# Azra Naheed Medical College

**Hematopoietic System (31 Jan 2019)**

**(MBBS. 4th Year)**

## (Pathology-Subjective Part)

**Time Allowed: 60 min** **Total Marks: 30**

Obtained Marks: _____

Q1-A 20 year old female comes to the hospital with the complaints of weakness, lethargy & shortness of breath on exertion

On examination:

Pallor +, Pulse 100/min, Bp 100/80mmHg

Hb 10g/dl TLC 4000/mm3 plt 200,000/mm3

MCV 65fl MCH 30

1. What is the diagnosis?
2. What is the diagnostic approach to this condition? 02
3. What are the causes of this condition? 02

Q2- a 40 years old female comes to the hospital with the complaints of numbness in the right hand & tingling sensations in the finger. She is purely vegetarian for 2 years.

Lab investigations show:

Hb 11g/dl, MCV 110fl, TLC 5000/mm3

1. What is the diagnosis?
2. What are the causes of this condition? 02
3. What investigation needs to be done? 02

Q3- A mother brings a one year old baby boy to the hospital. She complaints of poor feeding irritability, & wealness.

ON EXAMINATION: PALLOR + BOSSING OF SKULL

HB 4G/DL MCV 45FL

SERUM IRON NORMAL

SERUM FERRITIN NORMAL

1. What is the diagnosis? 02
2. What is the confirmatory test? 01
3. What happens to Total Iron binding capacity (TIBC)? 02

Q4- A 38 year old man presents with a few tender, rubbery lymph cervical lymph node limited to the neck.

1. What is the appropriate investigation to perform after a full physical exam? 01
2. What is the clinical difference between Hodgkin & non Hodgkin lymphoma? 03
3. What are the morphological features of the hallmark cells seen on biopsy? 01

Q5- A 12years old girl comes to emergency with the complaint of severe pain in the back & abdomen. He also c/o of excessive fatigue & repeated infections
On examination: leg ulcer & leg tenderness
Labs show: Hb low MCV normal MCH normal. Peripheral picture shows abnormal cells which look like spindles

1. What is the diagnosis? sickle cell Anemia 01
2. What are the causes? GA replaced by Valine on chr. 6 → point mutation 02
3. Classify hemolytic anemias. 02

Q6- A 60yrs old female presents with bone pain & generalized weakness. On investigation she has hypercalcemia & also features of renal failure. Protein electrophoresis shows monoclonal immunoglobulin spike (M protein) Urinalysis shows Ig light chains (Bence Jones protein)

What is the diagnosis? multiple myeloma 01
What can be probable radiological findings? 02
What is the particular cell seen on the biopsy & its morphological feature? 02

(1)
- Punched out lesion
  - → skull
  - spine
  - Pelvis
(2) Osteopenia
(3) Plasmacytoma
(4) Sclotic le

- plasmablast → multinuc. Prom. nucleo
  - vesicular nuclear chromatin
  - Prom. single nucleolus
  - Bizarre - multi-nuc. cells.
- Flame cells
- Mott cells
- Dutcher bodies
- Russel bodies

Hemolytic Anemia

Intracapsular

Extracapsular

1. Antibody mediated
2. mechanical trauma to rect cell
3. Infection

I) Hereditary
- Enzyme def
- membrane abnormality
- Disorders of hb synthesis

Anemia of chronic disease (MCV ↓ 80) such as
Aplastic (MCV 80-100)