FCP - Technical Assistant (Blood Bank) - A

Date: 04. August, 2011.

1. The usual level of leucoreduction to prevent febrile non-hemolytic transfusion reaction (FNHTR) is
   A. 0.5 108
   B. 0.5 107
   C. 1 108
   D. 2 106

2. The function of platelets include the following except
   A. Preserve vascular integrity
   B. Clot retraction
   C. Wound healing
   D. Synthesis of granules

3. Which one of the following plasticizer is the safest
   A. DEHP
   B. Trimellitate
   C. TOTM
   D. BTHC

4. The enzyme responsible for conferring H-activity on red cell membrane is
   A. N-acetyl galactosaminyl transferase
   B. D-galactosyl transferase
   C. L-fucosyl transferase
   D. Glucosyl transferase

5. The following are true about acquired B antigen except
   A. Cells type as AB in forward typing
   B. It is due to inheritance of ABO enzymes capable of synthesizing A and B antigens
   C. Cells type as B in forward typing
   D. Acquired B antigen have been found on the RBCs of normal donors

6. The following are true about Thrombotic Thrombocytopenic Purpura (TTP) except
   A. Characterized by microangiopathic hemolytic anemia
   B. There will be renal dysfunction
   C. Treated by plasma exchange
   D. Treated by platelet transfusion

7. Which of the following is least likely to be naturally occuring
   A. Anti D
   B. Anti M
   C. Anti A

D. Anti B

8. Complication of massive transfusion includes all except
   A. Hypocalcemia
   B. Hypokalemia
   C. Hypothermia
   D. Acidosis

9. In which ELISA, a positive result will have a low OD value
   A. Indirect ELISA
   B. Competitive ELISA
   C. Sandwich ELISA
   D. Capture ELISA

10. Regarding screening O cells, which of the following is false?
   A. The most common clinically significant antigen must be present
   B. It is preferred that as many antigens as possible be homozygous on the red cells
   C. Screening cells outdate every 4 months
   D. The least common clinically significant antigens must be present

11. The constituents of cryoprecipitate includes all except
   A. Factor VIII
   B. Fibrinogen
   C. Factor V
   D. Factor XIII

12. Specificity of an ELISA kit is defined as
   A. Its ability to detect truly infected individuals
   B. Its ability to correctly identify all the uninfected individuals
   C. Its ability to identify all positives as positive and all negatives as negative
   D. Its ability to identify actually infected individuals among all persons giving a positive result

13. Which of the following is **false** regarding the use of heparin for storage of blood?
   A. Prevents coagulation by inactivating thrombin and coagulation factors
   B. Dose of heparin for collecting blood in blood bag is 0.5-2 iu/ml
   C. The dose of heparin for collecting blood in blood bag is 5-10 iu/ml
   D. Heparinised blood should be used within 7 days of collection

14. Prozone phenomena is
   A. Presence of agglutination due to excess antibodies
   B. Absence of agglutination due to excess antibodies

C. Presence of agglutination due to fewer antibodies
D. Absence of agglutination due to fewer antibodies

15. Hybridoma technology is used in
A. Blood component preparation
B. Compatibility
C. Antisera production
D. Transfusion transmitted infection

16. A patient with thrombocytopenia and platelet refractoriness should ideally be given
A. Random donor platelets
B. Irradiated platelets
C. HLA matched platelets
D. Pool of platelet concentrate

17. Virus used in monoclonal antibody production is
A. Ebstein Barr Virus
B. Polio Virus
C. Rota Virus
D. Cytomegalo Virus

18. Cause of GVHD is engraftment of
A. Viable neutrophils
B. Viable lymphocytes
C. Viable monocytes
D. Viable basophils

19. Which of the following is a DNA virus?
A. Hepatitis A virus
B. Hepatitis B virus
C. Hepatitis C virus
D. Hepatitis D virus

20. Genes for Rh system is located in
A. Chromosome 9
B. Chromosome 7
C. Chromosome 10
D. Chromosome 1

21. Adsorption elution is a method used for
A. Confirmation of weak A or B subgroups
B. Investigation of incompatibility
C. Autoimmune hemolytic anemia
D. Bombay group detection

22. Which infectious agent is commonly transmitted by WBCs?
    A. HIV
    B. Treponema Pallidum
    C. Cytomegalo virus
    D. Malarial parasite

23. Card test for malarial parasite, the marker detected is
    A. Plasmodial DNA
    B. Plasmodial envelope protein
    C. Plasmodial lactate dehydrogenase
    D. Anti cardiolipin antibody

24. Which of the following statement about acute hemolytic transfusion reaction is false?
    A. It is usually intravascular
    B. Usually associated with ABO incompatible blood transfusion reaction
    C. It is mainly due to IgM antibodies
    D. The reaction takes days to weeks to appear

25. Which of the following statements is false?
    A. ABO incompatibility between mother and foetus causes increased affection of the foetus from Rh HDN
    B. Usually first pregnancy is unaffected
    C. The risk of immunization is greater with Rh D positive blood transfusion than with Rh positive pregnancy
    D. The amount of foetal blood entering the maternal circulation varies from less than 1 ml to 10 ml

26. Blood collection should not be more than------ml/Kg body wt.
    A. 12.O ml
    B. 10.5 ml
    C. 8.5 ml
    D. 9.5 ml

27. ------is the RBC phenotype where all antigens are absent
    A. Weak D
    B. Partial D
    C. Rh negative
    D. Rh Null

28. -------is used as an anticoagulant for apheresis
    A. CPD
    B. ACD

C. CPDA
D. SAG-M

29. Volume of of RBC for neonatal transfusion
A. 5ml/kg
B. 15-20ml/kg
C .Hct of less than 20%
D .None of the above

30. Screening cells used for atypical antibody will not detect
A. Anti M
B. Anti N
C. Anti A1
D. Anti K

31. Solvent/detergent treatment does not inactivate viruses like
A. Hepatitis A
B. Parvovirus
C. Viruses that lack lipid envelope
D. None of the above

32. ---- is an antigen showing dosage effect
A. ABO
B. Rh
C. HLA
D.Kidd

33. Freezing is not recommended for antisera due to
A. Additives
B. High titer antibodies
C. Colouring agent
D. Prozone phenomenon

34. Hyperventilation tetany in a donor is due to
A. Reduction in blood volume
B. Reduced O2
C.Increased CO2
D.Decreased CO2

35. F VIII circulates in combination with-----

A. F IX
B. F II,VII, IX & X
C. vWF.
D. Platelets

36. The dipotassium salts of EDTA as an anticoagulant is preferred due to its
A. Low solubility
B. Greater solubility
C. Chelating effect
D. All the above

37. Most commonly used anticoagulant for coagulation study is
A. EDTA
B. Trisodium citrate
C. Heparin
D. Oxalate

38. Routine coagulation investigations are performed on
A. Plateletr poor plasma
B. Cryo poor plasma
C. Serum
D. A&B

39. Causes of prolonged Thrombin time
A. Hypofibrinogenaemia
B. Presence of heparin
C. Abnormal fibrin polymerization
D. A&B

40. Non stimulated platelets are
A. Sphere shaped
B. Disc shaped
C. Activated
D. Uniformly distributed

41. False neg.AHG test is due to
A .Failure to add antiglobulin serum
B. Inadequate washing
C. Weak or inactive AHG serum
D. All the above

42. Hepatitis B is acquired through
A.Faecal oral route

B. During epidemics
C. Parenterally through infected blood or fluids
D. Due to unidentified agents

43. RBC in hypotonic solution
A. Burst
B. Shrink
C. Retain the size
D. Survive less

44. Character of an organism is said to be sex linked when gene is carried on
A. Y chromosome
B. X chromosome of male or female
C. X and Y chromosome
D. Autosomes

45. In Haemophilia A, F VIII coagulant activity is:-
A. Normal with abnormal vWF
B. Abnormal with normal vWF and vWF antigen
C. Abnormal with inhibitors
D. None of the above

46. Human immunodeficiency virus has a predilection for
A. T4 lymphocytes
B. Macrophages
C. Monocytes
D. RBCs

47. Slowing of blood flow during blood collection is due to
A. Tight tourniquet
B. Hematoma at puncture site
C. Vein spasm
D. All the above

48. Since there is no built in control for Rh typing, it is essential to perform
A. Testing for Rh antibodies
B. Du testing
C. Rh control
D. Immediate spin

49. ACD plasma may be converted to serum by the addition of
A. Sodium chloride
B. An excess of calcium
C. Lectin

D. Fibrinogen

50. Donor giving history of hepatitis B will be deferred from blood donation for
A. 3 months
B. 6 months
C. 1 year
D. permanently

51. Adenine in CPDA increases shelf life of rbc by
A. Increased nutrition to rbc
B. Maintaining PH of stored blood
C. Giving ATP to rbc
D. Maintaining clotting factors

52. 1 unit random donor platelets should have at least
A. 3×10^{11} platelets /bag
B. 5.5×10^{10} platelets /bag
C. 3×10^{10} platelets /bag
D. 5.5×10^{11} platelets /bag

53. Core antibody window denotes
A. The time when anti HBc is circulating after the disappearance of HbsAg
B. The time of appearance of HbsAg
C. The time of disappearance of anti HBc
D. The time of appearance of antiHBs

54. Indirect coombs test positivity indicate that
A. Alloantibody is present
B. Autoantibody is present
C. Allo and /or autoantibody is present
D. No free antibody in the serum

55. Irradiation in blood components is to prevent
A. Alloimmunization
B. Graft rejection
C. GVHD
D. Hemolytic transfusion reaction

56. Plasticizer used in PVC blood bags for storing rbc
A. Tri (2 ethyl hexyl) trimellitate
B. Di Ethyl Hexyl Pthalate
C. Polyolefin
D. Butryl Tri Hexyl Citrate

57. Hyperventillation tetany is due to
A. Loss of excess CO_2 resulting in alkalosis
B. Loss of excess O_2 resulting in acidosis
C. Inhalation of Carbon Monoxide
D. Inhalation of CO_2

58. The effect of irradiation on blood components
    A. Prevent mitosis of nucleated cells
    B. Prevent sensitization of the patients
    C. To remove WBC
    D. To increase effectiveness of transfusion

59. Acquired B phenotype is a condition where
    A. A blood group rbcs are converted to B
    B. A blood group rbcs are converted to AB
    C. Weakened expression of B antigens on B group rbcs
    D. O group rbcs are converted to B

60. Transferase enzyme specific for A group
    A. N acetyl galactosamyl transferase
    B. D galactosamyl transferase
    C. Fucosyl transferase
    D. Glucosamyl transferase

61. The most critical lesion during storage of blood
    A. Reduction in glucose
    B. Reduction in PH
    C. Increase in K
    D. Increase in hemolysis

62. Rh HDN should be suspected if
    A. Mother and baby are Rh positive
    B. Mother and baby are Rh negative
    C. Mother is Rh negative and baby is Rh positive
    D. Mother is Rh positive and baby is Rh negative

63. In LISS the amount of NaCl is
    A. 2.8 g/1L
    B. 1.8 g/1L
    C. 9 g/1L
    D. 0.9 g/1L

64. Monoclonal antisera is prepared by
    A. Hyperimmune human volunteers
    B. Hyperimmune animals
    C. Hybridoma Technology
    D. Sensitized multiparous mothers

65. Leucoreduced rbcs are indicated to prevent
    A. Hemolytic Transfusion Reactions
    B. Non Hemolytic Febrile Transfusion Reactions
    C. Circulatory overload
    D. Anaphylactic reactions

66. Characteristic feature of Bombay blood group is

A. Presence of H antigen
B. Presence of anti H
C. Presence of secretor
D. Presence of H gene

67. Anticoagulant action of Na Citrate in CPDA is by
A. Chelating Calcium
B. Binding F VIII
C. Chelating Na
D. Removing F X

68. Blood group substances are present in all of the following except
a. Saliva
b. Tear
c. CSF
d. Semen

69. The chance of bacterial contamination is more in platelet components due to
A. Platelets are more prone to infections
B. Agitation help the entry of bacteria in to the bag
C. Platelets components are stored at higher temperature than other blood components
D. Platelet storage bags are more porous

70. Tetany is caused by
a. Hyperkalemia
b. Hyponatremia
c. Hypocalcemia
d. Hypokalemia

71. Dithiothreitol (DTT) is used to cleave
A. IgM and for detection of IgG
B. IgG and for detection og IgM
C. IgA from serum
D. Proteins present on rbc

72. Specific antigen used in ELISA kits for detection of HIV 2 antibody
A. P24 antigen
B. P17 antigen
C. gp 36
D. gp 41

73. Heparin is not used to store blood because
A. Heparin will remove anti Thrombin III
B. Heparin lacks dextrose
C. Heparin is rapidly destroyed
D. Heparin destroy platelets

74. The most effective way to remove wbcs to reduce non hemolytic transfusion reaction is

A. Washing
B. Leucoreduction by buffycoat removal
C. Filtration using wbc filters
D. Irradiation

75. Part of the hand frequently missed during hand washing.
a. Dorsum of hand
b. Thumb
c. Wrist
d. In between fingers

76. Example of a non-lipid enveloped virus
A. HIV
B. HBV (Hepatitis B Virus)
C. HCV (Hepatitis C Virus)
D. HAV (Hepatitis A Virus)

77. Graft Versus Host Disease can be prevented by
A. Filtration
B. Irradiation
C. HLA matching
D. Achieving leucoreduction by centrifugation and filtration

78. The factor not contained in cryoprecipitate
A. Factor VIII
B. Factor IX
C. Fibrinogen
D. Von Willebrands Factor

79. A good sedimenting agent for Red Cells
A. Glycopyrrolate
B. Hydroxyethyl starch
C. Tranexamic Acid
D. Glycerol

80. Incubation period of Hepatitis B
A. 6-8 weeks
B. 6-8 months
C. 6 weeks to 6 months
D. 4-6 weeks