BANK

PAPER—XV (Unit-29)

Full Marks : 40

Time : 2 Hours

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Illustrate the answers wherever necessary.

Answer Q. No. 1 and any three from the rest.

1. Answer any five questions :

5×2

- ✓ (a) What is full form of ACD.
- ✓ (b) What is HDN ?
- ✓ (c) What is 'H' antigen ?

(Turn Over)

(d) What is natural antibody ?

(e) What is 'O' gene.

(f) What is the actual blood donation interval time.

(g) Mention the amount of CPDA-1 required for 50 ml of blood. $\rightarrow 7$

2. What is 'D' ? What is its significance ? How do you recognize it ? State the procedure ? $2+2+1+5$

3. What are the criteria for selection and rejection of a donor ? What is Bombay 'O' ? How do you calculate the maximum amount of blood to be drawn from a recipient ? $4+4+2$

4. How do you avoid mismatch transfusion in a patient ? What is cross matching ? Mention the duties of lab technician in blood bank after collection of blood. $3+2+5$

5. Write short notes :

$4 \times 2\frac{1}{2}$

(a) Cold Agglutinin

Cryoprecipitate

3

Interval time 50 ml
2) Plasmaphoresis

(d) Collection bags used in blood bank.

$\frac{14}{100} \times 100$

BMLT 5th Semester Examination, 2018

**BLOOD TRANSFUSION AND
BLOOD BANK**

PAPER – XV (U-29)

Full Marks : 40

Time : 2 hours

Answer Q.No.1 and any three questions from the rest

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any five of the following : 2 × 5

(a) Who discovered blood group system ?

(b) What are the types of agglutinin ?

(c) Name two anticoagulants.

(d) What is Plasmapheresis ?

(Turn Over)

(2)

(e) Write the full name of MDTC.

(f) If a recipient is 'O'-negative, what should be the donor's blood group (give reasons)?

(g) What will be the approximate volume of blood in the body of a healthy female weighing 60kg?

(h) What do you mean by Voluntary donor association?

2. (a) What is erythroblastosis foetalis?

(b) How is hydrops foetalis develop?

(c) What do you mean by Kernicterus? 4 + 3 + 3

3. (a) What is mismatched blood transfusion?

(b) Mention the disorders of mismatched transfusion.

(c) State briefly the mechanism of action of CPDA. 3 + 3 + 4

~~Q1~~ Gal - Gal - GINQC - Gal - Ful
(3) Gal
Gal
Gal

Gal - Gal

4. (a) What is the basic structure of A/B antigen on RBC surface?
(b) Enumerate the importance of tests that must be performed after blood collection. 5 + 5
5. (a) How plasma is separated from blood and when it is used in clinical state?
(b) State the role of Technician in blood bank. 5 + 3 + 2
6. Write short notes on (any four): $2\frac{1}{2} \times 4$
(i) Bombay 'O' blood group.
(ii) Changes observed in stored blood.
(iii) Indirect Comb's test
(iv) HDN
(v) ISO-antibodies
(vi) False Positive and False Negative reaction
(vii) Criteria for selection of blood donors in West Bengal.

BMLT 5th Semester Examination, 2019
BLOOD TRANSFUSION AND BLOOD BANK

PAPER – XV

Full Marks : 40

Time : 2 hours

Answer Q.No. 1 and any **three** from the rest

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Illustrate the answers wherever necessary

U – XXIX

1. Answer any *five* of the following : 2 × 5

~~(a) What is H-Antigen ?~~

~~(b) What do you mean by pilot tube ?~~

~~(c) What is Alloimmunity ?~~

(Turn Over)

- (d) What do you mean by SDP and CPP?
- (e) What is cold red cell autoantibody?
- (f) What is haemosiderosis?
- (g) Why 'O' Negative blood does not given to Bombay phenotypic patients.
- (h) State the conditions where platelets are preserved.

2. (a) What is D^U ?

(b) Write the procedure of D^U testing?

(c) What do you mean by Reverse grouping?

(d) What is Duffy Antigen?

2 + 3 + 3 + 2

3. (a) Write the procedure for the separation of different blood components.

(b) Write the significance of indirect Coomb's test? How will you prepare 5% cell suspension?

5 + 5

(3)

(a) Write down the criteria for rejecting a donor ?

(b) How PRP is prepared ?

(c) Write down the changes observed in stored blood ?

(d) What is citrate toxicity ? $2 + 3 + 3 + 2$

5. (a) What is Massive Blood Transfusion ? Write about the complications of massive blood transfusion ? Why it can lead to hyperkalemia ?

(b) What precaution will you take to prevent transmission of HIV through blood transfusion ?

(c) What is RL Antigen ? $\left(2 + 2\frac{1}{2} + 1\frac{1}{2}\right) + 2 + 2$

6. Write short notes on :

$2\frac{1}{2} \times 4$

(i) Autologous blood transfusion

(ii) Cryoprecipitate

(4)

(iii) Apheresis

(iv) Quality control in blood bank.
