

B.Sc. Semester - 6 (CBCS) Examination**March/April -2020****BALLISTIC AND EXPLOSIVE (CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q1 (A) Answer in short: (04)

1. Define Ballistics.
2. Write the formula for calculation of caliber.
3. In which century were firearms first used?
4. Mention types of firearms based on barrel characteristics.

Q1 (B) Answer any one in brief: (03)

1. Explain the shotgun family in flow chart format.
2. Write about types of chokes based on degrees of choking.

Q1 (C) Answer any one in detail: (07)

1. Give the classification of firearms based on different characteristics.
2. Define twist and explain methods of rifling.

Q2 (A) Answer in short: (04)

1. Define ammunition.
2. What is a primer?
3. Give examples of double base smokeless powders.
4. What are cartridge cases for bullets made up of?

Q2 (B) Answer any one in brief: (03)

1. Write a brief note on cycle of operation.
2. Explain density of loading.

Q2 (C) Answer any one in detail: (07)

1. Explain spherical projectiles in detail.
2. Draw the flow chart for types of bullets.

Q3 (A) Answer in short: (04)

1. Define base drag.
2. What is drift?
3. What should be the velocity of a projectile for penetrating the skin?
4. Define ricochet.

Q3 (B) Answer any one in brief: (03)

1. Explain range.
2. Write a brief note on characteristics of entry wound.

Q3 (C) Answer any one in detail: (07)

1. What are the differences between entry and exit wounds?
2. Explain shotgun wounds.

Q4 (A) Answer in short: (04)

1. Which identification marks are found on bullets?
2. What is the full form of IBIS?
3. What is the function of BDAS?
4. What is range of firing?

Q4 (B) Answer any one in brief: (03)

1. Mention instruments used for analysis in Ballistics division and the respective uses.
2. What are the components of IBIS? Explain uses of each component in brief.

Q4 (C) Answer any one in detail: (07)

1. Explain about the marks on cartridge cases used for comparison.
2. Explain BDAS in detail.

Q5 (A) Answer in short: (04)

1. Define explosive.
2. What is the full form of ANFO?
3. What is the chemical name of RDX?
4. What is GSR composed of?

Q5 (B) Answer any one in brief: (03)

1. Explain Harrison and Gilroy's test.
2. What are the differences between High and Low explosives?

Q5 (C) Answer any one in detail: (07)

1. Explain explosion scene management.
2. Write a detailed note on collection of GSR.
