

In the Gell and Coombs classification of hypersensitivity reactions this is an example of a:ia

- A. Type I reaction
- B. Type II reaction
- C. Type III reaction
- D. Type IV reaction

17) Which one of the following causes of primary immunodeficiency is a T-cell disorder?ia

- A. Chediak-Higashi syndrome
- B. Chronic granulomatous disease
- C. DiGeorge syndrome
- D. Wiskott-Aldrich syndromeia

18) A 25-year-old woman is evaluated after a recent complain of hirsutism, irregular menses. She has no desire to be pregnant at this time. She takes no medications. On physical examination, she is afebrile, her blood pressure is 110/60 mmHg, pulse rate is 68/min, and respiratory rate is 16/min. BMI is 37. Coarse hair is noted on the chin, jawline, and periumbilical area. Routine laboratory results are normal. Blood sample is obtained for hormonal determination of specific enzymes. What is the most appropriate enzyme level?

- A. High concentration of 17-hydroxyprogesterone.
- B. Low concentration of ACTH level.
- C. Low concentration of androstenedion.
- D. Increased serum cortisol level.

19) A 16-year-old, previously healthy female Presents with acne, hirsutism, and irregular menses. Her pubertal history reveals breast development at 9 years of age and pubic hair development at 7 years of age, and she reported 1 episode of vaginal spotting at approximately 11.5 years of age. After several investigations and genotyping, she is diagnosed as non-classical form of 21 hydroxylase deficiency. All of the following is false regarding this condition except:

- A. Autosomal recessive condition
- B. Oral glucose tolerance test is the gold standard for diagnosis
- C. 9 α -fludrocortisone acetate should be administered immediately.
- D. No role for steroids in this condition.

20) A 33-year-old male was referred with poorly controlled hypertension. He gave no other past medical or family history. Despite therapy with multiple agents, blood pressure was poorly controlled at 200/130 mm/Hg. Initial investigations which

included renal ultrasound, magnetic resonance angiography and urine catecholamine excretion were all negative. Plasma aldosterone was suppressed with elevated 11-deoxycorticosterone level (DOC). Adrenal CT scan was normal. However, a subsequent urinary steroid metabolite profile revealed a pattern consistent with late onset 11-beta hydroxylase deficiency. Which gene is likely affected?

- A. CYP11B1
- B. HFE
- C. StAR
- D. CFTR

21) A 45-year-old female with nephrotic syndrome develops renal vein thrombosis. What changes in patients with nephrotic syndrome predispose to the development of venous thromboembolism?

- A. Reduced excretion of protein S
- B. Loss of antithrombin III
- C. Reduced excretion of protein C
- D. Loss of fibrinogen

22) Most common genes mutations in thrombophilia is all EXCEPT

- A. Factor V Leiden mutation
- B. Anti thrombin III gene mutation
- C. Prothrombin 20210 gene mutation
- D. MPL gene mutation

23) Thrombophilia characterized by :

- A. Occur at any age
- B. Recurrent miscarriage
- C. Arterial thrombosis common than venous thrombosis
- D. Female affected more than male

24) Antiphospholipid antibody disease has increased level of

- A. Lupus anticoagulant.
- B. Anticardiolipin antibodies
- C. PTT
- D. All of above

25) Factor V Leiden mutation leading to

- A. Activated protein C resistance
- B. Activated protein S resistance

- C. Factor V deficiency
- D. PTT prolongation

26) **Acquired causes of hypercoagulability include:**

- A. Obesity.
- B. Varicose vein.
- C. Contraceptive pills
- D. All of the above

27) **A 50-year-old woman presents with a complaint of lethargy, feeling unwell and right upper quadrant abdominal discomfort. On history it was found out that she does not have addiction of alcohol or any intravenous drugs. She has never received a transfusion, has no tattoos. On physical examination, her BMI is 33 kg/m². Abdominal examination reveals slight enlargement of liver but no tenderness. Laboratory studies reveal the following: random blood glucose: 250 mg/dL, albumin: 4.2 g/dL, bilirubin: 1.0 mg/dL, alkaline phosphatase: 188 U/L, AST: 150 U/L, ALT: 160 U/L. Past history is suggestive of similar liver enzyme levels 2 years back also. Ultrasonography demonstrates increased echogenicity of the liver and biliary tract is normal. Liver biopsy demonstrates microvesicular and macrovesicular steatosis, scattered polymorphonuclear leukocytes, and Mallory's hyaline, and a mild increase in portal and lobular fibrosis. Iron stains are negative. What is best suitable management for this patient?**

- A. Gradual weight loss and close monitoring for disease progression
- B. Venesection
- C. Liver transplantation
- D. Prednisone

28) **Vascular remodeling is an active process of structural change that involves**

- A. Cell death.
- B. Cell migration.
- C. The synthesis or degradation of extracellular matrix.
- D. All of the above.

29) **The main effector of the RAAS in the homeostatic regulation of the cardiovascular system and in the pathogenesis of cardiovascular disease.**

- A. Angiotensin I
- B. Angiotensin II
- C. Renin
- D. Aldosterone

30) Regarding the pathogenesis of non alcoholic steatohepatitis the following factors are associated with disease progression or advanced fibrosis:

- A. Body mass index (BMI) ≥ 28 kg/m²
- B. Higher visceral adiposity index, which takes into account waist circumference, BMI, triglycerides, and high-density lipoprotein level
- C. Older age
- D. All of the above

QUESTION 2: SHORT ESSAY QUESTIONS (9 SUBQUESTIONS), ALL QUESTIONS MUST BE ANSWERED, (45 MARKS, 5 MARKS FOR EACH QUESTION)

1. Diet and dyslipidemia in patients with diabetes
2. Mention types of immunologic tissue injury in systemic lupus erythematosus (SLE)?
3. Enumerate FOUR effects of insulin resistance on lipid metabolism.
4. Mention congenital causes of thrombophilia
5. Enumerate lipid lowering drugs and its mechanism of action and target organ of action
6. Enumerate long term complications of congenital adrenal hyperplasia?
7. Enumerate FOUR neurodegenerative diseases caused by apoptosis
8. Pharmacological therapy for non alcoholic steatohepatitis (NASH)
9. Mention types of vascular remodeling

GOOD LUCK