



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied and Health Sciences

DEPARTMENT OF MEDICAL SCIENCES

DIPLOMA IN MEDICAL LABORATORY SCIENCES
(DMLS)

AML 2204 : BLOOD TRANSFUSION II

SPECIAL/SUPPLEMENTARY : EXAMINATIONS

SERIES: OCTOBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this examination

- *Answer booklet*

This paper consists of **TWO** sections.

Answer all questions in **Section A** and **B**. $\frac{1}{2}$ marks deducted for any wrong answer in **Section A**.

This paper consists of 9 PRINTED pages
SECTION A (40MARKS)

1. The optimum temperature for blood storage is
 - a) -4°C
 - b) 40°C
 - c) 37°C
 - d) 4-6°C
 - e) 4-6°f

2. Another name of antibodies is
 - a) Agglutinogens
 - b) Agglutinins
 - c) Complements
 - d) Immunoglobullins
 - e) Agglutination

3. Antibody screening test means
 - a) Direct coomb's test
 - b) Rhesus titration
 - c) Antibody titration
 - d) Indirect coombs test
 - e) D^u test

4. Which of the following is a natural antibodies
 - a) Immune anti A
 - b) Kelly antibody
 - c) Duffy
 - d) IgG
 - e) Anti B

5. The most common blood group is
 - a) B Rh +Ve
 - b) A Rh +Ve
 - c) O Rh +Ve
 - d) B Rh -Ve
 - e) AB Rh + Ve

6. Haemolytic disease of the new born may occur if
 - a) Mother is A +Ve, baby O +Ve
 - b) Mother is A -Ve, baby A +Ve
 - c) Mother is A-Ve, father A +Ve and baby A+Ve
 - d) AB +Ve mother and O Rh +Ve father
 - e) None of the above

7. The incompatible X-match means
 - a) Blood is unsafe for transfusion
 - b) No transfusion reaction
 - c) Indirect coombs test positive

- d) Blood is safe for transfusion
 - e) Blood is of Rh –Ve
8. Factor causing false positive AHG results may be due to
- a) Reticulocytosis
 - b) Unclean glassware
 - c) Over centrifugation
 - d) Cells having direct coombs +Ve test
 - e) Leucopenia
9. The weak antigen D may be detected by
- a) Direct coomb's test
 - b) Indirect coomb's test
 - c) Antibody screening test
 - d) D" test
 - e) Blood grouping
10. Blood should be stored in the bank for
- a) 121 days
 - b) 21 days
 - c) 12 days
 - d) 3 days
 - e) 7 days
11. 20% bovine albumin is used in transfusion to
- a) Make work easier
 - b) Reduce Zeta potential
 - c) To increase Zeta potential
 - d) Countercheck cross-match
 - e) Countercheck if AHG is working
12. The following is recommended as universal recipient
- a) Blood group A
 - b) Blood group B
 - c) Blood group AB
 - d) Blood group O
 - e) Bombay blood group
13. The concentration of normal saline for washing RBC's is
- a) 0.85% NaCl
 - b) 8.5% NaCl
 - c) 100% NaCl
 - d) 10% NaCl
 - e) 0.085% NaCl
14. False negative coomb's test may be due to
- a) Failure to add anti. D to the test
 - b) Failure to add AHG to the test

- c) Failure to add O cell to the test
 - d) Overwashing of the cells
 - e) Failure to pool O cells
15. Anti B reacts with
- a) A cells
 - b) B cells
 - c) O cells
 - d) D cells
 - e) Anti A
16. Which test is done to detect Haemolytic disease of the new born?
- a) Eluation test
 - b) Direct coombs test
 - c) Indirect coombs test
 - d) Enzymes technique
 - e) Adsorption technique
17. In cross-match the room temperature phase will detect
- a) All irregular antibodies in patients serum
 - b) Cold antibodies in patient serum
 - c) Rhesus complete antibodies
 - d) Warm antibodies
 - e) Natural antibodies
18. Before blood is transfused to a patient, the following tests is done
- a) ABO typing only
 - b) Screening of the patient only
 - c) Urinalysis
 - d) Haemoglobin only
 - e) ABO, and Rhesus typing then cross match
19. Rhesus antibodies react best at
- a) 15°C
 - b) 18°C
 - c) 22°C
 - d) 37°C
 - e) 4°C
20. Which of the following is considered a complete antibody
- a) Anti D
 - b) Anti fya
 - c) Anti K
 - d) Anti JKa
 - e) Anti M
21. In reverse grouping O cells are used to
- a) Confirm the blood group

- b) Detect warm antibodies
 - c) Detect ungrouped blood
 - d) Detect all errors in grouping
 - e) As a control
22. The following are methods used I n ABO grouping except
- a) Titration
 - b) Tube method
 - c) Slide method
 - d) Tile method
 - e) Reverse method
23. The following are the testing media employed in Rhesus group in except
- a) Normal saline
 - b) Enzymes
 - c) Anti human globulin
 - d) Bovine albumin
 - e) Serum
24. During forward grouping failure to wash cells may cause
- a) False negative results
 - b) False positive results
 - c) Contamination
 - d) Antisera's to be weak
 - e) Save time for a technician in doing the test
25. Paw paw is used for the production of _____ enzyme
- a) Ficin
 - b) Bromelin
 - c) Trypsin
 - d) Papain
 - e) Albumin
26. The main purpose of blood transfusion is/are to
- a) Give blood to all patients
 - b) Replace blood lost by haemorrhage
 - c) Give represent universal blood
 - d) Give all recipient universal blood
 - e) Give any patient going to threaten blood
27. Antibody titre is significant in
- a) Determining blood groups
 - b) Haemolytic cases
 - c) Antisera preparation
 - d) Forensic medicine
 - e) Al female donors
28. Which antibody is most frequently used when saliva is tested for secretor status?

- a) Anti. A
- b) Anti. H
- c) Anti. B
- d) Anti. Se
- e) Anti. D

29. Delayed transfusion reactions are usually caused by

- a) IgG antibody
- b) IgM antibody
- c) IgE antibody
- d) IgA antibody
- e) IgD antibody

30. The best storage temperature for platelets rich plasma is

- a) 40°C
- b) Room Temperature
- c) -20°C
- d) 37°C
- e) 56°C

31. Genes inherited from both parents are termed as

- a) Phenotypes
- b) Allele
- c) Locus
- d) Genotype
- e) Rhesus

32. The possible genotype of a person with blood group A₂& O is

- a) A₂ A₂
- b) A₁A₂
- c) A₂B
- d) A₂O
- e) BO

33. Group O individual has the following antibodies

- a) Anti. A
- b) Anti. A₁B
- c) Anti. D
- d) Anti. B
- e) None of the above

34. The copper sulphate solution for Hb estimation of women donor has SG

- a) 1.051
- b) 1.053
- c) 1.53
- d) 1.055
- e) 1.55

35. Which of the following is not correctly matched
- a) Bromollin – Pineapple
 - b) Ficin – fig tree
 - c) Trypsin - Tree
 - d) Papain – Paw Paw
 - e) None of the above
36. The least common blood groups is
- a) B
 - b) A
 - c) D
 - d) O
 - e) AB
37. The following investigation involves the use of coomb's reagent except
- a) D" Test
 - b) Indirect coomb's test
 - c) Direct coombs Test
 - d) Detected for weak D antigen
 - e) Blood grouping
38. In cross match tube labelled room temperature is used in detection of
- a) IgM only
 - b) IgG
 - c) IgM and Cold antibody
 - d) Comb's test
 - e) None of the above
39. The following investigation are done incase of a transfusion reaction except
- a) Urinaysis
 - b) Regrouping
 - c) Re group pint & patent
 - d) D^u test
 - e) B/S for malaria
40. In blood donor centres the most important equipment is
- a) Water batch
 - b) Microscope
 - c) Oven
 - d) Refrigerator
 - e) Timer

SECTION B (60MARKS)

1. Discuss the qualities of potential blood donor **(20marks)**

2. Write short notes on:-
 - a) The different between D” test and Direct coombs Test
 - b) ABO back typing
 - c) Finding the titre of anti. D in the laboratory
 - d) ABO cells grouping**(20marks)**

3. (a) List FIVE characteristics of blood group AB in the ABO blood group system **(5marks)**
(b) Explain the preparation and use of isotonic saline in blood bank **(10marks)**
(c) Explain the procedure & purpose of D” test in the laboratory **(5marks)**