

DO NOT BREAK THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

SERIES : I

QUESTION BOOKLET

Subjects : General English & General Knowledge and  
Forensic Science & Crime Scene Management

Full Marks : 200

Time Allowed : 3 Hours

Read the following instructions carefully before you begin to answer the questions.

INSTRUCTIONS TO CANDIDATES

1. This Booklet contains **100 Questions** to be answered in a separate OMR Answer Sheet using Black Ballpoint Pen in the following two Parts :

**Part—A : General English & General Knowledge : 25 questions**

**Part—B : Forensic Science & Crime Scene Management : 75 questions**

2. All questions are compulsory.
3. You will be supplied the Answer Sheet separately by the Invigilator. You must complete the details of particulars asked for.
4. Answers must be shown by completely blackening the corresponding circles in the Answer Sheet against the relevant question number by Black Ballpoint Pen. OMR Answer Sheet without marking Series shall not be evaluated.

**Example :**

Suppose the following question is asked :

**The Capital of Meghalaya is**

- (A) Guwahati
- (B) Kohima
- (C) Shillong
- (D) Delhi

You will have four alternatives in the Answer Sheet for your response corresponding to each question of the Question Booklet as below :

(A) (B) (C) (D)

In the above illustration, if your chosen response is alternative (C), i.e., Shillong, then the same should be marked on the Answer Sheet by blackening the relevant circle with a Black Ballpoint Pen only as below :

(A) (B) ● (D)

**The example shown above is the only correct method of answering.**

5. Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any one question.
6. There will NOT be any negative marking for wrong answers.
7. The Answer Sheet must be handed over to the Invigilator before you leave the Examination Hall.
8. No Rough Work is to be done on the Answer Sheet. Space for Rough Work has been provided in the Question Booklet.

SEAL

**PART—A : GENERAL ENGLISH & GENERAL KNOWLEDGE**

( Marks : 50 )

Each question carries 2 marks

**Directions : In Question Nos. 1-2, out of the four alternatives given, choose the one which best expresses the opposite meaning of the given words :**

1. Liberty

- (A) Freedom
- (B) Liberal
- (C) Democracy
- (D) Slavery

2. Peril

- (A) Danger
- (B) Horror
- (C) Safe
- (D) Risk

**Directions : In Question Nos. 3-6, choose the correct sentences from the given alternatives :**

3. (A) Sarah's uncle car was found without its wheel in that old derelict warehouse.
- (B) Sarah's uncle's car was found without its wheels in that old, derelict warehouse.
- (C) Sarah's uncle's car was found without its wheels in that old, derelict warehouse.
- (D) Sarah's uncle's car was found without its wheel in that old derelict warehouse.

4. (A) Charlie Tan, whose wife lived in China, died quite some time ago.
- (B) Charlie Tan, whose wife lived in China, died quite some times ago.
- (C) Charlie Tan, who's wife lived in China, died quite some time ago.
- (D) Charlie Tan, who's wife live in China, died quite some time ago.
5. (A) I can't see Tim car, there must have been an accident.
- (B) I cant see Tim's car, it must be an accident.
- (C) I can't see Tim car, it must have been an accident.
- (D) I can't see Tim's car, there must have been an accident.
6. (A) Spain is a beautiful country; the beach is warm, sandy and spotless clean.
- (B) Spain is a beautiful country; the beaches is warm, sandy and spotlessly clean.
- (C) Spain is a beautiful country; the beach are warm, sandy and spotless clean.
- (D) Spain is a beautiful country; the beaches are warm, sandy and spotlessly clean.

**Directions : In Question Nos. 7-12, fill in the blanks to complete the phrases with the correct option from the given alternatives :**

7. A stitch in time saves \_\_\_\_\_.

- (A) lives
- (B) money
- (C) nine
- (D) fuel

8. A bad worker always blames his \_\_\_\_\_.

- (A) co-workers
- (B) fortunes
- (C) bad luck
- (D) tools

9. Don't put all your eggs in one \_\_\_\_\_.

- (A) plate
- (B) basket
- (C) tray
- (D) bag

10. Let sleeping dogs \_\_\_\_\_.

- (A) lie
- (B) sleep
- (C) bark
- (D) whine

11. Hope for the best, but \_\_\_\_\_ for the worst.

- (A) make up
- (B) dread
- (C) save up
- (D) prepare

12. \_\_\_\_\_ is thicker than water.

- (A) Blood
- (B) Soup
- (C) Milk
- (D) Tear

**Directions : Choose the correct answer from the given alternatives :**

13. In which of the following ecosystems the pyramid of biomass is inverted?
- (A) Forest  
(B) Grassland  
(C) Pond  
(D) Desert
14. Which one of the following is also known as read/write memory?
- (A) ROM  
(B) RAM  
(C) DVD  
(D) Hard disk
15. Which of the following Amendment Acts made the right to education as a Fundamental Right in India?
- (A) 86th Amendment Act, 2002  
(B) 87th Amendment Act, 2003  
(C) 88th Amendment Act, 2003  
(D) 89th Amendment Act, 2003
16. When did Alexander the Great invade India?
- (A) 298 BC  
(B) 323 BC  
(C) 322 BC  
(D) 326 BC
17. The 'Kyoto Protocol' is associated with
- (A) international trade  
(B) clean environment and climate change  
(C) characters of living organisms  
(D) use of solar energy
18. Who was the founder and first Emperor of the Mughal Dynasty in the Indian subcontinent?
- (A) Akbar  
(B) Aurangzeb  
(C) Babur  
(D) Shah Jahan
19. Extensive planting of trees to increase forest cover is called
- (A) afforestation  
(B) agroforestry  
(C) deforestation  
(D) social forestry

**20.** Who was the first woman President of the Indian National Congress?

- (A) Indira Gandhi
- (B) Sonia Gandhi
- (C) Pratibha Devisingh Patil
- (D) Annie Besant

**21.** The cause of inflation is

- (A) increase in money supply
- (B) fall of production
- (C) increase in money supply and fall of production
- (D) decrease in money supply and fall of production

**22.** WAN stands for

- (A) Wap Area Network
- (B) Wide Area Network
- (C) Wide Array Net
- (D) Wireless Area Network

**23.** Which Article of the Indian Constitution states that 'India, that is Bharat, shall be a Union of States'?

- (A) Article 1
- (B) Article 13
- (C) Article 21
- (D) Article 32

**24.** Who is considered as the 'Father of Economics'?

- (A) Karl Marx
- (B) Max Muller
- (C) Jeremy Bentham
- (D) Adam Smith

**25.** Which battle decided the full control of the British in India?

- (A) Panipat
- (B) Chausa
- (C) Buxar
- (D) Haldighati

**PART—B : FORENSIC SCIENCE & CRIME SCENE MANAGEMENT**

( Marks : 150 )

Each question carries 2 marks

- 26.** Among both single-barrel and double-barrel shotguns, 12 bore firearms are the most common. The designation 12 bore means that
- (A) 12 spheres of solid lead each with a diameter equal to the internal diameter of the gun's barrel weigh one pound
  - (B) 12 spheres of solid lead each with a diameter equal to the internal diameter of the gun's barrel weigh one kilogram
  - (C) the internal diameter of the gun's barrel is 1.2 inches
  - (D) the internal diameter of the gun's barrel is 1.2 mm
- 27.** Firearm examiners use which of the following instruments to examine bullets and cartridge cases for similar marks?
- (A) Bore scope
  - (B) Comparison microscope
  - (C) Scanning electron microscope (SEM)
  - (D) Stereo microscope
- 28.** Most positive bullet identifications are made on striations and are found
- (A) on land impressions near the base of the bullet
  - (B) on the bottom of the bullet
  - (C) on groove impressions near the base of the bullet
  - (D) near the nose of the bullet
- 29.** A cartridge is a single unit of ammunition consisting of
- (A) the cartridge case, primer and propellant with or without one or more projectiles
  - (B) the primer, cartridge case and bullet
  - (C) the cartridge case, primer and one or more projectiles
  - (D) cartridge case, wadding, pellets and primer
- 30.** If class characteristics between an ammunition component and a firearm are in agreement, the next step in the examination process would be to look for
- (A) nitrites
  - (B) individual characteristics
  - (C) microscopic residues
  - (D) safety defects
- 31.** The term 'self-loading pistol' is strictly synonymous with which one of the following?
- (A) Double-action revolver
  - (B) Semi-automatic pistol
  - (C) Single-action revolver
  - (D) Automatic pistol

32. Two class characteristics of firearms that relate to the bullets fired from them include
- (A) striations and impressed marks
  - (B) caliber and rifling pattern
  - (C) model and barrel length
  - (D) All apply
33. The muzzle-loading firearms have which of the following ignition types?
- (A) Matchlock system
  - (B) Wheellock system
  - (C) Flintlock system
  - (D) Percussion cap system
34. As scientists and expert witnesses (and to remain as such), it is of the utmost importance that we maintain complete \_\_\_\_\_ in our work.
- (A) concentration
  - (B) impartiality
  - (C) partiality
  - (D) ambiguity
35. A married woman died in unnatural condition at home within 5 years of marriage. Her parents complained of frequent demand of dowry. Her autopsy will be conducted under which Section?
- (A) 174 of CrPC
  - (B) 176 of CrPC
  - (C) 302 of IPC
  - (D) 304 of IPC
36. The fingerprint pattern may be impaired permanently in cases of
- (A) eczema
  - (B) scalds
  - (C) scabies
  - (D) leprosy
37. Ptyalin enzyme is found in
- (A) blood
  - (B) sweat
  - (C) milk
  - (D) saliva
38. The diameter of a 12 bore gun is
- (A) 0.620"
  - (B) 0.689"
  - (C) 0.729"
  - (D) 0.820"
39. Margaret Pereira is related to which field of forensic science?
- (A) Fingerprints
  - (B) Documents
  - (C) DNA profiling
  - (D) Serology
40. Circular bruise is caused by
- (A) thorn
  - (B) cane
  - (C) cricket ball
  - (D) sword

41. Tele-forensic technology is used in
- (A) voice identification
  - (B) lie detection
  - (C) crime scene management
  - (D) None of the above
42. The individual credited with creating voiceprint technology is
- (A) Wilhelm Greiss
  - (B) Lawrence Kersta
  - (C) Clifford Irving
  - (D) David Coy
43. Choose the instrument used for analysis of downy feather.
- (A) SEM
  - (B) Gel electrophoresis
  - (C) ESDA
  - (D) GLC
44. Section 66F of IT Act deals with
- (A) cyberstalking
  - (B) email bombing
  - (C) child pornography
  - (D) cyberterrorism
45. HMX is
- (A) 2, 4, 6 trinitrotoluene
  - (B) cyclotetramethylene tetranitramine
  - (C) cyclotrimethylene trinitramine
  - (D) pentaerythritol tetranitrate
46. Maximum frequency that human ear can recognize is
- (A) 20000 Hz
  - (B) 8000 Hz
  - (C) 16000 Hz
  - (D) All frequencies
47. Which of the following has the lowest viscosity (at a given temperature)?
- (A) Naphtha
  - (B) Petrol
  - (C) Kerosene
  - (D) Tar
48. Frequency of vibrations of the vocal cords determines the
- (A) pitch
  - (B) rate of speaking
  - (C) loudness
  - (D) None of the above
49. What does the term 'in battery' mean in ballistic?
- (A) The firearm that is operated with battery
  - (B) Fully loaded magazine
  - (C) Fully loaded guns with security lock
  - (D) Fully loaded gun that is ready to fire
50. Information can be extracted from smartphones by
- (A) physical analysis
  - (B) logical analysis
  - (C) analysis using agent application
  - (D) All of the above



51. When a body is partly or wholly immersed in a liquid, the apparent loss of weight is equal to the weight of the liquid displaced by the submerged portion. This is known as
- (A) Pascal's law
  - (B) Bernoulli's law
  - (C) Archimedes' law
  - (D) Boyle's law
52. Which of the following can be found in close-range wound?
- (A) Small bullet hole with no GSR
  - (B) Large wound with GSR and flash burns
  - (C) Large wound with no GSR
  - (D) Very small bullet hole with flash burns
53. 'WAV' is an extension of which type of file?
- (A) Data
  - (B) Audio
  - (C) Video
  - (D) None of the above
54. Which of the following have highest fundamental frequency?
- (A) Female
  - (B) Male
  - (C) Children
  - (D) Both (A) and (C)
55. The density of water in the SI system is
- (A)  $10^2 \text{ kg m}^{-3}$
  - (B)  $10^3 \text{ kg m}^{-3}$
  - (C)  $10^{-2} \text{ kg m}^{-3}$
  - (D)  $10^{-3} \text{ kg m}^{-3}$
56. A football bounces when it falls on the ground because
- (A) it is made up of rubber
  - (B) it is hollow
  - (C) it is very light and is able to overcome the resistance of the air
  - (D) of its property of elasticity
57. Which of the following is a good conductor of heat and electricity?
- (A) Diamond
  - (B) Anthracite
  - (C) Granite
  - (D) Graphite
58. The ABO system was discovered by
- (A) Karl Landsteiner
  - (B) Edmond Locard
  - (C) Kary Mullis
  - (D) Johannes Friedrich
59. Which of the following is **not** a true operating system?
- (A) DOS
  - (B) Windows 3.1
  - (C) Windows 2000
  - (D) UNIX
60. When the speed of a body is doubled, its kinetic energy becomes
- (A) double
  - (B) half
  - (C) quadruple
  - (D) one-fourth

61. The term 'dB' is used to measure
- (A) power
  - (B) pressure
  - (C) frequency
  - (D) amplitude
62. A long-term user of cocaine may develop symptoms of other psychological disorders such as
- (A) major depression
  - (B) social phobia
  - (C) eating disorder
  - (D) All of the above
63. Voice of a man is heavy compared to woman because
- (A) female vocal cord is longer
  - (B) male vocal cord is heavy
  - (C) male vocal cord is longer
  - (D) Concept is not related
64. At what temperature do the Fahrenheit and Celsius scales give the same readings?
- (A)  $212^{\circ}$
  - (B)  $32^{\circ}$
  - (C)  $-40^{\circ}$
  - (D)  $0^{\circ}$
65. The term 'Mach' is used to measure the speed of
- (A) sound
  - (B) wind
  - (C) ship
  - (D) aeroplanes
66. Which of the following is **not** a mode of suffocation?
- (A) Throttling
  - (B) Smothering
  - (C) Choking
  - (D) Gagging
67. The device used to record the sound is
- (A) a microphone
  - (B) a headphone
  - (C) a phonograph
  - (D) an amplifier
68. The Narcotic Drugs and Psychotropic Substances Act was passed in the year
- (A) 1985
  - (B) 1986
  - (C) 1879
  - (D) 1972
69. ₹ 200 currency notes have
- (A) four bleed lines
  - (B) seven bleed lines
  - (C) five bleed lines
  - (D) four bleed lines with circles
70. Which of the following is **not** an electromagnetic wave?
- (A) Heat wave
  - (B) Sound wave
  - (C) Radio wave
  - (D) Light wave

71. For examination of diatoms, sample should be collected from
- (A) bone marrow
  - (B) blood
  - (C) tissue
  - (D) epithelial cells
72. Germanium and silicon are classified as
- (A) semiconductors
  - (B) good conductors
  - (C) insulators
  - (D) superconductors
73. Chadwick's sign shows
- (A) softening of cervix
  - (B) increased vaginal mucous secretion
  - (C) blue colouration of vagina
  - (D) None of the above
74. A fired bullet generally ricochets from a surface when fired at angle of
- (A)  $0^{\circ}$ - $15^{\circ}$
  - (B)  $15^{\circ}$ - $30^{\circ}$
  - (C)  $30^{\circ}$ - $45^{\circ}$
  - (D)  $45^{\circ}$ - $60^{\circ}$
75. Two cigarette butts found at crime scene should be packed
- (A) in same parcel
  - (B) in separate parcels
  - (C) with other biological fluids
  - (D) with bare hands
76. Production of beats is a result of the phenomenon of
- (A) resonance
  - (B) interference
  - (C) reflection
  - (D) superimposition
77. The distance between two nearest particles that are in phase is called
- (A) displacement
  - (B) frequency
  - (C) wavelength
  - (D) velocity
78. Light from the sun reaches the earth in
- (A) 2 minutes
  - (B) 4 minutes
  - (C) 6 minutes
  - (D) 8 minutes
79. Firearms leave unique characteristics on the ammunition components due to
- (A) manufacturing processes, use, and abuse
  - (B) breech marks
  - (C) gas pressure within the barrel
  - (D) rifling impressions
80. Class characteristics that relate to the identification of cartridges and cartridge cases are
- (A) firing pin impressions
  - (B) breech marks
  - (C) All apply
  - (D) ejector marks

81. Imperfections in the surface of the interior of the barrel leave which of the following marks on bullets?
- Parallel
  - Contour
  - Striations
  - Impressions
82. Which one of the following is used to analyze for the presence of gunshot residues?
- Scanning electron microscopy used in conjunction with energy dispersive X-ray analysis
  - Polarized light microscopy
  - Microspectrophotometry
  - Refractive index measurement
83. Adipocere starts early in all of the following, **except**
- face
  - breast
  - buttock
  - chest wall
84. Which of the following refers to email that appears to have been originated from one source when it was actually sent from another source?
- Email bombing
  - Email spoofing
  - Email spamming
  - None of the above
85. In cyber law terminology, 'DDoS' means
- Distributed Denial-of-Service
  - Disk Operating System
  - Distant Denial-of-Service
  - None of the above
86. Sound wave travels faster in
- vacuum
  - sea
  - atmosphere
  - broomstick
87. Dried semen stains from clothing are preserved at crime scene
- as such
  - in 40% formalin
  - in alcohol
  - in 10% formalin
88. The sexual assault victim will be asked to remove clothing in order to collect any trace evidence on which type of paper by MO?
- Clean white paper
  - On polythene bag
  - On floor
  - Black paper
89. Acoustics is known as
- study of light
  - study of sound
  - study of water
  - study of digital data
90. 1 KB is equivalent to
- 1024 bytes
  - 1000 bytes
  - 1024 MB
  - 1000 MB

91. Which organ is **not** used during production of speech sound in human being?
- (A) Vocal cords
  - (B) Glottis
  - (C) Lungs
  - (D) Liver
92. When a tape hiss occurs within the speech frequency range, which filter is used to eliminate it?
- (A) High-pass filter
  - (B) Low-pass filter
  - (C) Band-pass filter
  - (D) Parametric equalizer
93. A bullet is fired at a certain angle with the horizontal. Its path will be
- (A) elliptical
  - (B) a straight line
  - (C) a parabola
  - (D) a vertical line
94. The most reliable form of evidence is
- (A) weapon
  - (B) blood
  - (C) clothes
  - (D) eye witness
95. The best collection media for a bloody weapon is
- (A) plastic ziplock bag
  - (B) cardboard box
  - (C) waterproof paper bag
  - (D) plastic container with sealed lid
96. Accreditation of forensic science laboratories in India is done by
- (A) ASCLAD
  - (B) NABL
  - (C) BIS
  - (D) DEA
97. Hair lifted from crime scene should be packed in
- (A) plastic container
  - (B) folded white paper and paper envelope
  - (C) paper envelope
  - (D) plastic ziplock bag
98. In case of sexual offences, who among the following are authorized to collect the sample from victim for further examination in forensic laboratory?
- (A) First responder
  - (B) Forensic examiner
  - (C) Investigating officer
  - (D) Medical officer
99. Biological sample authentication form should be duly signed by
- (A) victim/accused
  - (B) medical officer
  - (C) both victim/accused along with witness and medical officer
  - (D) None of the above
100. If the seminal stains are on absorbent material, then they can be collected by
- (A) cutting
  - (B) scrapping
  - (C) vacuuming
  - (D) swabbing