

Sample Written Exam – Pediatrics

Question 1

You are following a 6-year-old boy for iron deficiency anemia. Two months after initiation of therapy (6 mg/kg/day of elemental iron), there has been minimal improvement in the hemoglobin and ferritin levels despite adequate adherence. Findings on history and physical examination are normal. What is the **MOST** appropriate investigation to perform **NEXT**?

- a. ***serology for anti-tissue transglutaminase levels (CORRECT ANSWER)**
- b. upper gastrointestinal (GI) series with small bowel follow-through
- c. upper endoscopy
- d. bone marrow aspirate

Question 2

What is the **MOST** common long-term sequela of bacterial meningitis in a child?

- a. seizure disorder
- b. intellectual disability
- c. ***hearing loss (CORRECT ANSWER)**
- d. hemiparesis

Question 3

You are caring for a 14-year-old adolescent boy with trisomy 21. Which of the following tests is **MOST** appropriate to order on an annual basis, as part of the regular health supervision for this adolescent?

- a. ECG
- b. ***thyroid function (CORRECT ANSWER)**
- c. sleep oximetry
- d. x-rays of the cervical spine

Question 4

A term infant is born to a mother who is receiving methadone. Which of the following is a sign of neonatal abstinence syndrome?

- a. lethargy
- b. ***sneezing (CORRECT ANSWER)**
- c. hyporeflexia
- d. constipation



Question 5

A 10-year-old boy has a history of hyperactivity, declining school performance and daytime sleepiness. Which of the following investigations will lead to the **MOST** likely diagnosis?

- a. computed tomography scan of the head
- b. electroencephalogram
- c. neuropsychological testing (psychoeducational testing)
- d. ***overnight polysomnogram (CORRECT ANSWER)**

Question 6

A previously healthy 2-year-old boy presents to the emergency department with a 1-day history of vomiting and diarrhea. On arrival, he is lethargic, and his serum glucose level is 2 mmol/L. His condition improves with IV dextrose. Which of the following results would best support your **MOST** likely diagnosis?

- a. low serum growth hormone level
- b. elevated serum insulin level
- c. positive urine test for reducing substances
- d. ***elevated urinary ketone level (CORRECT ANSWER)**

Question 7

A 12-year-old girl presents with a 3-week history of fever, malaise, and polyarthralgia. On examination, her temperature is 37.6°C, blood pressure and joint examination are normal, but she is pale. Her urinalysis shows a trace of blood and protein. Her WBC is $3.0 \times 10^9/L$, neutrophils 92%, lymphocytes 4%, monocytes 4%, hemoglobin 105 g/L. Her platelet count is normal, ESR is 50 mm/h, and serum creatinine level is 59 $\mu\text{mol/L}$. What is the **MOST** likely diagnosis?

- a. acute poststreptococcal glomerulonephritis
- b. ***systemic lupus erythematosus (CORRECT ANSWER)**
- c. acute rheumatic fever
- d. systemic-onset juvenile idiopathic arthritis

Question 8

A 4-year-old boy was admitted with a *Staphylococcus aureus* pneumonia. He subsequently developed a lung abscess. His past history includes admission to hospital for pneumonia at 18 months of age, and stomatitis complicated by facial impetigo at 3 years of age. He also has a history of recurrent mouth ulcers. Which component of his immune system is **MOST** likely affected?

- a. complement
- b. T cells
- c. ***granulocytes (CORRECT ANSWER)**
- d. B cells



Question 9

A 7-year-old girl presents with a 5-day history of a rash on her left thigh consistent with erythema migrans. She is well and afebrile, with an otherwise normal physical examination. She had been camping in a Lyme disease-endemic area 2 weeks previously, but there is no history of a tick bite. What is your **NEXT** step in management?

- a. ***prescribe a 14-day course of oral amoxicillin (CORRECT ANSWER)**
- b. request serodiagnostic testing for *Borrelia burgdorferi*, and if positive, start amoxicillin treatment
- c. request serodiagnostic testing for *Borrelia burgdorferi*, and if positive, request confirmatory assay and if positive, start amoxicillin treatment
- d. prescribe a 14-day course of IV ceftriaxone

Question 10

Which of the following conditions can be diagnosed through chromosomal microarray testing?

- a. ***22q11 deletion syndrome (CORRECT ANSWER)**
- b. fragile X syndrome
- c. myotonic dystrophy
- d. Prader-Willi syndrome

Question 11

A newborn presents with cyanosis. His chest x-ray shows an enlarged heart with decreased pulmonary vascular markings. What is the **MOST** likely diagnosis?

- a. ***tetralogy of Fallot (CORRECT ANSWER)**
- b. transposition of the great vessels
- c. total anomalous venous return
- d. truncus arteriosus