



Quiz of the month August

Q1. Identify the right combination

- A. GLUT 1 -Skeletal Muscle
- B. GLUT2-Sperm
- C. GLUT3-Heart
- D. GLUT4-Skeletal Muscle

Ans 1. Correct answer is D. GLUT4 is the glucose transporter responsible for insulin-regulated glucose uptake in skeletal muscle and adipose tissues. GLUT1 is primarily responsible for glucose transport in the brain, while GLUT2 is found in the liver, pancreas, and kidney.

Q2. Which of the following amino acids can combine with ammonia to carry it from brain to liver?

- A. Glutamine
- B. Glutamate
- C. Alanine
- D. Tyrosine

Ans 2. Correct answer is B. Glutamate is the main amino acid responsible for transporting ammonia from peripheral tissues, including the brain, to the liver. It acts as a carrier of excess ammonia, which is converted into urea in the liver.

Q3. Dihydrorhodamine test is used for?

- A. SCID
- B. CGD
- C. LAD
- D. Hyper IgM

Ans 3. Correct answer is B. The **Dihydrorhodamine (DHR) test** is used to diagnose **Chronic Granulomatous Disease (CGD)**. In CGD, there is a defect in the NADPH oxidase enzyme complex in phagocytes, which impairs the ability to produce reactive oxygen species (ROS) necessary to kill certain bacteria and fungi. The DHR test measures the production of ROS by neutrophils. In CGD, this production is defective, leading to abnormal results on the test.

Q4. Veganism is associated with which vitamin deficiency?

- A. Vitamin C
- B. Vitamin D
- C. Vitamin B12
- D. Vitamin B6

Ans 4. Correct answer is C. Veganism is most commonly associated with **Vitamin B12** deficiency. Vitamin B12 is primarily found in animal products such as meat, dairy, and eggs, so individuals who follow a strict vegan diet may lack sufficient intake of this vitamin unless they consume fortified foods or supplements. Vitamin B12 is essential for red blood cell formation, neurological function, and DNA synthesis, and its deficiency can lead to anemia and neurological issues.

Q5. Bitot's spots are seen with which vitamin deficiency?

- A. Vitamin C
- B. Vitamin D
- C. Vitamin B12
- D. Vitamin A

Ans 5. Correct answer is D. **Bitot's spots** are seen with **Vitamin A** deficiency. These are foamy, white accumulations of keratin on the conjunctiva of the eye, often associated with dry eyes (xerophthalmia). Vitamin A deficiency can lead to serious eye problems, including night blindness and, in severe cases, complete blindness.

Q6. Which condition is associated with hepatitis C infection?

- A. Pemphigus
- B. Cryoglobulinemia
- C. Myeloma
- D. Gingivitis

Ans 6. Correct answer is B. **Hepatitis C infection** is strongly associated with **Cryoglobulinemia**. Cryoglobulinemia is a condition where abnormal proteins (cryoglobulins) in the blood precipitate at low temperatures, leading to vasculitis, joint pain, and glomerulonephritis. It is often linked to chronic Hepatitis C infection due to the virus stimulating the immune system to produce these abnormal proteins.

Q7. Anaphylaxis is associated with which antibody?

- A. Ig E
- B. IgA
- C. IgD
- D. IgM

Ans 7. Correct answer is A. **Anaphylaxis** is associated with **IgE** antibodies. IgE plays a crucial role in allergic reactions. When an individual is exposed to an allergen, IgE antibodies bind to mast cells and basophils, causing them to release histamine and other mediators, leading to the symptoms of anaphylaxis, such as swelling, difficulty breathing, and a drop in blood pressure.

Q8. Streak Ovaries are seen in which syndrome?

- A. Down Syndrome
- B. Weber Syndrome
- C. Turner Syndrome
- D. Edward Syndrome

Ans 8. Correct answer is C. **Streak ovaries** are a characteristic feature of **Turner Syndrome**. This condition occurs in females with a missing or structurally abnormal X chromosome (45,X karyotype). Streak ovaries are underdeveloped ovaries made of fibrous tissue, leading to ovarian failure and infertility in affected individuals.

Q9. Sandal Gap is seen in which syndrome?

- A. Down Syndrome
- B. Ptau Syndrome
- C. Turner Syndrome
- D. Edward Syndrome

Ans 9. Correct answer is A. **Sandal gap**, a wide space between the first and second toes, is a characteristic feature of **Down Syndrome** (Trisomy 21). It is one of the many physical traits commonly observed in individuals with Down syndrome.

Q10. Congenital heart disease seen in Down syndrome is?

- A. ASD
- B. VSD
- C. AVSD
- D. PDA

Ans 10. Correct answer is C. The most common **congenital heart disease** seen in **Down syndrome** is **Atrioventricular Septal Defect (AVSD)**. AVSD involves defects in both the atrial and ventricular septa, as well as the valves between the chambers. It is frequently associated with Down syndrome due to the chromosomal abnormality affecting heart development.

Q11. False statement about Turner Syndrome?

- A. Premature Ovarian Failure
- B. Osteoporosis
- C. High Stature
- D. Webbed Neck

Ans 11. Correct answer is C. The **false statement** about Turner Syndrome is "**High Stature**". In fact, individuals with Turner syndrome typically have **short stature** due to the absence or abnormality of one X chromosome. Other features of Turner syndrome include **premature ovarian failure**, leading to infertility, **osteoporosis** due to estrogen deficiency, and a characteristic **webbed neck**.

Q12. Diagnostic Criteria of NF1 does not include?

- A. Lisch Nodules
- B. Optic Glioma
- C. Sphenoid dysplasia
- D. Schwannoma

Ans 12. Correct answer is D. The **diagnostic criteria for Neurofibromatosis type 1 (NF1)** do not include **Schwannoma**. Schwannomas are more commonly associated with **Neurofibromatosis type 2 (NF2)**.

The diagnostic criteria for NF1 include:

- **Lisch nodules** (pigmented hamartomas of the iris)
- **Optic glioma**
- **Sphenoid dysplasia** (a type of bone deformity)
- Café-au-lait spots, neurofibromas, and other features.

Q13. Flapping tremors are seen in which condition?

- A. CO₂ retention
- B. Hepatic Encephalopathy
- C. Azotemia
- D. All of the above

Ans 13. Correct answer is D. **Flapping tremors** (also known as asterix) are most commonly associated with **Hepatic Encephalopathy**. However, they can also be observed in other conditions related to metabolic disturbances, such as **CO₂ retention** (in respiratory failure) and **Azotemia** (associated with renal failure).

Q14. Presence of AF leads to predisposition to?

- A. Embolism
- B. Heart Failure
- C. Both A and B
- D. None

Ans 14. Correct answer is C. The presence of Atrial Fibrillation (AF) leads to a predisposition to both embolic events (such as stroke) and heart failure. AF increases the risk of thrombus formation in the atria due to irregular blood flow, which can lead to embolic strokes. It can also contribute to heart failure due to the loss of effective atrial contraction and rapid ventricular rates.

Q15. Investigation of Choice in Deep Vein thrombosis?

- A. CTPA
- B. Venous Doppler
- C. Arterial Doppler
- D. Lung perfusion Scan

Ans 15. Correct answer is B. The **investigation of choice for diagnosing Deep Vein Thrombosis (DVT)** is **Venous Doppler ultrasound**. This non-invasive imaging technique is highly effective in visualizing venous structures and identifying the presence of thrombus in the deep veins.

Q16. Management of Choice in case Acute Anterior wall MI is?

- A. Reteplase
- B. Streptokinase
- C. Angioplasty
- D. Antiplatelet therapy only

Ans 16. Correct answer is C. The **management of choice for Acute Anterior Wall Myocardial Infarction (MI)** is **Angioplasty** (percutaneous coronary intervention, PCI), especially when it can be performed promptly. Angioplasty aims to restore blood flow to the affected area of the heart and is often preferred over thrombolytic therapy in cases of ST-elevation myocardial infarction (STEMI).

Q17. Amiodarone induced thyroid disease includes?

- A. Hypothyroidism
- B. Hyperthyroidism
- C. Both A and B
- D. None

Ans 17. Correct answer is C. **Amiodarone-induced thyroid disease** can cause both **hypothyroidism and hyperthyroidism**. Amiodarone contains a high amount of iodine, which can disrupt normal thyroid function, leading to these conditions.

Q18. Beck's triad does not include

- A. Tachycardia
- B. Increase JVP
- C. Muffled heart sounds
- D. Pulsus paradoxus

Ans 18. Correct answer is A. **Beck's triad** is a classic clinical finding associated with **cardiac tamponade** and includes the following three signs:

1. **Increased JVP** (Jugular Venous Pressure)
2. **Muffled heart sounds**
3. **Hypotension** (not tachycardia)

Q19. Rosuvastatin inhibits which enzyme?

- A. Carnitine Acyl transferase
- B. Transglucosylase
- C. Catalase
- D. HMG CoA reductase

Ans 19. Correct answer is D. **Rosuvastatin** inhibits **HMG-CoA reductase**, which is the rate-limiting enzyme in the cholesterol biosynthesis pathway. By inhibiting this enzyme, rosuvastatin effectively reduces cholesterol levels in the blood.

Q20. Glycopeptides include all of the following except?

- A. Vancomycin
- B. Dalbavancin
- C. Capreomycin
- D. Oritavancin

Ans 20. Correct answer is C. Glycopeptides are a class of antibiotics that primarily include **Vancomycin, Dalbavancin, and Oritavancin**. **Capreomycin**, however, is not a glycopeptide; it is classified as an antibiotic that belongs to a different class (specifically, it is an aminoglycoside-like antibiotic used primarily for tuberculosis).

Q21. Drug associated with Optic Neuritis

- A. Rifampicin
- B. Pyrazinamide
- C. Isoniazid
- D. Ethambutol

Ans 21. Correct answer is D. The drug associated with **optic neuritis** is **Ethambutol**. Ethambutol is used in the treatment of tuberculosis and can cause retrobulbar optic neuritis, leading to visual disturbances.

Q22. Which anti-diabetic causes fungal UTI?

- A. Linagliptin
- B. Glimipride
- C. Insulin
- D. Dapagliflozin

Ans 22. Correct answer is D. **Dapagliflozin**, a sodium-glucose co-transporter 2 (SGLT2) inhibitor, is associated with an increased risk of fungal urinary tract infections (UTIs). This is due to its mechanism of action, which promotes glucose excretion in urine, creating an environment conducive to fungal growth.

Q23. All of the following drugs decreases Heart rate except?

- A. Neostigmine
- B. Atenolol
- C. Atropine
- D. Verapamil

Ans 23. Correct answer is C. **Atropine** is the drug that does not decrease heart rate; in fact, it typically increases

heart rate. Atropine is an anticholinergic agent that blocks the action of the vagus nerve on the heart, leading to increased heart rate.

The other options—**Neostigmine**, **Atenolol**, and **Verapamil**—are associated with decreased heart rate:

- **Neostigmine**: Increases acetylcholine, which can decrease heart rate through its action on the vagus nerve.
- **Atenolol**: A beta-blocker that decreases heart rate.
- **Verapamil**: A calcium channel blocker that decreases heart rate.

Q24. Hemochromatosis is associated with all except?

- A. High Ferritin
- B. Listeria infection
- C. Precocious Puberty
- D. Heart Failure

Ans 24. Correct answer is C. Precocious puberty is generally not a recognized feature of hemochromatosis. The endocrine complications of hemochromatosis can include hypogonadism, which may lead to delayed puberty, rather than precocious puberty.

Q25. Wilson's disease is due to defective?

- A. ATP7A gene
- B. ATP7B gene
- C. Both A and B
- D. None

Ans 25. Correct answer is B. **Wilson's disease** is due to a defect in the **ATP7B gene**. This gene is responsible for coding a protein that helps regulate copper transport in the body. A mutation in the ATP7B gene leads to excessive accumulation of copper, primarily in the liver and brain, resulting in the symptoms associated with Wilson's disease.

Q26. Cushing's disease is due to?

- A. Adrenal Hyperplasia
- B. Lung Cancer
- C. Pituitary Tumor
- D. Exogenous Steroids

Ans 26. Correct answer is C. **Cushing's disease** specifically refers to the condition caused by a **pituitary tumor** (usually a corticotroph adenoma) that secretes excess adrenocorticotropic hormone (ACTH), leading to increased cortisol production from the adrenal glands.

While Cushing's syndrome can be caused by adrenal hyperplasia, lung cancer (ectopic ACTH production), or exogenous steroids, **Cushing's disease** itself is directly linked to a **pituitary tumor**.

Q27. Criteria for defining AIDS includes CD4 count?

- A. <200
- B. <300
- C. <400
- D. <500

Ans 27. Correct answer is A. The criteria for defining **AIDS (Acquired Immunodeficiency Syndrome)** includes a **CD4 count of less than 200 cells/mm³**. This low CD4 count indicates severe immunosuppression, making individuals more susceptible to opportunistic infections and certain cancers.

Q28. Organ transplant patient should receive which drug for CMV prophylaxis?

- A. Acyclovir
- B. Valganciclovir
- C. Amantadine
- D. Rotinavir

Ans 28. Correct answer is B. Organ transplant patients should receive **Valganciclovir** for cytomegalovirus (CMV) prophylaxis. Valganciclovir is an antiviral medication that is effective in preventing CMV infection in high-risk transplant recipients.

Q29. CA cervix is due to HPV genotypes?

- A. 11, 16
- B. 11, 18
- C. 16,18
- D. 18,10

Ans 29. Correct answer is C. **Cervical cancer (CA cervix)** is primarily associated with **HPV genotypes 16 and 18**. These high-risk HPV types are known to cause the majority of cervical cancer cases worldwide.

Q30. Type of inheritance in MEN syndrome?

- A. AD
- B. AR
- C. XR
- D. XD

Ans 30. Correct answer is A, **Multiple Endocrine Neoplasia (MEN) syndrome** is inherited in an **autosomal dominant (AD)** pattern. This means that only one copy of the mutated gene from an affected parent can lead to the development of the syndrome in offspring.

Q31. Which hormone increases prolactin secretion?

- A. Dopamine
- B. TRH
- C. GnRH
- D. CRH

Ans 31. Correct answer is B. **Thyrotropin-releasing hormone (TRH)** increases prolactin secretion. While dopamine typically inhibits prolactin release, TRH stimulates the pituitary gland to release prolactin along with thyroid-stimulating hormone (TSH).