

SEC
MEDICAL DIAGNOSTICS

THEORY

(Credits 3)

Unit 1:

Introduction to medical diagnostics and its importance.

Blood composition; preparation of blood smear and Differential Leucocyte Count (D.L.C) using Leishman's stain; platelet count using haemocytometer; Erythrocyte Sedimentary Rate (E.S.R), Packed Cell Volume (P.C.V.); Urine analysis: physical characteristics; abnormal constituents.

Unit 2:

Causes, types, symptoms, complications, diagnosis and prevention of diabetes (Type I and Type II); hypertension (Primary and secondary); tuberculosis, hepatitis, dengue, malaria, Japanese encephalitis; testing of blood glucose using glucometer/Kit.

Unit 3:

Types of tumours (benign/malignant), detection and metastasis; medical imaging: X-Ray of bone fracture, PET, MRI and CT scan (using photographs).

SUGGESTED READINGS:

- **Godkar, P.B. and Godkar, D.P. 2021.** Textbook of Medical Laboratory Technology, II Edition, Bhalani Publishing House.
- **Kumar, V., Abbas, A.K. and Aster, J.C. 2020.** Robbins and Cortan Pathologic Basis of Disease, 10th Edition. Elsevier - Health Sciences Division.
- **Prakash, G. 2012.** Lab Manual on Blood Analysis and Medical Diagnostics, S. Chand and Co. Ltd.