

Test Booklet Code & No.

प्रश्नपत्रिका कोड व क्र.

A

## Paper-II

# FORENSIC SCIENCE

Signature and Name of Invigilator

1. (Signature) .....

(Name) .....

2. (Signature) .....

(Name) .....

Seat No.

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(In figures as in Admit Card)

Seat No. ....

(In words)

OMR Sheet No.

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(To be filled by the Candidate)

**MAY - 39216**

**Time Allowed : 1¼ Hours]**

**[Maximum Marks : 100**

**Number of Pages in this Booklet : 12**

**Number of Questions in this Booklet : 50**

### Instructions for the Candidates

- Write your Seat No. and OMR Sheet No. in the space provided on the top of this page.
- This paper consists of **50** objective type questions. Each question will carry *two* marks. *All* questions of Paper-II will be compulsory, covering entire syllabus (including all electives, without options).
- At the commencement of examination, the question booklet will be given to the student. In the first 5 minutes, you are requested to open the booklet and compulsorily examine it as follows :
  - To have access to the Question Booklet, tear off the paper seal on the edge of this cover page. Do not accept a booklet without sticker-seal or open booklet.
  - Tally the number of pages and number of questions in the booklet with the information printed on the cover page. Faulty booklets due to missing pages/questions or questions repeated or not in serial order or any other discrepancy should not be accepted and correct booklet should be obtained from the invigilator within the period of 5 minutes. Afterwards, neither the Question Booklet will be replaced nor any extra time will be given. The same may please be noted.**
  - After this verification is over, the OMR Sheet Number should be entered on this Test Booklet.
- Each question has four alternative responses marked (A), (B), (C) and (D). You have to darken the circle as indicated below on the correct response against each item.

**Example :** where (C) is the correct response.

<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
A	B	C	D
- Your responses to the items are to be indicated in the **OMR Sheet given inside the Booklet only**. If you mark at any place other than in the circle in the OMR Sheet, it will not be evaluated.
- Read instructions given inside carefully.
- Rough Work is to be done at the end of this booklet.
- If you write your Name, Seat Number, Phone Number or put any mark on any part of the OMR Sheet, except for the space allotted for the relevant entries, which may disclose your identity, or use abusive language or employ any other unfair means, you will render yourself liable to disqualification.
- You have to return original OMR Sheet to the invigilator at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. You are, however, allowed to carry the Test Booklet and duplicate copy of OMR Sheet on conclusion of examination.
- Use only Blue/Black Ball point pen.**
- Use of any calculator or log table, etc., is prohibited.**
- There is no negative marking for incorrect answers.**

### विद्यार्थ्यांसाठी महत्त्वाच्या सूचना

- परिक्षार्थींनी आपला आसन क्रमांक या पृष्ठावरील वरच्या कोपऱ्यात लिहावा. तसेच आपणांस दिलेल्या उत्तरपत्रिकेचा क्रमांक त्याखाली लिहावा.
- सदर प्रश्नपत्रिकेत **50** बहुपर्यायी प्रश्न आहेत. प्रत्येक प्रश्नास **दोन** गुण आहेत. या प्रश्नपत्रिकेतील **सर्व** प्रश्न सोडविणे अनिवार्य आहे. सदरचे प्रश्न हे या विषयाच्या संपूर्ण अभ्यासक्रमावर आधारित आहेत.
- परीक्षा सुरु झाल्यावर विद्यार्थ्यांला प्रश्नपत्रिका दिली जाईल. सुरुवातीच्या 5 मिनिटांमध्ये आपण सदर प्रश्नपत्रिका उघडून खालील बाबी अवश्य तपासून पहाव्यात.
  - प्रश्नपत्रिका उघडण्यासाठी प्रश्नपत्रिकेवर लावलेले सील उघडावे. सील नसलेली किंवा सील उघडलेली प्रश्नपत्रिका स्विकारू नये.
  - पहिल्या पृष्ठावर नमूद केल्याप्रमाणे प्रश्नपत्रिकेची एकूण पृष्ठे तसेच प्रश्नपत्रिकेतील एकूण प्रश्नांची संख्या पडताळून पहावी. पृष्ठे कमी असलेली/कमी प्रश्न असलेली/प्रश्नांचा चुकीचा क्रम असलेली किंवा इतर त्रुटी असलेली सदोष प्रश्नपत्रिका सुरुवातीच्या 5 मिनिटातच पर्यवेक्षकाला परत देऊन दुसरी प्रश्नपत्रिका मागवून घ्यावी. त्यानंतर प्रश्नपत्रिका बदलून मिळणार नाही तसेच वेळी वाढवून मिळणार नाही याची कृपया विद्यार्थ्यांनी नोंद घ्यावी.**
  - वरीलप्रमाणे सर्व पडताळून पहिल्यानंतरच प्रश्नपत्रिकेवर ओ.एम.आर. उत्तरपत्रिकेचा नंबर लिहावा.
- प्रत्येक प्रश्नासाठी (A), (B), (C) आणि (D) अशी चार विकल्प उत्तरे दिली आहेत. त्यातील योग्य उत्तराचा रकाना खाली दर्शविल्याप्रमाणे ठळकपणे काढा/निळ करावा.

**उदा. :** जर (C) हे योग्य उत्तर असेल तर.

<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
A	B	C	D
- या प्रश्नपत्रिकेतील प्रश्नांची उत्तरे **ओ.एम.आर. उत्तरपत्रिकेतच दर्शवावीत**. इतर ठिकाणी लिहीलेली उत्तरे तपासली जाणार नाहीत.
- आत दिलेल्या सूचना काळजीपूर्वक वाचाव्यात.
- प्रश्नपत्रिकेच्या शेवटी जोडलेल्या कोऱ्या पानावरच कच्चे काम करावे.
- जर आपण ओ.एम.आर. वर नमूद केलेल्या ठिकाणा व्यतिरिक्त इतर कोठेही नाव, आसन क्रमांक, फोन नंबर किंवा ओळख पटेल अशी कोणतीही खूप केलेली आढळून आल्यास अथवा असभ्य भाषेचा वापर किंवा इतर गैरमागाचा अवलंब केल्यास विद्यार्थ्यांला परीक्षेस अपात्र ठरविण्यात येईल.
- परीक्षा संपल्यानंतर विद्यार्थ्यांने मूळ ओ.एम.आर. उत्तरपत्रिका पर्यवेक्षकांकडे परत करणे आवश्यक आहे. तथापी, प्रश्नपत्रिका व ओ.एम.आर. उत्तरपत्रिकेची द्वितीय प्रत आपल्याबरोबर नेण्यास विद्यार्थ्यांना परवानगी आहे.
- फक्त निळ्या किंवा काळ्या बॉल पेनचाच वापर करावा.**
- कॅलक्युलेटर किंवा लॉग टेबल वापरण्यास परवानगी नाही.**
- चुकीच्या उत्तरासाठी गुण कपात केली जाणार नाही.**

**MAY- 39216/II—A**

**Forensic Science**  
**Paper II**

**Time Allowed : 75 Minutes]**

**[Maximum Marks : 100**

**Note :** This Paper contains **Fifty (50)** multiple choice questions. Each question carries **Two (2)** marks. Attempt *All* questions.

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|--|---|
| <p>1. The term “Forensic” is derived from :</p> <p>(A) Russian word “Forensis”</p> <p>(B) Latin word “Forensis”</p> <p>(C) Greek word “Forensis”</p> <p>(D) French word “Forensis”</p> <p>2. The term “Podography” is related to :</p> <p>(A) Black and White Photography</p> <p>(B) Fingerprint on dead body</p> <p>(C) Footprint</p> <p>(D) Earprint</p> <p>3. High explosive factory is situated at :</p> <p>(A) Roorkee</p> <p>(B) Chandigarh</p> <p>(C) Dehradun</p> <p>(D) Khadki (Pune)</p> | <p>4. Who is the father of “Questioned” Document Examination :</p> <p>(A) Albert A. Osborn</p> <p>(B) Albert S. Osborn</p> <p>(C) Albert C. Osborn</p> <p>(D) Albert R. Osborn</p> <p>5. The abbreviation “CDTS” stands for :</p> <p>(A) Central Detective Training School</p> <p>(B) Central Detective Training Services</p> <p>(C) Central Disaster Training School</p> <p>(D) Central Disaster Training Services</p> |
|--|---|

6. The capacity of a microscope to distinguish between two adjacent points is :
- (A) Magnification
  - (B) Ionization
  - (C) Resolving Power
  - (D) Aberration
7. Which of the following has a limit of resolution of  $0.5 \text{ nm}$  to  $5\text{\AA}$
- (A) Polarising Microscope
  - (B) Stereo Microscope
  - (C) Scanning Electron Microscope
  - (D) Transmission Electron Microscope
8. In an electron microscope, the magnified image of a particle is formed by :
- (A) Primary Electrons
  - (B) Secondary and back scattered electrons
  - (C) X-Ray generated when the electron beam strikes the particle
  - (D) All of the above
9. Infrared Spectroscopy provides valuable information about :
- (A) Molecular Weight
  - (B) Melting Point
  - (C) Boiling Point
  - (D) Functional Groups
10. The wavelength of wave associated with electrons accelerated through a potential difference of “V” Volt is :
- (A) Directly Proportional to “V”
  - (B) Directly Proportional to  $\sqrt{V}$
  - (C) Inversely Proportional to “V”
  - (D) Inversely Proportional to  $\sqrt{V}$
11. The determination of whether or not a substance is blood is best made by means of a screening test, such as the Kastle-Meyer colour test, which uses the chemical :
- (A) Pyridine
  - (B) Phenolphthalein
  - (C) Benzidine
  - (D) Triketohydrindine hydrate

12. To test whether or not a blood sample is of human or animal origin, the standard test that is used is :
- (A) Precipitin test
  - (B) Kastle-Meyer test
  - (C) Benzidine test
  - (D) Radioimmuno assay
13. The fluorescence examination of the seminal stains gives fluorescence due to :
- (A) Melanin
  - (B) Flavin
  - (C) Phaeo-Melanin
  - (D) Eurobilin
14. Which of the following is a not a red cell blood group system :
- (A) HLA
  - (B) ABO
  - (C) Duffy
  - (D) Kell
15. Presence of Colostrum in human milk is indicative of :
- (A) Ovarian Tumors
  - (B) False Pregnancy
  - (C) Recent Delivery
  - (D) Uterine Tumor
16. Scott test is used for the detection of :
- (A) Morphine
  - (B) Heroine
  - (C) Cocaine
  - (D) Cannabis
17. First Chemical examiner laboratory was established in :
- (A) Agra
  - (B) Mumbai
  - (C) Kolkata
  - (D) Chennai
18. Fire debris suspected of containing ignitable liquid is best collected in
- (A) Tape sealed plastic bags
  - (B) Sealed metal can
  - (C) Glass jar sealed with lid
  - (D) Plastic container

19. Ethanol is absorbed into the blood from :
- (A) Stomach and small intestine
  - (B) Liver and large intestine
  - (C) Kidney and liver
  - (D) Stomach and large intestine
20. Distilled wine is commonly known as :
- (A) Rum
  - (B) Brandy
  - (C) Arech
  - (D) Beer
21. C4 Explosive is :
- (A) RDX with Plastic binder
  - (B) TNT with Plastic binder
  - (C) PETN with Plastic binder
  - (D) Dynamite Sticks
22. Dum Dum bullet causes greater devastation in body because :
- (A) It disintegrates on impact
  - (B) It mushrooms after impact
  - (C) It remains unaltered because it is jacketed
  - (D) It remains unaltered because it is non-jacketed
23. The origin of gun powder is believed to be in :
- (A) India
  - (B) China
  - (C) Taiwan
  - (D) Russia
24. In case of firing of a 12 bore cartridge from loose country made pistol tattooing can be found upto about :
- (A) 1 Feet
  - (B) 2 Feet
  - (C) Upto distance much larger than 3 feet
  - (D) 3 Feet
25. Which of the following is *not* a necessary condition for burning of fire ?
- (A) Continuous flow of Oxygen
  - (B) Fuel
  - (C) Heat
  - (D) Specific gravity of accelerant

26. Overlapping margins are characteristics of :
- (A) Jute
  - (B) Cotton
  - (C) Silk
  - (D) Wool
27. Acid Phosphatase is secreted by :
- (A) Bulbourethral gland
  - (B) Testis
  - (C) Seminiferous tubules
  - (D) Prostate
28. Human medullary index is :
- (A)  $< 0.3$
  - (B)  $> 0.3$
  - (C)  $0.3 - 0.5$
  - (D)  $0.5 - 0.7$
29. Characteristic feature of naturally fallen hair is :
- (A) Absence of root sheath
  - (B) Large root sheath
  - (C) Ruptured root sheath
  - (D) Irregular root sheath
30. The condition where males have very low sperm count is known as :
- (A) Aspermia
  - (B) Azospermia
  - (C) Oligospermia
  - (D) None of the above
31. The best way to preserve shoe and tyre marks that have been impressed into soil is :
- (A) Photography and casting
  - (B) Rough sketch and finished sketch
  - (C) Using a high voltage electrode
  - (D) With an electrostatic lifting device
32. A hard brittle amorphous substance composed mainly of silicon dioxide is :
- (A) Glass
  - (B) Silicon
  - (C) Carbon
  - (D) Plastic

33. Which of the following techniques may be used to reveal the crystalline structure of pigment in paint :
- (A) Microspectrophotometry
  - (B) Atomic absorption spectrometry
  - (C) X-ray diffraction
  - (D) Atomic emission
34. Which of the following tooth types is absent in the primary dentition ?
- (A) Canine
  - (B) Molar
  - (C) Incisor
  - (D) Pre-molar
35. Algor mortis is :
- (A) Postmortem cooling
  - (B) Postmortem blood pooling
  - (C) Instantaneous rigor
  - (D) Time since death
36. Shovel shaped incisors are most commonly found among people with :
- (A) Negroid ancestry
  - (B) Caucasoid ancestry
  - (C) Mongoloid ancestry
  - (D) Caucasoid and negroid mixed ancestry
37. A system of personal identification based on anthropometry developed in the later part of the 19th century by a French Criminologist is known as :
- (A) Somatometry
  - (B) Cephalometry
  - (C) Human Engineering
  - (D) Bertillonage
38. Which of the following would provide a more accurate estimate of stature :
- (A) Foot
  - (B) Finger
  - (C) Palm
  - (D) Toe



39. In which method of individualization photographic enlargement of the latent and inked prints are done, which is followed by comparison of geometric configuration :
- (A) Pin-cushion method
  - (B) Overlay method
  - (C) Seymour trace method
  - (D) Photographic strip method
40. Ninhydrin turns purple when it reacts with which of the following residues of latent fingerprints that make them visible :
- (A) Fatty matters
  - (B) Amino acids
  - (C) Sodium chloride
  - (D) Metal ions
41. The primary classification of 10-digit classification system is based on which of the following ?
- (A) Presence or absence of loop or arches
  - (B) Presence or absence of only loops
  - (C) Presence or absence of accidentals and arches
  - (D) Presence or absence of whorls
42. Nine fingerprint patterns were first given by :
- (A) Sir William Herschel
  - (B) J.E. Purkinje
  - (C) P.J. Coulier
  - (D) Henry Faulds

43. A document written and signed by the same person is called :
- (A) Hectograph
  - (B) Spectrograph
  - (C) Holograph
  - (D) Sesmograph
44. Sodomy is also known as :
- (A) Bestiality
  - (B) Buggery
  - (C) Buccal coitus
  - (D) Incest
45. Presence of maggots at postmortem indicates :
- (A) Duration since death
  - (B) Cause of death
  - (C) Mode of death
  - (D) Posture of body at death
46. The time limit for exhumation in India is not later than :
- (A) Six Months
  - (B) Six Years
  - (C) Sixty Years
  - (D) No time limit
47. Which of the following genotype causes “Klinefelter syndrome”
- (A) XO
  - (B) XXY
  - (C) XX
  - (D) XYY
48. Which fiber burns with a smell of burning paper :
- (A) Nylon
  - (B) Silk
  - (C) Wool
  - (D) Cotton
49. The permanent mounting of hair sample can be done using :
- (A) Ether
  - (B) Alcohol
  - (C) Xylene
  - (D) Acetic acid
50. The usual diameter of negroid hair falls in the range of :
- (A) 60 - 90 Microns
  - (B) 70 - 100 Microns
  - (C) 90 - 120 Microns
  - (D) 110 - 140 Microns

**MAY- 39216/II—A**

**ROUGH WORK**

**MAY- 39216/II—A**

**ROUGH WORK**