

M.D. DEGREE EXAMINATION

BRANCH III – PATHOLOGY

**PAPER IV – IMMUNOPATHOLOGY, HAEMATOLOGY, PRINCIPLES
AND APPLICATION TO TECHNOLOGICAL ADVANCES
IN LABORATORY SERVICES**

Q.P. Code: 202013

Time : Three Hours

Maximum : 100 Marks

I. Essay: **(2 x 15 = 30)**

1. Discuss in detail about the genetic and molecular classification of Acute myeloid leukemia and their prognostic significance.
2. Discuss about quality control in Hematology lab.

II. Write Short Notes on: **(10 x 5 = 50)**

1. Stellate scar in pathology
2. Gene therapy
3. TRAP test
4. Use of Elastin stains in HPE.
5. Squash cytology – CNS
6. Minimal residual disease in leukemia
7. LJ chart
8. Telescoped urinary segments
9. Photography of grossing
10. JAK – 2 mutations

(2)

III. Reasoning Out:

(4 x 5 = 20)

1. A 40 year old male presented with painless cervical and axillary lymphadenopathy. Lymph nodes are Rubbery in consistency. He had fever and weight loss of more than 6 kg. No peripheral lymphadenopathy present.
 - a) What is the most probable diagnosis?
 - b) How do you classify based on morphological and immunophenotype?
 - c) How do you stage the disease?
 - d) Which is the type associated with HIV and EBV respectively?
 - e) What are the therapy related malignancies associated with?

2. A 50 year old female came with complaints of swelling in left breast. The lump occupies all quadrants and engorged veins are seen in the overlying skin of the tumour. Tumour measures 15cm in diameter. FNAC discloses spindle cell proliferation with scant duct epithelial cells.
 - a) What is your probable diagnosis?
 - b) What is your differential diagnosis?
 - c) What is the significance of proliferative marker?
 - d) How will you grade based on Bethesda system?

3. A 40 year old male with anterior mediastinal mass, presented with Myasthenia gravis.
 - a) What is your probable diagnosis?
 - b) What are the Hematological diseases associated with this tumour?
 - c) What is the thyroid disease associated with this tumour?
 - d) How do you classify this tumour?

4. A 40 year old female presented with pin point hemorrhages in thighs and lower limbs with a previous episode of nasal bleeding and dysfunctional uterine bleeding. Peripheral smear revealed thrombocytopenia with giant platelets. Bone marrow discloses increased megakaryocytes. PT and APTT were normal. Discuss the pathogenesis involved?
