



DIRECTORATE OF SCHOOL EDUCATION TAMILNADU

12NPCB10 (2023-24)	NEET PRACTICE QUESTIONS (TEST-10)	Class : XII Time : 1.15 hrs Total Marks : 240
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Answer key

12th - ZOOLOGY

46. B) Melanism in peppered moths

(Solution: The example of Melanism in peppered moths is often cited as evidence against the Lamarckian concept of inheritance of acquired characters and, instead, supports the principles of natural selection proposed by Charles Darwin. The phenomenon of Melanism in peppered moths is a classic example of evolutionary change driven by natural selection.)

47. B) *Ramapithecus* → *Australopithecus* → *Homo habilis* → *Homo erectus*

48. C) In mutation, there are intermediate forms since they are not fully fledged.

(Solution: Mutations can occur spontaneously or be induced by external factors like radiation or certain chemicals. Once a mutation has occurred, it becomes a stable part of the DNA sequence. Hence, there are no intermediate forms.)

49. A) Both A and R are true, R is the correct explanation of A

50. A) Small isolated population

51. D) *Oenothera lamarckiana*

(Solution: Hugo de Vries proposed his mutation theory of evolution while working on the evening primrose plant, *Oenothera lamarckiana*. During his research, he observed sudden and distinct changes in the characteristics of the plants, which he referred to as "mutations".)

52. B) 2pq

(Solution: In the Hardy-Weinberg equilibrium equation, the frequency of heterozygous individuals is represented by the term 2pq. The Hardy-Weinberg equilibrium is a principle in population genetics that describes the relationship between the frequencies of alleles and genotypes in a population that is not evolving)

53. A) *Homo habilis* - 650 - 800 cc

54. B) Both A and R are true, but R is not the correct explanation of A

55. C) Basophils

(**Solution:** Basophils appear in more number during allergic reactions or inflammatory reactions. They produce heparin to prevent blood clotting and histamine and serotonin to induce inflammation)

56. D) SA node - AV node - Bundle of His - Purkinje fiber

57. C) Prothrombin involved in blood clotting

(**Solution:** Prothrombin is a protein produced by the liver and is one of the factors in the blood coagulation cascade. When there is damage to a blood vessel and bleeding occurs, the coagulation cascade is activated to form a blood clot, which helps in stopping the bleeding)

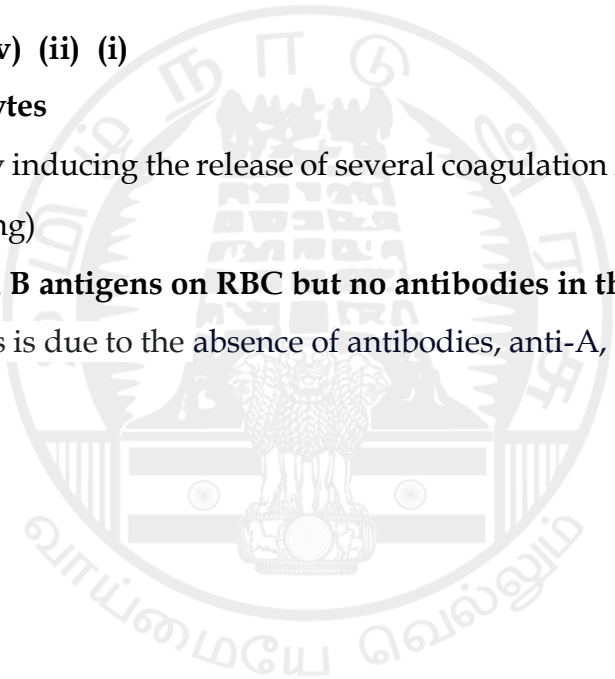
58. A) (iii) (iv) (ii) (i)

59. D) Thrombocytes

(**Solution:** By inducing the release of several coagulation factors, they also assist in blood clotting)

60. A) Both A and B antigens on RBC but no antibodies in the plasma

(**Solution:** This is due to the absence of antibodies, anti-A, and anti-B, in plasma.)





DIRECTORATE OF SCHOOL EDUCATION TAMILNADU

11NPCB10 (2023-24)	NEET PRACTICE QUESTIONS (TEST-10)	Class : XI Time : 1.15 hrs Total Marks : 240
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Answer key

11th - ZOOLOGY

46. B) Both A and R are true, but R is not the correct explanation of A
47. C) Basophils
(Solution: Basophils appear in more number during allergic reactions or inflammatory reactions. They produce heparin to prevent blood clotting and histamine and serotonin to induce inflammation)
48. D) SA node - AV node - Bundle of His - Purkinje fiber
49. C) Prothrombin involved in blood clotting
(Solution: Prothrombin is a protein produced by the liver and is one of the factors in the blood coagulation cascade. When there is damage to a blood vessel and bleeding occurs, the coagulation cascade is activated to form a blood clot, which helps in stopping the bleeding)
50. C) Rhocum
51. A) Embolism
(Solution: An embolism is a blocked artery caused by a foreign body, such as a blood clot or an air bubble)
52. D) Na⁺
(Solution: Sodium constitutes around 90% of the positive ions in the extracellular fluid.)
53. B) low pressure in the veins
54. A) (iii) (iv) (ii) (i)
55. D) Thrombocytes

(**Solution:** By inducing the release of several coagulation factors, they also assist in blood clotting)

56. A) 1. Neutrophil 2. Basophil 3. Lymphocyte 4. Eosinophil 5. Monocyte

57. B) Mother is Rh -ve and father is Rh +ve

58. C) Lacking clotting factors

(**Solution:** Serum is the liquid portion of blood that remains after coagulation (clotting) has occurred. During the clotting process, fibrinogen and other clotting factors are used to form a blood clot. As a result, serum lacks these clotting factors, as they are removed during the clotting process. Serum contains water, electrolytes, antibodies, hormones, and other proteins but is deficient in the clotting factors present in plasma.)

59. C) Spleen

60. A) Both A and B antigens on RBC but no antibodies in the plasma

(**Solution:** This is due to the absence of antibodies, anti-A, and anti-B, in plasma.)

