

## All questions should be answered

١- interpret the following data and what the next test must be done? (٤marks)

Subject .Dog,male,٨ weeks old

Presenting problem . pallor for several days

Laboratory findings

### ١-Blood cytology

PCV	١٣%	(N.٣٧-٥٥).
HB	٣,٩g/dl	(N.١٢-١٨).
RBC	١,٥٩x ١٠ <sup>٦</sup> /μL	(N.٥,٥-٨,٥)
MCV	٨١,٧fl	(N.٦٠-٧٧).
MCH	٢٤,٥Pg	(N١٩,٥-٢٤,٥)
MCHC	٣٠,٠ g/dl	(N ٣٢-٣٦ ).

Polychromasia, anisocytosis.

Reticulocytes	١٦,٦%	(N ٠-١,٥)
NRBC	٣/١٠٠٠WBC	(N.٠ )
Platelets	١٢x١٠ <sup>٩</sup> / μL	(N٢-٩ )
WBC	١٧,٥٠٠٠/μL	(N ٦,٠٠٠-١٧,٠٠٠)
Seg.neutrophils	٧٨%	(N ٦٠-٧٧ )
Band neutrophils	٠%	(N ٠-٣ )
Lymphocytes	١٥%	(N ١٢-٣٠ )
Monocytes	٣%	(N٣-١٠ )
Eosinophils	٤%	(N ٢-١٠ )

### ٢- Blood chemistry

Plasma. Clear, colourless
Plasma protein ٤,١ g/dl
(N ٦-٧,٥ )

### ٢-Write full account on

(٦marks)

a-Identification and classification of acute leukemia.

b-Identify general categories or processes that cause thrombocytopenia

c-Different classifications of anemia

d-comparison between erythroleukemia and leukoerythroblastic reaction

### ٣-Short account on

(٦marks)

a-shift to left

b-copper poisoning in sheep

c-lead poisoning in pigs

d-intravascular hemoglobin catabolism

٤-laboratory findings expected in veterinary patients with the following conditions

(٥marks)

a-AID

B-Multiple myeloma

c-Polycythemia vera

d-lymphoma

d-Megaloblastic anemia

باقى الأسئلة بالخلف

**٥-Choose the correct answer**

(٤ marks )

**١. Which of the following tests is the most effective means of assessing red cell generation in response to anemia?**

- a. Red blood cell distribution width
- b. Reticulocyte count
- c. Platelet count
- d. CBC

**٢. Qualitative abnormalities in the white cell include all except which of the following:**

- a. Toxic granulation
- b. hypersegmentation
- c. Gaucher's cells
- d. Dohle bodies

**٣. Which red cell inclusions originate as a result of denatured hemoglobin?**

- a. Howell-Jolly bodies
- b. Heinz bodies
- c. Pappenheimer bodies
- d. Malarial parasites

**٤. Which of the following is most often associated with acute leukemia?**

- a. Erythrocytosis and thrombocytosis
- b. Neutropenia and thrombosis
- c. Anemia and thrombocytopenia
- d. Lymphocytosis and thrombocythemia

**٥. Which enzyme activities induced by heme concentration?**

- a. pyruvate kinase
- b. acid phosphatase
- c-ferroxidase
- d-aminolevulinic acid synthetase

**٦. Which cytochemical reaction is most helpful in identifying the blasts in acute monoblastic leukemia?**

- a. Nonspecific esterase
- b. myeloperoxidase stain
- c. PAS
- d. Acid phosphatase

**٧. In which of the following conditions will monocytes be increased?**

- a. Tuberculosis
- b. Parasitic infections
- c. Ulcerative colitis
- d. Recovery phase of infection

**٨. All of the following conditions will produce a thrombocytopenia except:**

- a. Post transfusion
- b. Iron Deficiency Anemia
- c. Splenomegaly
- d. Chemotherapy

GOOD LUCK  
PROF.DR A. MOKHBATLY