MAJ-003-001546 Seat No. _____

B. Sc. (Forensic Science) (Sem. V) (CBCS) Examination

October / November – 2016

FS-501 : Forensic Biology, Serology & Anthropology

Faculty Code : 003
Subject Code : 001546

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

Instructions : (1) This question paper contains three questions.
(2) All are compulsory.
(3) Draw neat and labelled diagrams wherever necessary.
(4) Figures to the right indicate marks.

1 Give the answer of following questions (one mark each) : **20**

(1) Who showed ESD for the 1st time?

(2) Estimation of age during intrauterine life from skeleton is possible only after _____ months.

(3) What is injury?

(4) What is WPA 1972 ?

(5) Cell wall of diatoms made up of _____ .

(6) Give the component of blood.

(7) Which component of semen is responsible for smell and flavor of semen?

(8) Define Vomit.

(9) Define Abrasion.

(10) What is Death?

(11) Give the full name of STR.

(12) How many percentages of people are ABO Secretors?

(13) How many bones are there in human body?

(14) Which base pairs are there in DNA?

(15) What is the function of PCR?

(16) Give the dental formula of Human child.

(17) What is Harakiri?

(18) Give the types of human teeth.

(19) Give the example of body fluids.

(20) Which tests are performed for the primary examination of blood in forensic laboratory?

2 Give the answers of following questions as per instruction :

(a) Write any **three** out of six : **6**

(1) Give the Composition of saliva.

(2) Give the characteristics causing change in color of urine.

(3) Name the grouping methods of fresh blood.

(4) Give the only name for the forensic analysis of semen.

(5) Detail the Kastle Mayer test for blood.

(6) What is the function of restriction enzyme and southern blotting in RFLP?

(b) Write any **three** out of six : **9**

(1) How estimation of saliva stain is done by starch-iodine test ?

(2) Explain urea nitrate and creatinine test for urine detection.

(3) Draw and label the structure of sperm cell.

(4) Explain the features of diatoms and its coloration.

(5) Cross section of hair.

(6) Define : Polymorphism and give five types of isoenzymes.

(c) Write any **two** out of five : **10**

(1) Write a note on electrophoresis.

(2) Use Karl Pearson's formula (i) Femur bone length = 45 cm (ii) Tibia bone length = 32 cm. Find the stature of the person.

(3) Explain Drowning.

(4) Write a note on diseases of teeth.

(5) Explain the abrasion injuries.

3 Give the answers of following questions as per instruction :

(a) Write any **three** out of six : **6**

(1) Give the detailing of AK kinase.

(2) Which things are include in wildlife?

(3) What is wildlife?

(4) Give the types of thermal injury.

(5) What are lacerated wounds?

(6) What findings will you notes in a typical hanging case? (2 points)

(b) Write any **three** out of six : **9**

(1) Describe the working of Agar gel electrophoresis

(2) Describe the superimposition technique

(3) Give the PM findings of Choking and Gagging

(4) Give the points of difference in Antemortem and postmortem abrasions

(5) Describe Canines and Premolars

(6) Give main features of lacerations.

(c) Write any **two** out of five : **10**

(1) Explain the confirmatory test for blood stains.

(2) Draw structure of hair and Differentiate Animal and Human hair.

(3) Brief introduction of diatoms and its forensic significance.

(4) Give the analysis technique of RFLP and its significance.

(5) How does PCR works?
