

- a) Tracking cellular processes and biomolecules
 b) Synthesizing novel polymers
 c) Studying ancient fossils
 d) Developing targeted drug delivery systems
- (ix) Select the key feature of prion diseases that makes them unique among neurodegenerative disorders?
 a) Amyloid plaque formation
 b) Inflammation in the brain
 c) Infectious transmission
 d) Neuronal cell loss
- (x) Glucose-6-phosphate deficiency is an inherited disorder that primarily affects which organ or system in the body?
 a) Kidneys
 b) Nervous system
 c) Red blood cells
 d) Liver
- (xi) Identify the clinical feature of kwashiorkor
 a) Edema
 b) Hepatomegaly
 c) Muscle Wasting
 d) All of these
- (xii) Elevated levels of Interleukin-6 (IL-6) are often observed in various inflammatory conditions. Which of the following diseases is NOT associated with increased IL-6 levels?
 a) Crohn's disease
 b) Multiple sclerosis
 c) Chronic obstructive pulmonary disease (COPD)
 d) Inflammatory bowel disease (IBD)
- (xiii) Interleukins are signaling molecules that play a vital role in immune responses. Identify which Interleukin is associated with promoting inflammation and fever during infections?
 a) Interleukin-1 (IL-1)
 b) Interleukin-6 (IL-6)
 c) Interleukin-10 (IL-10)
 d) Interleukin-13 (IL-13)
- (xiv) Tell the clinical condition is characterized by a significant increase in CRP levels, serving as an important biomarker for monitoring disease activity?
 a) Osteoporosis
 b) Rheumatoid arthritis
 c) Glaucoma
 d) Type 2 diabetes
- (xv) This can be the first indication that PEM has led to the permanent damage to the brain
 a) low birth weight
 b) premature birth
 c) a reduced circumference of the head
 d) slowed reflexes during birth

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define B-type natriuretic peptide and its clinical significance (3)
3. Apply the biochemistry involved in Alzheimer's disease (3)
4. Write the clinical significance of HbA1c Test. (3)
5. Justify the clinical significance of Tumor Necrosis Factor- α (3)
6. Calculate the urea blood clearance using the provided values for urea concentration in urine (3)
 1500 mg/dL, urine flow rate (2.5 mL/min), and urea concentration in blood 50 mg/dL).
 Evaluate the calculated clearance value alongwith BUN and explain its significance in assessing kidney function.

OR

A 60-year-old patient with a history of hypertension and diabetes presents with edema, high (3) blood pressure, and changes in urine color. What specific kidney function tests would you recommend for this patient, and how can these tests help diagnose and manage their condition?

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Illustrate n the neurobiochemistry involved in Parkinson's diseases (5)
8. Name two neurological disorders and illustrate its clinical significance (5)
9. Apply the serum creatinine by Jaffes colorimetric method (5)
10. Define CRP and evaluate its associated tests involved. (5)
11. Correlate the significance of Hypertension and Diabetes (5)
12. Elaborate the clinical manifestation of Liver disease (5)

OR

Examine the clinical features of Chronic Hepatitis (5)

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