

Scientific Assistant (Ballistics)

1. Iron pyrite is used as an initiator in _____ firearm
 - (A) Wheel lock
 - (B) Flint Lock
 - (C) Match lock
 - (D) Breech loader
2. Grade size of propellant charge is designated as:
 - (A) Fg
 - (B) Ffg
 - (C) Fffg
 - (D) All of the above
3. In a firearm injury, there is burning, blackening, tattooing around the wound, along with cherry red colour of the surrounding tissues and is cruciate in shape, the injury is:
 - (A) Close shot entry
 - (B) Close contact exit
 - (C) Contact shot entry
 - (D) Distant shot entry
4. During a flight of projectile, drop is determined by:
 - (A) $D = \frac{1}{2}gt^2$
 - (B) $g = Dt$
 - (C) $D = 2gt$
 - (D) None of the above
5. Tandem bullet is also called as :
 - (A) Explosive bullet
 - (B) Dumdum bullet
 - (C) Piggy tail bullet
 - (D) Frangible bullet
6. In .25 ACP firearm, ACP means:
 - (A) Auto cycle pistol
 - (B) Automatic coil pistol
 - (C) Automatic colt pistol
 - (D) None of the above
7. Comparison Microscope is the combination of two _____ Microscope?
 - (A) Stereo
 - (B) Compound
 - (C) Composite
 - (D) None of the above

8. If weight and diameter of projectile is fluctuated, which of the following factors will be affected?
- (A) Velocity
 - (B) Air resistance
 - (C) Stability of bullet
 - (D) All of the above
9. The housing cavity for a cartridge in a firearm is known as:
- (A) Chamber
 - (B) Choke
 - (C) Cork
 - (D) Breech face
10. From the following which one is correct for LEAD styphnate:
- (A) derived from styphnic acid
 - (B) Lead 2,4,6-trinitroresorcinate, $C_6H_3N_3O_8Pb$
 - (C) Less sensitive secondary explosives
 - (D) All of the above
11. BDAS stands for:
- (A) Ballistic Data Acquiring System
 - (B) Ballistic Data Acquisition System
 - (C) Ballistic Data Analysing System
 - (D) Ballistic Data Analogizing System
12. A _____ is made up of hard tungsten core.
- (A) Tandem bullet
 - (B) Dumdum bullet
 - (C) Armour piercing bullet
 - (D) Jacketed bullet
13. Improved cylinder degree choking is similar to:
- (A) 3-5/1000 th of an inch
 - (B) 10/1000 th of an inch
 - (C) 20/1000 th of an inch
 - (D) None of the above
14. The percentage of the space in the cartridge case that is filled with powder is called as:
- (A) Load density
 - (B) Bulge density
 - (C) Complete density
 - (D) All of the above
15. Which of the following is not a Double base powder?
- (A) Cordite
 - (B) Modified Cordite
 - (C) RDX
 - (D) Ballistite

16. The action in which recoil operates the loading, locking and the firing mechanism of an automatic or semi- automatic firearm is known as:
- (A) Bolt action
 - (B) Lever action
 - (C) Hammer action
 - (D) Blow back action
17. Improvised shotguns are also known as:
- (A) Sniffer gun
 - (B) Zip Gun
 - (C) Carbine
 - (D) Improved gun
18. What are proof marks?
- (A) Certification marks on firearm
 - (B) Lands and grooves marks on bullet
 - (C) Slippage marks
 - (D) Firing pin marks
19. _____action gun do not have magazine.
- (A) Pump
 - (B) Break
 - (C) Bolt
 - (D) Lever
20. Which is non-destructive technique to analyze GSR?
- (A) ICP-AAS
 - (B) AAS
 - (C) GC-MS
 - (D) EDXRF
21. The ignition was initiated in match lock firearm through:
- (A) Muzzle end
 - (B) Chamber
 - (C) Flash pan
 - (D) None of the above
22. The first step when cleaning a firearm is:
- (A) run a bore brush with a light coating of gunpowder solvent through the barrel.
 - (B) run a cloth patch with a light coating of gunpowder solvent through the barrel.
 - (C) wipe the outside with a clean cloth and then apply a light coat of gun oil to the outer metal surface.
 - (D) make sure the firearm is unloaded and prove it safe.
23. Which bullet cause fragmentation of bullet when strikes to the body:
- (A) Rubber bullet
 - (B) Explosive bullet
 - (C) Boat tailed bullet
 - (D) Jacketed bullet

24. A circular groove or fluting on the circumference of a bullet for better bullet case grip is called as:
- (A) Cap
 - (B) Cracker
 - (C) Cannelure
 - (D) Chamber
25. Spread of pellets in shotgun depends upon:
- (A) Barrel dimension
 - (B) Amount of choke
 - (C) Construction of barrel
 - (D) All of the above
26. The constriction of bore near muzzle end of shotgun is called as:
- (A) Choke
 - (B) Cork
 - (C) Cylinder
 - (D) None of the above
27. AK-56 was manufactured in:
- (A) Germany
 - (B) China
 - (C) Israel
 - (D) Nepal
28. Which component of firearm actuates the firing sequence of firearms?
- (A) Hammer
 - (B) Chamber
 - (C) Trigger
 - (D) Magazine
29. Air Cushion Wads are the part of _____ cartridge case?
- (A) Shotgun
 - (B) Rifle
 - (C) Both (A) & (B)
 - (D) None of the above
30. Direction of Rifling is demonstrated as :
- (A) Twist
 - (B) Pitch
 - (C) Depth
 - (D) Shape

31. Density of loading is calculated by the formula:
- (A) $S=V/M$
 - (B) $S=v/V \times 100$
 - (C) $V= S/100$
 - (D) $V/v=S \times 100$
32. Which bullet has no penetrating capacity:
- (A) Lead bullet
 - (B) Dumdum bullet
 - (C) Rubber bullet
 - (D) Explosive bullet
33. The cartridge where, excluding bullet, every part consumed in firing process is called as :
- (A) Case cartridge
 - (B) Case less cartridge
 - (C) Chilled cartridge
 - (D) Cap cartridge
34. In shot gun cartridge ignition is _____ ignition.
- (A) Rim fire
 - (B) Pin fire
 - (C) Centre fire
 - (D) None of the above
35. Which bullet starts fire on striking the target?
- (A) Stream lined bullet
 - (B) Incendiary bullet
 - (C) Boat-tailed bullet
 - (D) All of the above
36. Which of the following component is NOT found in a centre fire rifle cartridge?
- (A) case
 - (B) wad
 - (C) powder
 - (D) primer
37. Flute marks or annular ring marks are classified for:
- (A) Firing pin mark
 - (B) Breech face marks
 - (C) Chamber marks
 - (D) Extractor

38. A curved steel strip which protects the trigger from accidental pulling is very well known as :
- (A) Sear
 - (B) Stock
 - (C) Grip
 - (D) Trigger guard
39. Muzzle imprint on around the entry wound is clear indication of :
- (A) Contact fire
 - (B) Near Distance fire
 - (C) Close distance fire
 - (D) All of the above
40. Change in striking angle of projectile is due to air resistance with its horizontal axis of fire is:
- (A) Jump
 - (B) Yaw
 - (C) Trajectory
 - (D) None of the above
41. The weapon in which the compressed air used to propel out the projectile is:
- (A) Air gun
 - (B) Pistol
 - (C) Machine gun
 - (D) LMG
42. Greiss test gives rose red colour for which of the following?
- (A) Nitrite
 - (B) Carbon
 - (C) Chlorate
 - (D) Barium
43. The black powder has shining surface due to the :
- (A) Powder glass
 - (B) Sulfure
 - (C) Graphite
 - (D) None of the above
44. To determine the gauge and length of the shell for a shotgun, look on the:
- (A) action
 - (B) barrel
 - (C) stock
 - (D) recoil pad
45. Wild cat cartridge is type of :
- (A) Standard Cartridge
 - (B) Non-standard Cartridge
 - (C) Cat shaped cartridge
 - (D) None of these

46. Which of the following are assault rifles?
(A) AK-47
(B) Carbine
(C) AK-74
(D) Both a & c
47. _____ is used for spot testing of lead from GSR
(A) Price test
(B) Griess test
(C) Alpha beta test
(D) Sodium rhodizinate
48. Loading or unloading in a break frame revolver is carried out by the means of :
(A) Bolt
(B) Latch
(C) Cylinder
(D) Clamp
49. 12 bore shotgun has its bore diameter in _____ inches
(A) 0.777
(B) 0.662
(C) 0.729
(D) 0.550
50. In choke characteristics cylinder choke is similar to :
(A) 1mm
(B) 3mm
(C) 0.25 mm
(D) 0 mm
51. Stud guns are commonly known as :
(A) Revolver
(B) Rifle
(C) Cattle gun
(D) Improvised guns
52. Tattooing is also known as:
(A)Peppering
(B)Wipe ring
(C)Charring
(D)Blackening
53. In black powder Fg indicates :
(A)Fineness of grain
(B)Format of gun
(C)Fitness of grain
(D)None of the above

54. Cu shells are made up of :
- (A) Copper 70%, zinc 30%
 - (B) Brass 55%, zinc 45%
 - (C) Iron 60%, lead 40%
 - (D) None of the above
55. A device to link the striker and the trigger is:
- (A) Safety
 - (B) Sear
 - (C) Sling
 - (D) Sabot
56. During flight, the shifting of bullet from its nose on position is termed as :
- (A) Ricochet
 - (B) Yaw
 - (C) Both (A) &(B)
 - (D) Neither (A)nor(B)
57. Which of the following are considered as class characteristics of a fired bullet?
- (A) No. of lands and grooves
 - (B) Striation on the bullet
 - (C) Calibre of bullet
 - (D) Both (A) &(B)
58. The rearward movement of firearm, on firing is :
- (A) Jump
 - (B) Vibration
 - (C) Gas cutting
 - (D) Recoil
59. The highest point of trajectory is:
- (A) Elevation
 - (B) Vertex
 - (C) Impact
 - (D) Fall
60. Brass trax is used in IBIS to capture images of :
- (A) Bullet
 - (B) Cartridge case
 - (C) A and B both
 - (D) None of the above
61. When collecting a swab from a shooter's hand, a piece of cotton swab moistened with _____ can be used.
- (A) 10% Acetone
 - (B) 5% Ethanol
 - (C) 10% HCL
 - (D) 10% Sulphuric acid

62. The surface of the action block surrounding the firing pin is called as:
(A) Muzzle end
(B) Chamber
(C) Trigger
(D) Breech block
63. Walkers test is useful to determine:
(A) Entrance hole
(B) Range of fire
(C) Identifying a shooter
(D) All of the above
64. Which of the following soft metal is usually used for the manufacturing of Bullet?
(A) Lead
(B) Metal alloys
(C) Brass
(D) Antimony
65. Firing angle is known as :
(A) Angle of fall
(B) Angle of Elevation
(C) Angle of impact
(D) Angle of Departure
66. The shotgun barrel in which the diameter of the bore is same throughout:
(A) Jug barre
(B) Reverse barrel
(C) Poly barrel
(D) Cylindrical barrel
67. In case when GSR is deposited on coloured clothes, _____ photography is useful.
(A) Ultra violet
(B) Infrared
(C) Black and White
(D) Fluorescence
68. 0.303 rifle has _____ grooves with _____ twist
(A) 6 with left twist
(B) 5 with right twist
(C) 8 with right twist
(D) 5 with left twist
69. Anvil is a conjugate part of:
(A) Bullet
(B) Firearm
(C) Percussion cap
(D) Hammer

70. A circular protrusion in cylindrical part of metallic cartridge case is :
- (A) Belt
 - (B) Bump
 - (C) Head space
 - (D) Drift
71. The backward motion of firearm after firing is called as:
- (A) Recoil
 - (B) Jump
 - (C) Yaw
 - (D) Trajectory
72. Sporting firearm characterization is based on:
- (A) Handling
 - (B) Use
 - (C) Bore
 - (D) None of the above
73. Barrel fouling is occurred due to :
- (A) Powder residues
 - (B) Primer residues
 - (C) Metal particles
 - (D) All of the above
74. Which bullet is used to study the trajectories?
- (A) Tracer bullet
 - (B) Stream lined bullet
 - (C) Incendiary bullet
 - (D) Boat-tailed bullet
75. KF designation of the base of a cartridge signifies:
- (A) Make
 - (B) Model
 - (C) Calibre
 - (D) Bore
76. Which of the following is not a type of percussion cap?
- (A) Battery cup
 - (B) Bison cup
 - (C) Berdan cup
 - (D) Boxer cup
77. A common name given to all missiles fired from firearm :
- (A) Powder
 - (B) Projectile
 - (C) Both (A) & (B)
 - (D) Neither (A) nor (B)

78. Use of a metal rod like structure to push the powder is come across in _____ firearm
- (A) Automatic
 - (B) Stud guns
 - (C) loader
 - (D) Tamancha
79. The formation of umbrella like structure on hitting the target is seen in :
- (A) Piggy bullet
 - (B) Dumdum bullet
 - (C) Tandem bullet
 - (D) Gas check bullet
80. Which of the following component of propellant is known as gun cotton?
- (A) Black powder
 - (B) Nitrocellulose
 - (C) Nitroglycerin
 - (D) Mercury fulminate
81. The first important active material used as a primer is:
- (A) Mercury styphnate
 - (B) Mercury nitrate
 - (C) Mercury fulminate
 - (D) None of the above
82. The diameter of shotgun chamber is :
- (A) Equal to the cartridge diameter
 - (B) Slightly more than cartridge diameter
 - (C) Equal to the bullet diameter
 - (D) Slightly less than the cartridge diameter
83. Ammonium nitrate is :
- (A) Highly carcinogenic
 - (B) Highly hygroscopic
 - (C) Non hygroscopic
 - (D) None of the above
84. The firearm having partial rifling, used to fire shots is known as :
- (A) Zip gun
 - (B) Shot gun
 - (C) Paradox gun
 - (D) None of the above
85. A bullet having a tapered base end is:
- (A) Boat tailed bullet
 - (B) Gas check bullet
 - (C) Soft nose bullet
 - (D) Cu-Nickel bullet

86. Rifling of the barrel is responsible for the:
- (A) Spin of the bullet
 - (B) Stability of the bullet
 - (C) Increase the aim and accuracy
 - (D) All of the above
87. The gyratory motion is due to the:
- (A) Shape of bullet
 - (B) Rifling of barrel
 - (C) Construction of barrel
 - (D) Higher velocity of bullet
88. _____ Technique can be used to locate and record the projectile from a living person.
- (A) UV photography
 - (B) X-ray Radiography
 - (C) Scanning
 - (D) Sonography
89. The function of stock in firearms is:
- (A) To batter grip
 - (B) To absorb recoil
 - (C) To batter aim
 - (D) All of the above
90. Firearm of same make and model imprint common _____ characteristics on fired cartridge.
- (A) Class
 - (B) Individual
 - (C) Both (A) and (B)
 - (D) None of the above
91. A device fitted to the muzzle of a shotgun to reduce recoil is widely known as :
- (A) Silencer
 - (B) Cutts Compensator
 - (C) Suspensor
 - (D) None of the above
92. The mechanism that pushes out the fired cartridge case from the firearm is:
- (A) Extractor
 - (B) Latch
 - (C) Ejector
 - (D) Drift

93. The lands and grooves of rifled firearm can vary in:
- (A) Direction of twist
 - (B) Twist angle
 - (C) Depth
 - (D) All of the above
94. Which of the following is/are the composition (s) of the primer?
- (A) Initiator
 - (B) Fuel
 - (C) Stabilizer
 - (D) All of the above
95. Ideal propellant powder is:
- (A) Very unstable
 - (B) Produce maximum heat for a given velocity
 - (C) Should be non-corrosive
 - (D) All of the above
96. For standard firearms with half choke, a range of fire, from the spread of pellets, is obtained from the equation:
- (A) $D = R$
 - (B) $D = \frac{1}{2} R$
 - (C) $D = R^2$
 - (D) $D = 3R$
97. Split ball is a type of :
- (A) Rifled projectile
 - (B) Percussion cap
 - (C) Smooth bore projectile
 - (D) Ammunition
98. SEM stands for:
- (A) Scanning Electron Microscope
 - (B) Scanner Electric Metal
 - (C) Scanning Electra Microscope
 - (D) Scanning Electra Magnification
99. Which of following is not a digressive powder (shape)?
- (A) Flake
 - (B) Strip
 - (C) Tube
 - (D) Cylinder
100. Rimless cartridge is used in :
- (A) Automatic firearm
 - (B) Semi-automatic firearm
 - (C) Both (A) & (B)
 - (D) none of the above

Rough Work