NAN-003-038602 Seat No. _____

B. Voc. (MLMDT) (Sem. VI) (CBCS) Examination

March / April - 2017

MLMDT - 6.2 : Molecular Diagnostics

Faculty Code : 003

Subject Code : 038602

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All questions are compulsory.
(2) The paper is divided in two sections.
(3) Figures on right indicate marks

SECTION – I

1 Answer the following questions : **20**

(1) What is FRET?

(2) Give examples of target amplification technique.

(3) What is hybrid capture assay?

(4) Write the principle of SSP-PCR.

(5) Write the full name of ASO and its use.

(6) Write the principle of VNTR.

(7) Enlist the methods to measuring HIV RNA in plasma.

(8) Write the principle of virus neutralization test.

(9) Write the full name of NAAT with its use.

(10) What is the use of MGIT?

(11) What is line immunoassay?

(12) What is Marfan syndrome?

(13) What is Polygenetic disorder?

(14) What is Lipidosis?

(15) What is Thalassemia?

(16) What is Alzheimer disease?

(17) Enlist the parasites causing meningitis.

(18) Define: Haemoglobinopathies

(19) In which disease quantitative defect occur in α-chain?

(20) What is Cooley's anemia?

SECTION – II

2 (A) Answer in brief : (Any **3**) **3×2=6**

(1) Principle of Microarray analysis

(2) Write note on SNP.

(3) Enlist the gel-based genotyping methods

(4) Enlist the steps involve in SSP-PCR method

(5) Write the principle of HIV tri-dot

(6) Gold standard test for HSV infection

(B) Answer in brief : (Any **3**) **3×3=9**

(1) Enlist test included in Donor screening.

(2) Note on transcription based amplification method.

(3) Types of mutatuion detection methods

(4) High density oligonucleotide arrays

(5) IFA assay for HIV diagnosis

(6) Haemagglutination Inhibition for the diagnosis of Influenza virus

(C) Answer in brief : (Any **2**) **2×5=10**

(1) Discuss on different variants of PCR

(2) RFLP for detection of gene mutation

(3) Single strand conformational polymorphism

(4) Gold standard test for the diagnosis of HIV infection

(5) HPV load quantification technique.

3 (A) Answer in brief : (Any **3**) **2×3=6**

(1) Enlist the emerging rapid methods for diagnosis of Tuberculosis

(2) Principle of Indirect Fluorescent Antibody test for the diagnosis of malaria

(3) What is Tay-Sachs disease?

(4) What is Mucopolysaccharidoses?

(5) Complications in thalassemia

(6) Symptoms of meningitis

(B) Answer in brief : (Any **3**) **3×3=9**

(1) DNA microarray technique for the diagnosis of E.coli infection

(2) IGRA for the diagnosis of Tuberculosis

(3) What are the causes of Obesity?

(4) Write a short note on Hurler syndrome

(5) Pathophysiology of Alzheimer disease

(6) Sickle cell anemia

(C) Answer in brief : (Any **2**) **2×5=10**

(1) Pulsed-Field Gel Electrophoresis for the diagnosis of E.coli infection

(2) Write a note on Gaucher Disease

(3) Write a note on Diabetes as a Genetic Disease

(4) Parkinson's disease

(5) α-thalassaemia.