**TEST YOUR KNOWLEDGE**

**BLOOD**

Contributed by Neema Kumari (pursuing Ph.D.) and Srinithi P. (pursuing M.Tech.), Dept. of Biotechnology, Indian Institute of Technology Hyderabad, National Highway 9, Kandi, Sangareddy, Telangana-502285; Email: neemak2006@gmail.com; srinithisow-miya@gmail.com

---

1. On an average, what percentage of human body weight is blood?
   a) 2%  
   b) 7%  
   c) 15%  
   d) 20%

2. How much blood approximately does a newborn baby have?
   a) 240 ml  
   b) 500 ml  
   c) 750 ml  
   d) 1000 ml

3. Which of the following cells lacks nucleus?
   a) WBC  
   b) RBC  
   c) Platelets  
   d) None of the above

4. World Blood Donor Day is celebrated every year on:
   a) 8 February  
   b) 6 April  
   c) 14 June  
   d) 8 September

5. When and where was the world’s first blood bank established?
   a) London, 1930  
   b) Mexico, 1942  
   c) Sweden, 1939  
   d) Chicago, 1937

6. Pus, a whitish-yellow protein-rich fluid that accumulates at the site of infection, is a build-up of dead _______.
   a) RBC  
   b) WBC  
   c) Platelets  
   d) All of the above

7. Which of the following animal’s blood is used to test contaminants in drugs and vaccines?
   a) Rabbit  
   b) Leach  
   c) Guinea pig  
   d) Horseshoe crab

8. Earthworm and leaches have green blood due to the presence of:
   a) Haemocyanin  
   b) Chlorocyanin  
   c) Chlorocruorin  
   d) Haemocruorin

9. Crab has blue blood because of the presence of _______ instead of Iron.
   a) Copper  
   b) Tin  
   c) Lead  
   d) Magnesium

10. The HH blood group is popularly known as:
    a) Bombay blood group  
    b) High-Haemo blood group  
    c) Caucasians blood group  
    d) No such blood group exists

11. Which part of the blood carries glucose to the cells?
    a) RBC  
    b) WBC  
    c) Plasma  
    d) Platelets

12. Mother-fetus Rh blood type incompatibility problems can occur if the mother is _____ and her fetus is _____.
    a) Rh+, Rh+  
    b) Rh+, Rh-  
    c) Rh-, Rh+  
    d) Rh-, Rh-

13. How much amount of blood is usually lost per period during a normal menstruation?
    a) 5-10 ml  
    b) 10-35 ml  
    c) 35-60 ml  
    d) 60-80 ml

14. Most of the volume of normal human blood is composed of:
    a) RBC  
    b) WBC  
    c) Water  
    d) Plasma

15. The ABO blood group was discovered by:
    a) Charles. R. Drew  
    b) Karl Landsteiner  
    c) William Harvey  
    d) Y. M. Bhende

16. In which of the following diseases the structure of the haemoglobins changes?
    a) Diabetes  
    b) Thalassemia  
    c) Haemolytic anaemia  
    d) Sickle cell anaemia

17. The structural characteristic(s) of an erythrocyte contributing to its function:
    a) Biconvex  
    b) Biconcave  
    c) Concave plus convex  
    d) Flat on both sides

18. What is haematocrit?
    a) Percent of foreign bodies in blood  
    b) Percent of RBC and WBC in blood  
    c) Percent of RBC in blood  
    d) Ratio of RBC to WBC during infection

---

**Answers:**

1. b  
2. a  
3. b  
4. c  
5. d  
6. b  
7. d  
8. c  
9. a  
10. a  
11. a  
12. a  
13. b  
14. a  
15. b  
16. c  
17. b  
18. d

---

Contributed by Neema Kumari (pursuing Ph.D.) and Srinithi P. (pursuing M.Tech.), Dept. of Biotechnology, Indian Institute of Technology Hyderabad, National Highway 9, Kandi, Sangareddy, Telangana-502285; Email: neemak2006@gmail.com; srinithisow-miya@gmail.com
1. Erythropoietin is a:
   a) Lipoprotein hormone  b) Glycoprotein hormone
   c) Both  d) None

2. The salt and water balance of the kidneys is controlled by:
   a) Erythropoietin  b) Aldosterone  c) Renin  d) None

3. Hyponatremia is the:
   a) Increased plasma sodium concentration
   b) Decreased plasma sodium concentration
   c) Increased nitrogen concentration  d) None of the above

4. Icterus, a common liver disease, is also known as:
   a) Hepatomegaly  b) Jaundice  c) Diabetes  d) None

5. Excessive intake of alcohol results in:
   a) Cirrhosis  b) Jaundice  c) Cholestasis  d) None

6. Liver clears the foreign substances and metabolises them. They are:
   a) Probiotics  b) Xenobiotics  c) Both  d) None

7. The main cells that clear antigen-antibody complexes from blood are:
   a) Phagocytes  b) Kupffer cells  c) Neurons  d) None

8. Prostaglandins are synthesised from:
   a) Hydrochloric acid  b) Arachidonic acid  c) Nitric acid  d) Chloric acid

9. Each nephron produces about _____ microlitre of ultrafiltrate per day.
   a) 100  b) 50  c) 90  d) 150

10. Azotemia is excess of _______ in the blood.
    a) Urea  b) Ketones  c) Ammonia  d) Potassium

11. Myoglobin is a _______ binding protein.
    a) Carbon  b) Nitrogen  c) Oxygen  d) Hydrogen

12. Brain natriuretic peptide was originally isolated from:
    a) Brain tissue  b) Liver tissue  c) Nerve tissue  d) Cardiac tissue

13. Choline is released by the stimulation of:
    a) Kinase  b) Lipase  c) Phospholipase  d) Amylase

14. The average pH of urine is:
    a) 6.0  b) 7.4  c) 4.5  d) 8.0

15. Which of the following hepatitis viruses is the most common cause of acute viral hepatitis in North America?
    a) Hepatitis A virus  b) Hepatitis B virus  c) Hepatitis C virus  d) Hepatitis D virus

16. Hepatitis B can be prevented by:
    a) Active immunization  b) Passive immunization  c) Both  d) None

17. Increased cortisol levels are observed in:
    a) Stress  b) Hypoglycemia  c) Pregnancy  d) All of the above

18. Turner’s syndrome affects:
    a) Only males  b) Only females  c) Both  d) None

19. Corpus Luteum secretes:
    a) Estrogen  b) Progestrone  c) Both  d) None

20. Prolactin is secreted by:
    a) Adenohypophysis  b) Neurohypophysis  c) Pituary gland  d) Adrenal gland

**Answers:**

1. b  2. b  3. b  4. b  5. a  6. b  7. b  
8. b  9. a  10. a  11. c  12. a  13. c  14. a 
15. a  16. c  17. d  18. b  19. c  20. a

**Contributed by** Abid Ahmad Shah, S/o Mr. G.H. Mohi-Ud-Din Shah, Seer Hamdan, Anantnag, Jammu and Kashmir-192129; Email: abidjm1121@gmail.com