

NEET PG 2024 Memory Based Answer Key

- 1. (C) Fulguration** – Fulguration is commonly used endoscopically to destroy abnormal tissue using electric current. It is useful in certain urethral or bladder lesions visualized during cystoscopy. The procedure helps remove diseased tissue while minimizing bleeding.
- 2. (C) Cystine stones** – Cystine stones occur due to inherited defects in renal tubular amino acid transport causing cystinuria. Patients often present at a young age with recurrent colicky abdominal pain and hematuria. Urine microscopy classically shows hexagonal cystine crystals.
- 3. (B) Esophageal varices** – Esophageal varices are dilated submucosal veins usually caused by portal hypertension. They appear as tortuous bluish elevations on upper GI endoscopy. Rupture of varices can lead to life-threatening upper gastrointestinal bleeding.
- 4. (B) Renal cyst** – Renal cysts are fluid-filled sacs within the kidney and are often detected incidentally on imaging. Simple renal cysts are usually benign and asymptomatic. Large cysts may occasionally cause flank pain or obstruction.
- 5. (A) Torsion testis with gangrene** – Testicular torsion occurs due to twisting of the spermatic cord causing interruption of blood supply. Delayed presentation can result in gangrene and irreversible ischemic damage. Early surgical intervention within hours is crucial for testicular salvage.
- 6. (A) Phyllodes tumour** – Phyllodes tumor is a fibroepithelial breast tumor that can grow rapidly and attain large size. Histologically it shows leaf-like stromal projections. Although many are benign, some may behave aggressively or recur after excision.
- 7. (C) 120–130 mmHg** – VAC dressing or negative pressure wound therapy commonly uses suction pressure around 120–130 mmHg. The negative pressure removes exudate, improves circulation, and promotes granulation tissue formation. It is widely used for chronic and complex wounds.
- 8. (A) Nissen's fundoplication** – Nissen fundoplication is a surgical procedure used for treatment of severe gastroesophageal reflux disease. The gastric fundus is wrapped around the lower esophagus to strengthen the lower esophageal sphincter. It helps reduce reflux symptoms and prevent complications.
- 9. (C) Testicular vein** – Testicular veins drain venous blood from the testes and are important structures encountered during inguinal surgeries. In congenital inguinal hernia operations, preservation of cord structures is essential. Injury may compromise testicular vascular drainage.
- 10. (C) Edge biopsy** – Edge biopsy is preferred in chronic ulcers because the junction between normal and abnormal tissue contains the highest diagnostic yield. It helps detect malignancy or chronic inflammatory changes. Proper biopsy technique improves histopathological accuracy.

- 11. (B) Inosculation** – Around the third day after skin grafting, graft survival depends mainly on inosculation. During this phase, vascular channels of the graft connect with recipient bed vessels. Successful vascular integration is essential for long-term graft viability.
- 12. (B) Venous ulcer** – Venous ulcers commonly occur around the medial malleolus due to chronic venous insufficiency. They are usually shallow, painful, and associated with edema and skin pigmentation. Compression therapy plays a major role in treatment.
- 13. (C) TSH & T4** – Thyroid swelling evaluation commonly begins with thyroid function tests including TSH and T4 levels. These tests help determine whether the thyroid gland is functioning normally. Further evaluation may require ultrasound or FNAC depending on findings.
- 14. (A) ROMOVAC** – Romovac is a closed suction drain commonly used after surgical procedures to prevent fluid accumulation. It helps reduce dead space and lowers the risk of postoperative infection. The system works using negative pressure suction.
- 15. (A) NADH dehydrogenase** – Rotenone inhibits Complex I or NADH dehydrogenase of the mitochondrial electron transport chain. This blocks electron transfer and reduces ATP generation. Severe poisoning may result in neurological and metabolic dysfunction.
- 16. (A) Pompe's disease** – Pompe disease is a glycogen storage disorder caused by acid maltase deficiency. Infants commonly present with cardiomegaly, hypotonia, muscle weakness, and hepatomegaly. Glycogen accumulation primarily affects cardiac and skeletal muscle tissue.
- 17. (A) Carnitine deficiency** – Carnitine deficiency impairs transport of long-chain fatty acids into mitochondria for beta oxidation. Patients develop exercise intolerance, muscle weakness, and fat accumulation within muscle fibers. Muscle biopsy often shows lipid vacuoles.
- 18. (A) Niacin** – Pellagra caused by niacin deficiency commonly presents with dermatitis, diarrhea, and dementia. Maize-based diets are deficient in bioavailable niacin and tryptophan. The rash typically affects sun-exposed areas such as face, neck, and hands.
- 19. (B) TMP** – Methotrexate inhibits dihydrofolate reductase, reducing tetrahydrofolate synthesis required for thymidylate formation. As a result, thymidine monophosphate production decreases impairing DNA synthesis. Rapidly dividing tissues like oral mucosa are commonly affected.
- 20. (A) Competitive inhibition** – Competitive inhibition increases K_m because substrate and inhibitor compete for the same active site. However, V_{max} remains unchanged since excess substrate can overcome inhibition. This is a classic feature of reversible competitive inhibitors.
- 21. Nicotinic acid** – Nicotinic acid commonly causes facial flushing due to prostaglandin-mediated vasodilation. It is used in treatment of hyperlipidemia because it lowers triglycerides and increases HDL cholesterol. Flushing can be reduced by taking aspirin before the dose.
- 22. Lipoprotein lipase deficiency** – Lipoprotein lipase deficiency causes impaired breakdown of triglyceride-rich lipoproteins leading to severe hypertriglyceridemia. Patients develop lipemic serum and elevated chylomicrons. Recurrent pancreatitis may occur in severe cases.

23. (B) Iron – Iron deficiency can produce anemia along with mucosal changes such as gum bleeding. Radiological findings like Frankel line may be associated with nutritional deficiencies affecting bone metabolism. Iron is essential for hemoglobin synthesis and oxygen transport.

24. Dihydrobiopterine reductase – Some cases of phenylketonuria occur despite normal phenylalanine hydroxylase activity due to tetrahydrobiopterin metabolism defects. Dihydrobiopterine reductase deficiency prevents regeneration of the required cofactor. This leads to elevated phenylalanine levels and neurological manifestations.

25. (A) Fibrillin 1 – Marfan syndrome is caused by mutation in the fibrillin-1 gene affecting connective tissue integrity. Patients commonly have tall stature, arachnodactyly, increased arm span, and lens subluxation. Cardiovascular complications like aortic aneurysm are major concerns.

26. Iron deficiency anemia – Iron deficiency anemia presents with low MCV indicating microcytic hypochromic anemia. Increased TIBC reflects elevated transferrin levels attempting to bind more iron. Common symptoms include pallor, weakness, and easy fatigability.

27. (A) Formic acid + Lactic acid – Methanol metabolism produces toxic metabolites such as formic acid and lactic acid. Formic acid is particularly responsible for optic nerve toxicity and metabolic acidosis. Severe poisoning can lead to blindness and death if untreated.