



NAN-003-001658 Seat No. \_\_\_\_\_

**B. Sc. (Forensic Sci.) (Sem. VI) (CBCS) Examination**

**March / April - 2017**

**FS-602 : Ballistic & Explosive**

**Faculty Code : 003**

**Subject Code : 001658**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

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

**1** Give the answers of following questions : **20**

- (1) Define ballistic.
- (2) Which are the subdivisions of forensic ballistic?
- (3) Define fire arm.
- (4) Drawbacks of wheel lock gun.
- (5) Classify the firearms on the basis of bore characteristics.
- (6) Give the name of parts of shotguns.
- (7) Equation for the barrel diameter on the basis of bore number.
- (8) What is the chocking?
- (9) Which component of firearm actuates the firing sequence of firearms?
- (10) The diameter of whole barrel is tapered at the muzzle end is called as \_\_\_\_\_
- (11) The content of potassium nitrate in the black powder is \_\_\_\_\_ %.
- (12) The black powder has shining surface due to the \_\_\_\_\_
- (13) Which component of propellant is known as gun cotton?
- (14) Define ignition time.
- (15) Define Yaw.

- (16) Full form of GSR.
- (17) Locard's principle.
- (18) Marks on Fired cartridge.
- (19) When GSR reacts with Di phenyl amine followed by con.  $H_2SO_4$  it gives \_\_\_\_\_ color of nitrate.
- (20) Define trigger.

**2** Give the answers of following questions as per instruction :

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

- (1) Explain muzzle loader.
- (2) Give the classification of breech loading shotgun family.
- (3) Define lands and grooves with figure.
- (4) How the paradox shotgun is different from simple shotgun?
- (5) Which types of choking are there according to degree of choking?
- (6) Define chamber and chamber cone.

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

- (1) Name of components of ballistic and define it.
- (2) Explain match lock action.
- (3) Explain twist and pitch and why rifling is necessary.
- (4) Semi automatic action of rifled fire arms.
- (5) Types of cartridge case on the basis of shape of cartridge case.
- (6) Draw the cartridge of rifled and smooth bore fire arm.

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

- (1) Explain any five parts of rifled fire arm.
- (2) Write a note on types of choking.
- (3) Explains the powder grains.
- (4) Explain heat problems observed during the study of internal ballistic.
- (5) How the structure of projectile affect the trajectory of projectile.

- 3** Give the answers of following questions as per instruction :
- (A) Write any **three** out of six : **6**
- (1) Composition of semi smokeless powder
  - (2) Explain: Boat tailed bullet
  - (3) What is ignition time and lock time?
  - (4) What is density of loading?
  - (5) What is the use of bore scope?
  - (6) Full name of: BIDAS and IBIS
- (B) Write any **three** out of six : **9**
- (1) Characteristics of exit wound of fire arm injury.
  - (2) Dry methods for the collection of GSR.
  - (3) Explain barrel fouling and how the magnitude of it can be reduced.
  - (4) Explain measurement and miscellaneous facts about recoil.
  - (5) Explain vacuum trajectory and list out those parameters which are used to determine the trajectory.
  - (6) Instrument used in examination of fire arm, projectile and cartridge case except IBIS and BDAS.
- (C) Write any two out of **five** : **10**
- (1) Write a note on BIDAS.
  - (2) Chemical test for the analysis of GSR.
  - (3) Determination of range of fire on the basis of characteristics of entry wound of shotgun firearm injury.
  - (4) Principle involved in the identification of firearms.
  - (5) Marks observed on fired cartridge case.
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