Test Booklet Code & Serial No.
प्रश्नपत्रिका कोड व क्रमांक

B

Paper-II
FORENSIC SCIENCE

Signature and Name of Invigilator

1. (Signature) .....

(Name) .....

2. (Signature) .....

(Name) .....

Seat No. | | | | | | |

(In figures as in Admit Card)

Seat No. .....

(In words)

OMR Sheet No. | | | | | | |

(To be filled by the Candidate)

APR - 39217

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

1. Write your Seat No. and OMR Sheet No. in the space provided on the top of this page.
2. 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).
3. 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 :
   (*i*) 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.
   (*ii*) **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.**
   (*iii*) After this verification is over, the OMR Sheet Number should be entered on this Test Booklet.
4. 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.

   (A) (B) ● (D)

5. 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.
6. Read instructions given inside carefully.
7. Rough Work is to be done at the end of this booklet.
8. 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.
9. 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.
10. **Use only Blue/Black Ball point pen.**
11. **Use of any calculator or log table, etc., is prohibited.**
12. **There is no negative marking for incorrect answers.**

विद्यार्थ्यांसाठी महत्त्वाच्या सूचना

1. परिक्षार्थींनी आपला आसन क्रमांक या पृष्ठावरील वरच्या कोपऱ्यात लिहावा. तसेच आपणांस दिलेल्या उत्तरपत्रिकेचा क्रमांक त्याखाली लिहावा.
2. 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.
3. परीक्षा सुरू झाल्यावर विद्यार्थ्याला प्रश्नपत्रिका दिली जाईल. सुरुवातीच्या 5 मिनीटांमध्ये आपण सदर प्रश्नपत्रिका उघडून खालील बाबी अवश्य तपासून पहाव्यात.
   (*i*) प्रश्नपत्रिका उघडण्यासाठी प्रश्नपत्रिकेवर लावलेले सील उघडावे. सील नसलेली किंवा सील उघडलेली प्रश्नपत्रिका स्विकारू नये.
   (*ii*) **पहिल्या पृष्ठावर नमूद केल्याप्रमाणे प्रश्नपत्रिकेची एकूण पृष्ठे तसेच प्रश्नपत्रिकेतील एकूण प्रश्नांची संख्या पडताळून पहावी. पृष्ठे कमी असलेली/कमी प्रश्न असलेली/प्रश्नांचा चूकीचा क्रम असलेली किंवा इतर त्रुटी असलेली सदोष प्रश्नपत्रिका सुरुवातीच्या 5 मिनिटातच पर्यवेक्षकाला परत देऊन दुसरी प्रश्नपत्रिका मागवून घ्यावी. त्यानंतर प्रश्नपत्रिका बदलून मिळणार नाही तसेच वेळही वाढवून मिळणार नाही याची कृपया विद्यार्थ्यांनी नोंद घ्यावी.**
   (*iii*) वरीलप्रमाणे सर्व पडताळून पहिल्यानंतरच प्रश्नपत्रिकेवर ओ.एम.आर. उत्तरपत्रिकेचा नंबर लिहावा.
4. प्रत्येक प्रश्नासाठी (A), (B), (C) आणि (D) अशी चार विकल्प उत्तरे दिली आहेत. त्यातील योग्य उत्तराचा रकाना खाली दर्शविल्याप्रमाणे ठळकपणे काळा/निळा करावा.
   उदा. : जर (C) हे योग्य उत्तर असेल तर.

   (A) (B) ● (D)

5. या प्रश्नपत्रिकेतील प्रश्नांची उत्तरे **ओ.एम.आर. उत्तरपत्रिकेतच दर्शवावीत.** इतर ठिकाणी लिहीलेली उत्तरे तपासली जाणार नाहीत.
6. आत दिलेल्या सूचना काळजीपूर्वक वाचाव्यात.
7. प्रश्नपत्रिकेच्या शेवटी जोडलेल्या कोऱ्या पानावरच कच्चे काम करावे.
8. जर आपण ओ.एम.आर. वर नमूद केलेल्या ठिकाणा व्यतिरीक्त इतर कोठेही नाव, आसन क्रमांक, फोन नंबर किंवा ओळख पटेल अशी कोणतीही खूण केलेली आढळून आल्यास अथवा असभ्य भाषेचा वापर किंवा इतर गैरमार्गाचा अवलंब केल्यास विद्यार्थ्याला परीक्षेस अपात्र ठरविण्यात येईल.
9. परीक्षा संपल्यानंतर विद्यार्थ्याने मूळ ओ.एम.आर. उत्तरपत्रिका पर्यवेक्षकांकडे परत करणे आवश्यक आहे. तथापी, प्रश्नपत्रिका व ओ.एम.आर. उत्तरपत्रिकेची द्वितीय प्रत आपल्याबरोबर नेण्यास विद्यार्थ्यांना परवानगी आहे.
10. **फक्त निळ्या किंवा काळ्या बॉल पेनचाच वापर करावा.**
11. **कॅलक्युलेटर किंवा लॉग टेबल वापरण्यास परवानगी नाही.**
12. **चुकीच्या उत्तरासाठी गुण कपात केली जाणार नाही.**

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.

1. Who will be called first officer ?

   (A) Incharge of the Police Station.

   (B) Any member of the Senior Police Officer

   (C) A person who is investigating the crime

   (D) A person who first reaches at the crime scene.

2. Which of the following search methods is most effective in large open area crime scene ?

   (A) Strip method

   (B) Grid method

   (C) Circular method

   (D) Quadrant method

3. The Forensic Expert is witness to :

   (A) The Prosecution

   (B) The Defence

   (C) The Court of Law

   (D) The Investigative Agency.

4. Which of the following techniques is *not* used in DNA analysis ?

   (A) RFLP

   (B) Y-STR

   (C) SNPs

   (D) Birefringence

5. Oil used in transformer and switch gear is basically :

(A) Technical mineral oil

(B) Pharmaceutical mineral oil

(C) Lubricating oil

(D) Refined vegetable oil

6. Triclofos belongs to :

(A) Insecticide

(B) Herbicide

(C) Rodenticide

(D) Sedative

7. With Marquis reagent ergotamine gives ..... colour.

(A) Blue

(B) Black

(C) Red

(D) Brown

8. The common street name "Crack" is for which of the undermentioned drug ?

(A) Heroin

(B) Hasish

(C) Khat

(D) Cocaine

9. Which one of the following techniques is one of the preferred techniques for the estimation of metallic poison from viscera ?

(A) HPTLC

(B) CZE

(C) GC-MS

(D) AAS

10. ACE-V in fingerprints terminology stands for :

(A) Association, comparison, evaluation and verification

(B) Analysis, comparison, expertise, verification

(C) Analysis, comparison, evaluation, verification

(D) Analysis, comparison, evaluation, valuation

11. The earliest large scale practical application of fingerprint was made by :

(A) Sir William Herschel

(B) Sir Francis Galton

(C) Sir Edmund Locard

(D) Sir Edward Henry

12. IBIS stands for :

(A) Indian Ballistics Identification System

(B) International Ballistics Identification System

(C) Integrated Ballistics Identification System

(D) Improvised Ballistics Identification System

13. Presence of semen in the vaginal canal is a proof of :

(A) Rape

(B) Sexual intercourse

(C) Attempted rape

(D) Indecent assault

14. Diacritical marks are :

(A) Blotting of ink

(B) Embellishment

(C) Punctuations

(D) Marks used with letter or group of letters.

15. Section 377 deals with :

(A) Adultery

(B) Rape

(C) Incest

(D) Unnatural sexual offence

16. Study of death in all its aspects is known as :

(A) Trichology

(B) Ornithology

(C) Odontology

(D) Thanatology

17. 'Bertillonage' is a term that is synonymous to :

(A) Somatoscopy

(B) Dactyloscopy

(C) Portrait Parle

(D) Craniometry

18. The age of an infant skull can be more accurately determined from an examination of :

(A) Size of skull

(B) Condition of fontanelles

(C) Shape of mandible

(D) Structure of zygomatic bone

19. The formulae given by which of the following scientists can be helpful in the estimation of age of human skeleton ?

(A) Pearsons

(B) Trotter and Gleser

(C) Gustafron

(D) Dupertuis and Hadden

20. Which of the following features of the hip bone is most useful for determination of sex ?

(A) Ischial tuberosity

(B) Ischio-pubic ramus

(C) Iliac fossa

(D) Greater sciatic notch

21. Which of the following is *not* a class characteristic of footwear ?

(A) General outsole pattern and shape

(B) Size of footwear

(C) Cuts in sole due to wear and tear

(D) Factory mould variation in outsole

22. Which of the following sexual offences is also known as "Greek Love" ?

(A) Bestiality

(B) Buggery

(C) Cunnilingus

(D) Lesbianism

23. Singeing effect is observed in :

(A) Nylon fiber

(B) Jute fiber

(C) Hair

(D) Flex fiber

24. In vasectomised persons the secretions of which of the following is missing ?

(A) Seminal vesicle

(B) Vas deferens

(C) Prostrate glands

(D) Cowpers glands

25. Urine gives the following fluorescence under ultra-violet light.

(A) White

(B) Blue

(C) Green

(D) Red

26. A bullet which is packed with jacket and opens at base is called :

(A) Tandem bullet

(B) Duplex bullet

(C) Dum-Dum bullet

(D) Souneir bullet

27. The scale pattern of hair found among humans is :

(A) Imbricate

(B) Rosette

(C) Pectinate

(D) Diamond

28. Twins may not have :

(A) Same DNA fingerprints

(B) Same fingerprint pattern

(C) Same blood groups

(D) Same HLA systems

29. Glass is :

(A) Solid

(B) Liquid

(C) Gas

(D) Amorphous

30. Friedrich Mohs scale is related to :

(A) Glass

(B) Minerals

(C) Crystals

(D) Rocky fragments

31. One of the most classical characteristics of disguise writing is :

(A) Inferior quality of writing

(B) Pen pressure

(C) Embellishment

(D) Angle of letters.

32. Which one is the most commonly used optical microscope to detect alteration is :

(A) Stereomicroscope

(B) Fluorescent microscope

(C) Polarising microscope

(D) Comparison microscope

33. Why digital images taken at a crime scene are not used in court ?

(A) Because digital images are not clear due to pixilation.

(B) Because the images are easy to alter.

(C) Because the digital images are not able to record minor details.

(D) Because digital images are not authentic.

34. Plaster of Paris is :

(A) Calcium phosphate

(B) Hydrated calcium sulfate

(C) Calcium carbonate

(D) Calcium bicorbonate

35. Which of the following is *not* described as striation marks ?

(A) Firing pin

(B) Scratch

(C) Abrasion

(D) Friction

36. Select the answer from the following, the distance travel by the firearm discharge in chronological order.

(A) Burning, charring, blackening, powder tattooing

(B) Charrirng, blackening, burning, powder tattooing

(C) Blackening, charring, powder tattooing, burning

(D) Powder tattooing, charring, blackening, Burning

37. Among the following, identify the commercial explosive :

(A) RDX

(B) TNT

(C) DNT

(D) ANFO

38. RRR test is performed while evaluating :

(A) Steel

(B) Glass

(C) Paint

(D) Soil

39. Universal detector coupled to gas chromatography is :

(A) FID

(B) NPD

(C) ECD

(D) MS

40. The term 'time-of-flight' is associated with :

(A) Mass spectrometer

(B) Path Finder

(C) Trajectory of a bullet

(D) Flight data recorder

41. In a chromatographic separation band broadening does not have any effect on :

(A) Efficiency

(B) Resolution

(C) Dead time

(D) Peak height

42. Fused silica or quartz cells have transmittance in the range of :

(A) 190 nm to 400 nm

(B) 190 nm to 1800 nm

(C) 190 nm to 1000 nm

(D) 400 nm to 1000 nm

43. "Attenuated Total Reflectance" is a term associated with which type of spectroscopy ?

(A) U.V.-Vis.

(B) I.R.

(C) Fluorescence

(D) Mass

44. Discovery of blood groups was made by :

(A) Weiner

(B) Landsteiner

(C) Boyed

(D) Boorman

45. Sex chromatin test for determination of sex is based on the detection of :

(A) Golgi body

(B) Barr body

(C) Ribosome

(D) Mitochondria

46. The double helical structure of DNA was first correctly elucidated by :

(A) James Watson & Francis Krick

(B) James Watson & Donald Krick

(C) Arnold Watson & Patrick Krick

(D) Watson Smith & John Krick

47. Christmas tree stain test is used for the identification of :

(A) Blood stains

(B) Urine stains

(C) Saliva stains

(D) Semen stains

48. M.J.B. Orfila was the most illustrious figure in the history of :

(A) Anthropology

(B) Biology

(C) Questioned Document

(D) Toxicology

49. The sure sign of death of a person is :

(A) Absence of breathing

(B) Absence of heart beat

(C) Absence of brain activity

(D) Absence of eye reaction to very strong light

50. How many times is the forensic scientist allowed to visit scene of crime ?

(A) Once

(B) Twice

(C) Upto one week

(D) Any time

ROUGH WORK