

1. Match List-I with List-II and select the correct answer using the codes given below:

**List-I**  
(Achievement  
in genetics)

**List-II**  
(Scientists)

- A. Discovery of transduction 1. Khurana  
and conjugation in bacteria  
B. Establishing the sex-linked 2. Kornberg  
C. Isolation of DNA polymerase 3. Lederberg  
from *E. coli*  
D. Establishing the complete 4. Morgan  
Genetic code 5. Ochoa

**Codes:**

- (a) A – 4; B – 3; C – 2; D – 1  
(b) A – 3; B – 4; C – 1; D – 5  
(c) A – 4; B – 3; C – 1; D – 5  
(d) A – 3; B – 4; C – 2; D – 1

2. A man whose blood group is not known meets with a serious accident and needs blood transfusion immediately. Which one of the blood groups mentioned below and readily available in the hospital will be safe for transfusion?

- (a) O, Rh– (b) O, Rh+  
(c) AB, Rh– (d) AB, Rh+

3. Match List-I (Endocrine glands) with List-II (Hormones secreted) and select the correct answer using the codes given below:

**List-I**

**List-II**

- A. Gonads 1. Insulin  
B. Pituitary 2. Progesterone  
C. Pancreas 3. Growth hormones  
D. Adrenal 4. Cortisone

- (a) A – 3; B – 2; C – 4; D – 1  
(b) A – 2; B – 3; C – 4; D – 1  
(c) A – 2; B – 3; C – 1; D – 4  
(d) A – 3; B – 2; C – 1; D – 4

4. Match List-I (Disease) with List-II (Types of disease) and select the correct answer using the codes given below:

**List-I**

**List-II**

- A. Haemophilia 1. Deficiency disease  
B. Diabetes 2. Genetic disease  
C. Rickets 3. Hormonal disorder  
D. Ringworm 4. Fungal infection

- (a) A – 2; B – 3; C – 4; D – 1  
(b) A – 2; B – 3; C – 1; D – 4  
(c) A – 3; B – 2; C – 1; D – 4  
(d) A – 3; B – 2; C – 4; D – 1

5. Widespread resistance of malarial parasite to drugs like chloroquine has prompted attempts to develop a malarial vaccine to

combat malaria. Why is it difficult to develop an effective malaria vaccine ?

(a) Malaria is caused by several species of *Plasmodium*

(b) Man does not develop immunity to malaria during natural infection

(c) Vaccines can be developed only against bacteria

(d) Man is only an intermediate host and not the definitive host.

6. Consider the following statements:

1. Hepatitis B is several times more infectious than HIV / AIDS

2. Hepatitis B can cause liver cancer

Which of the statements given above is/ are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

7. With reference to the management of minor minerals in India, consider the following statements :

1. Sand is a 'minor mineral' according to the prevailing law in the country.

2. State Governments have the power to grant mining leases of minor minerals, but the powers regarding the formation of rules related to the grant of minor minerals lie with the Centre Government.

3. State Governments have the power to frame rules to prevent illegal mining of minor minerals.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 2 and 3 only

(c) 3 only

(d) 1, 2 and 3 only

8. Consider the following statements regarding Atmospheric rivers.

1. Atmospheric rivers are short and wider bands of water vapour in the atmosphere that transport moisture from one region to another.

2. Atmospheric rivers are not concentrated to one region, but occur globally.

3. An example is the "Pineapple Express," an atmospheric river that brings moisture to the U.S. West Coast.

How many of the above statements is/are correct?

- a) Only one  
**b) Only two**  
c) All three  
d) None
9. Consider the following geothermal sites and their location.
1. Puga Geothermal Field: Gujarat
  2. Manikaran: Himachal Pradesh
  3. Tattapani: Ladakh
- How many of the above pairs is/are correctly matched?
- a) Only one**  
b) Only two  
c) All three  
d) None
10. Consider the following statements regarding Tantalum:
1. Tantalum is a rare metal with a high melting point and corrosion resistance.
  2. It is primarily used in the agriculture sector due to its ability to enhance crop yields.
  3. India imports almost all of its Tantalum, mainly from the Democratic Republic of the Congo.
- Which of the above statements is/are correct?
- a) 1 only  
**b) 1 and 3 only**  
c) 2 and 3 only  
d) 1, 2, and 3