

Test Booklet Code & Serial No.

प्रश्नपत्रिका कोड व क्रमांक

Paper-II

FORENSIC SCIENCE

C

Signature and Name of Invigilator

Seat No.

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1. (Signature)

(In figures as in Admit Card)

(Name)

Seat No.

(In words)

2. (Signature)

(Name)

OMR Sheet No.

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(To be filled by the Candidate)

JUN - 39220

Time Allowed : 2 Hours]

[Maximum Marks : 200

Number of Pages in this Booklet : 16

Number of Questions in this Booklet : 100

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 **100** objective type questions. Each question will carry *two* marks. *All* questions are 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.

(A)	(B)	(C)	(D)
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- 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.

विद्यार्थ्यासाठी महत्वाच्या सूचना

- परिक्षार्थींनी आपला आसन क्रमांक या पृष्ठवरील वरच्या कोपऱ्यात लिहावा. तसेच आपणांस दिलेल्या उत्तरपत्रिकेचा क्रमांक त्याखाली लिहावा.
- सदर प्रश्नपत्रिकेत **100** बहुपर्यायी प्रश्न आहेत. प्रत्येक प्रश्नास **दोन** गुण आहेत. **सर्व** प्रश्न सोडविणे अनिवार्य आहे. सदरचे प्रश्न हे या विषयाच्या संपूर्ण अभ्यासक्रमावर आधारित आहेत.
- परीक्षा सुरू झाल्यावर विद्यार्थ्याला 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 वेळही 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 काळा/निळा करावा.

उदा. : जर (C) हे योग्य उत्तर असेल तर.

(A)	(B)	(C)	(D)
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- 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 खूण केलेली आढळून आल्यास अथवा असभ्य भाषेचा वापर किंवा इतर गैरमार्गाचा अवलंब केल्यास विद्यार्थ्याला परीक्षेस अपात्र ठरविण्यात येईल.
- 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.
- फक्त निळ्या किंवा काळ्या बॉल पेनचाच वापर करावा.
- कॅलक्युलेटर किंवा लॉग टेबल वापरण्यास परवानगी नाही.
- चुकीच्या उत्तरासाठी गुण कपात केली जाणार नाही.

JUN - 39220/II—C

Forensic Science Paper II

Time Allowed : 120 Minutes]

[Maximum Marks : 200

Note : This Paper contains **One Hundred (100)** multiple choice questions. Each question carrying **Two (2)** marks. Attempt *All* questions.

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| <p>1. The terminology used to describe when the sperms are present in large number with abnormal morphology is :</p> <p>(A) Aspermia
(B) Oligospermia
(C) Teratozoospermia
(D) Necrozoospermia</p> <p>2. Chronic poisoning due to lead is known as :</p> <p>(A) Plumbism
(B) Hydrargyrisim
(C) Ptyalism
(D) Arsenicosis</p> <p>3. The luminol test is a capable of detecting bloodstains diluted upto :</p> <p>(A) 30,000 times
(B) 3,00,000 times
(C) 3,000 times
(D) 300 times</p> <p>4. The largest protein molecule in blood is :</p> <p>(A) Albumin
(B) Globulin
(C) Fibrinogen
(D) Haemoglobin</p> | <p>5. Which of the following ASTM guidelines is not related to forensic document examination ?</p> <p>(A) ASTM E 1422
(B) ASTM E 2290-07a
(C) ASTM F 2503-13
(D) ASTM E 443-09</p> <p>6. Which of the following is <i>not</i> used for nuclear DNA profiling ?</p> <p>(A) Cut hair
(B) Plucked hair
(C) Fallen hair
(D) Kinky hair</p> <p>7. As 'Wool' is obtained from sheep hair likewise Mohair is obtained from :</p> <p>(A) Camel hair
(B) Vicuna hair
(C) Angora goat hair
(D) Asiatic goat hair</p> <p>8. Which of the following is the test for detection of urine ?</p> <p>(A) Kastle Mayer test
(B) Jaffer test
(C) Teichmann test
(D) Phadebas test</p> |
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| <p>9. The STRs with identical length and sequence are known as :</p> <p>(A) Simple repeats</p> <p>(B) Complex repeats</p> <p>(C) Compound repeats</p> <p>(D) Complex hypervariable repeats</p> <p>10. As per ISO/IEC 7811, a magstripe card contains :</p> <p>(A) One track</p> <p>(B) Two tracks</p> <p>(C) Three tracks</p> <p>(D) Four tracks</p> <p>11. Which of the following is <i>not</i> depicting antigen-antibody reaction ?</p> <p>(A) Neutralization</p> <p>(B) Elisa</p> <p>(C) Precipitation</p> <p>(D) Agglutination</p> <p>12. In forensic examination of samples, STR are selected which are :</p> <p>(A) Genetically linked</p> <p>(B) Genetically not linked</p> <p>(C) Larger in size</p> <p>(D) Smaller in size</p> | <p>13. The minimum value of area under a receiver operating curve of a biometric system is :</p> <p>(A) 0.2</p> <p>(B) 0.3</p> <p>(C) 0.5</p> <p>(D) 0.4</p> <p>14. Salivary amylase converts :</p> <p>(A) Starch into glucose</p> <p>(B) Starch into glycogen</p> <p>(C) Starch into fats</p> <p>(D) Starch into carbohydrates</p> <p>15. The most suitable reagent for chemical etching of steel surfaces in cases of restoration of erased number is :</p> <p>(A) Fry's reagent</p> <p>(B) Villella's reagent</p> <p>(C) Thomas's reagent</p> <p>(D) William's reagent</p> <p>16. The pitch pattern in a sentence is known as :</p> <p>(A) Fundamental frequency</p> <p>(B) Intonation</p> <p>(C) Timbre</p> <p>(D) Phonology</p> <p>17. Narrow band spectrogram is the most suitable to study which of the following ?</p> <p>(A) Harmonics</p> <p>(B) Formant</p> <p>(C) Glotal pulses</p> <p>(D) Amplitude</p> |
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18. Which of the following is *correct* ?
Mixed Guns are :
- I. Double barrelled guns in which one barrel is of one bore and other is of different bore
 - II. Double barrel guns having different chokes in both the barrels
 - III. Double barrel have one smooth bore barrel and other is rifled barrel
- (A) I is correct
(B) II is correct
(C) I & III are correct
(D) III is correct
19. Which of the following statements is *correct* ?
- I. Forensic examiner encounter a wide range of weapons during the investigation
 - II. Most of these weapons falls in to one of the four major categories (Hand guns, shotgun, rifles and submachine guns)
- (A) Statement I is correct
(B) Statement II is correct
(C) Statements I and II are correct
(D) Neither of statements I and II is correct
20. Which of the following is *not* an example of soft biometrics ?
- (A) Periocular region
 - (B) Facial marks
 - (C) Gait pattern
 - (D) Tattoos
21. Casein is an example of :
- (A) Regenerated protein
 - (B) Synthetic polymer
 - (C) Mineral fiber
 - (D) Vegetable fiber
22. Which of the following is *not* a test for examination of semen ?
- (A) Barberios test
 - (B) Ammonium molybdate test
 - (C) Florence test
 - (D) Schiff's test
23. Cardite is used in :
- (A) 0.303 firearm
 - (B) 0.315 firearm
 - (C) 12 Bore shotgun
 - (D) 0.45 Revolver
24. The shortest barrel firearm is :
- (A) Revolver
 - (B) Pistol
 - (C) Carbine
 - (D) Machine Gun

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| <p>25. Which of the following explosive is the lowest density ?</p> <p>(A) ANFO</p> <p>(B) Dynamite</p> <p>(C) PETN</p> <p>(D) RDX</p> <p>26. Which of the following detonating device uses a primary explosive ?</p> <p>(A) Detonating card</p> <p>(B) Novel card</p> <p>(C) Exploding Bridgewire Detonators</p> <p>(D) Electric Blasting caps</p> <p>27. Dynamite is manufactured with the help of :</p> <p>(A) Mercury fulminate</p> <p>(B) Nitroglycerine</p> <p>(C) Ammonia nitrate</p> <p>(D) Potassium nitrate</p> <p>28. Recoil is <i>not</i> affected by :</p> <p>(A) The forward motion of the ejecta (Projectile, wads)</p> <p>(B) Outrushing gases</p> <p>(C) Muzzle blast</p> <p>(D) Breach face</p> | <p>29. Assertion : 0.22 inch lead air gun pellet requires a minimum of 500 ft/s velocity to penetrate fresh human skin.</p> <p>Reason : The mass and diameter of lead air gun pellet is relatively less.</p> <p>(A) Both Assertion and Reason are true</p> <p>(B) Assertion is true but Reason is false</p> <p>(C) Assertion is false but Reason is true</p> <p>(D) Both Assertion and Reason are false</p> <p>30. The sectional density of a bullet of mass 158 g and diameter 0.357 inch is :</p> <p>(A) 445 g/inch²</p> <p>(B) 56 g/inch²</p> <p>(C) 1239 g/inch²</p> <p>(D) 935 g/inch²</p> <p>31. In single digit classification of fingerprints, Battley lens is used, which has :</p> <p>(A) Five concentric circles</p> <p>(B) Three concentric circles</p> <p>(C) Six concentric circles</p> <p>(D) Seven concentric circles</p> |
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| <p>32. The ultimate matching of two fingerprints as belonging to the same individual is based on :</p> <p>(A) Comparison of number of triradii and core type</p> <p>(B) Comparison of pattern types</p> <p>(C) Comparison of ridge counts</p> <p>(D) Comparison of minutiae or ridge characteristics</p> <p>33. Which of the following sexual offences is also known as 'Greek Love' ?</p> <p>(A) Bestiality</p> <p>(B) Cunnilingus</p> <p>(C) Buggery</p> <p>(D) Lesbianism</p> <p>34. The absence of a cadaveric spasm in hand and the presence of country made weapon (Katta) at the crime scene is suggestive of :</p> <p>(A) Suicidal death</p> <p>(B) Natural death</p> <p>(C) Accidental death</p> <p>(D) Homicidal</p> <p>35. The feature, which is missing in the signature produced by scanning and printing through color printer is :</p> <p>(A) Presence of C.M.Y. dots in the vicinity</p> <p>(B) Pattern of paper from which signature is taken</p> <p>(C) Indentation on the back side of the paper</p> <p>(D) Microscopic texture on the stroke</p> | <p>36. Ridged skin on palms and soles is :</p> <p>(A) Found only in humans</p> <p>(B) Absent in apes</p> <p>(C) Absent in monkeys</p> <p>(D) Found in humans, apes as well as monkeys</p> <p>37. Which of the following black-and-white film is considered as slow film ?</p> <p>(A) ISO 800/30–3200/36</p> <p>(B) ISO 400/27–500/28</p> <p>(C) ISO 100/21–200/24</p> <p>(D) ISO 25/15–50/80</p> <p>38. Among the following inkjet and laser printers fall in which of the categories ?</p> <p>(A) Impact printer</p> <p>(B) Line printers</p> <p>(C) Non-impact printers</p> <p>(D) Page printer</p> <p>39. Which of the following is considered individual characteristics of a photocopy ?</p> <p>(A) Splash marks</p> <p>(B) Trash marks</p> <p>(C) Bleak marks</p> <p>(D) Crimp marks</p> <p>40. Protection of life and personal liberty has been sanctioned to the citizen of India under which of the following Articles of the Constitution ?</p> <p>(A) Article 19</p> <p>(B) Article 21</p> <p>(C) Article 20</p> <p>(D) Article 22</p> |
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41. The triradii, which are not actually present in a fingerprint but their potential formation is predicted (beyond the boundary of ridged skin) by the character of the pattern, are termed as :
- Extralimital triradii
 - Conjoint triradii
 - Super triradii
 - Phantom triradii
42. Kromekote paper method is used in which of the following ?
- Determining sequence of intersecting strokes
 - Deciphering indented writings
 - Deciphering erased writings
 - Deciphering secret writings
43. CEDAR-FOX is an example of :
- Systems for identification of firearms
 - Systems for handwriting identification
 - Systems for identification of animals
 - Systems for identification of hair
44. By cross breeding sativa strain of cannabis with that of indica will lead to the development of..... plant.
- Sinsemilla
 - Skunk
 - Clone
 - Hop
45. To raise the yield of gasoline from crude oil by splitting higher molecular weight constituents into lower molecular weight is obtained by a process known as :
- Polymerization
 - Alkylation
 - Cracking
 - Isomerization
46. Match the following :
- List I**
- Cardiac
 - Stimulant
 - Hallucinogen
 - Depressant
- List II**
- Cannabis sativa*
 - Digitalis purpurea*
 - Papaver somniferum*
 - Nicotiana tabacum*
- Codes :**
- (a) (b) (c) (d)
 - (i) (ii) (iii) (iv)
 - (iii) (i) (ii) (iv)
 - (ii) (iv) (i) (iii)
 - (iv) (iii) (ii) (i)
47. Which of the following is *not* considered as a date rape drug ?
- GHB
 - Ketamine
 - Nicotine
 - Flunitrazepam

48. Match the following :

List I

- (a) Alethrin
- (b) Chlorthion
- (c) Aldicarb
- (d) Endrin

List II

- (i) Organochlorines
- (ii) Pyrethrin
- (iii) Organophosphorus
- (iv) Carbamate

Codes :

- (a) (b) (c) (d)
- (A) (i) (ii) (iii) (iv)
- (B) (i) (iii) (ii) (iv)
- (C) (ii) (iii) (iv) (i)
- (D) (iii) (iv) (i) (ii)

49. Kerosene smell is detected in which of the following poisons ?

- (A) Arsenic
- (B) Organophosphorus
- (C) Cannabis
- (D) Cyanide

50. National Poison Information Centre (NPIC) was started in All India Institute of Medical Science (AIIMS), New Delhi in which of the following year ?

- (A) 1998
- (B) 1990
- (C) 1995
- (D) 1993

51. A suspect is caught 30 days after he committed a murder under the influence of drugs. Analysis of which matrix of suspect is most likely to identify the drug :

- (A) Blood
- (B) Hair
- (C) Sweat
- (D) Saliva

52. Condition when the temperature of body increases after death is known as :

- (A) Postmortem Caloricity
- (B) Postmortem Lividity
- (C) Postmortem Rigidity
- (D) Algor mortis

53. Which test is most commonly used spot test for amphetamine ?

- (A) Duquenois Levine
- (B) Mandelins
- (C) Ehrlich
- (D) Scott's

54. "Collision Detection Multiple Access" and "Time Division Multiple Access" are the examples of digital protocol used in :

- (A) PDA
- (B) Cell phones
- (C) CCTV
- (D) Workstation

55. Specific guidelines for accreditation of forensic science laboratories has been mentioned in which of the following documents of NABL ?

- (A) NABL-112
- (B) NABL-113
- (C) NABL-120
- (D) NABL-121

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| <p>56. Which of the following sample is the most suitable for the detection of diatoms in death due to drowning ?
(A) Sternum
(B) Liver
(C) Lungs
(D) Intestine</p> <p>57. Which of the following is <i>not</i> a test to determine death of heart ?
(A) Magnus test
(B) Diaphanous test
(C) Icard's test
(D) Winslow's test</p> <p>58. When broad surface of skin slides against a rough surface it produces which of the following types of abrasion ?
(A) Graze
(B) Imprint
(C) Pressure
(D) Scratch</p> <p>59. Which of the following is the first internal organ to putrefy ?
(A) Heart
(B) Kidney
(C) Gall bladder
(D) Larynx and trachea</p> <p>60. Chronic poisoning of which of the following causes tactile hallucinations ?
(A) Opium
(B) Cannabis
(C) Cocaine
(D) Lysergic acid diethylamide</p> | <p>61. Which of the following sutures of the human skull closes first ?
(A) Sagittal
(B) Lambdoid
(C) Coronal
(D) Mid-frontal</p> <p>62. When in a proceeding, the court has to form an opinion on any matter relating to any information transmitted or stored in any computer, which of the following sections of Indian Evidence Act is relevant :
(A) Section 45
(B) Section 45A
(C) Section 46
(D) Section 47A</p> <p>63. Chain of custody means :
(A) Continuity of possession
(B) Custody of accused
(C) Sampling process
(D) Presenting matter to the court</p> <p>64. The first Forensic Science Laboratory was started in the state of Maharashtra in the year :
(A) 1958
(B) 1966
(C) 1981
(D) 1989</p> |
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65. During summer season, a corpse was found lying in open with pupae of housefly on the body. This indicates the time since death would be approximately :
- (A) 1 day
(B) 5 days
(C) 10 days
(D) 8 days
66. **Assertion** : Wheel method of searching evidence is *not* suitable for larger area.
- Reason** : Investigator starts from a critical point and revolves into a circular fashion.
- (A) Both Assertion and Reason are true
(B) Assertion is true but Reason is false
(C) Assertion is false but Reason is true
(D) Both Assertion and Reason are false
67. Rate of charring of wood depends on all, *except* :
- (A) Intensity of fire
(B) Duration of exposure
(C) Moisture content
(D) Demarcation line
68. The method of Stass was modified by Otto for the removal of which of the following ?
- (A) Bone
(B) Fat
(C) Tissue
(D) Water
69. Footwear impression in snow is :
- (A) Three-dimensional impression
(B) Positive two-dimensional impression
(C) A flat impression
(D) A negative two-dimensional impression
70. Which of the following sketching methods is the most suitable for large outdoor crime scene ?
- (A) Triangulation
(B) Photogrammetry
(C) Baseline
(D) Polar coordinate
71. Which of the following is *not* an early change observed in eye after death ?
- (A) Segmentation of retinal blood columns
(B) Increase in intraocular pressure
(C) Loss of corneal reflex
(D) Increase in potassium concentration in vitreous humor

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| <p>72. The value of induced dipole moment divided by strength of the field is better known as :</p> <p>(A) Polarizability</p> <p>(B) Total dipole moment</p> <p>(C) Unit dipole moment</p> <p>(D) Depolarization</p> <p>73. The formulae given by which of the following can be helpful in estimation of age of unknown human skeletal remains ?</p> <p>(A) Trotter and Gleser</p> <p>(B) Gustafson's</p> <p>(C) Dupertius and Hadden</p> <p>(D) Pearson's</p> <p>74. Which of the following compounds is infra-red inactive ?</p> <p>(A) Ethylene</p> <p>(B) Hydrochloric acid</p> <p>(C) Carbon monoxide</p> <p>(D) Nitric acid</p> <p>75. Precolumn used for the conditioning of mobile phase is known as :</p> <p>(A) Guard column</p> <p>(B) Scavenger column</p> <p>(C) Conditioning column</p> <p>(D) Mobilizing column</p> | <p>76. Time-of-flight mass spectrometry operates in :</p> <p>(A) Continuous mode</p> <p>(B) Pulse mode</p> <p>(C) Direct mode</p> <p>(D) Syntactic mode</p> <p>77. Which of the following is the <i>correct</i> sequence of the components of a monochromator in Emission Spectrometry ?</p> <p>(A) Entrance slit, focusing lens, collimating lens, prism, exit slit</p> <p>(B) Entrance slit, collimating lens, prism, focusing lens, exit slit</p> <p>(C) Exit slit, prism, collimating lens, focusing lens, entrance slit</p> <p>(D) Entrance slit, prism, collimating lens, focusing lens, exit slit</p> <p>78. Distortion of glass article on fire suggests that the temperature reached :</p> <p>(A) Below 750°C</p> <p>(B) 750°C to 850°C</p> <p>(C) 1000°C to 1500°C</p> <p>(D) 1500°C to 2000°C</p> <p>79. A man committed suicide by a 0.357 revolver in hard contact of his head. Blood stains were found in the barrel of the revolver due to :</p> <p>(A) Back spatter</p> <p>(B) Forward spatter</p> <p>(C) Blowback effect</p> <p>(D) Impact effect</p> |
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| <p>80. In HPLC, LOD and LOQ are obtained using :</p> <p>(A) Retention time to Signal ratio</p> <p>(B) Efficiency to Asymmetry ratio</p> <p>(C) Signal to Noise ratio</p> <p>(D) Retention time to Dead time ratio</p> <p>81. Which of the following is used as a source of radiation in XRE Spectrometer ?</p> <p>(A) Collidge Tube</p> <p>(B) Crookes Tube</p> <p>(C) Hollow Cathode Tube</p> <p>(D) Incandescent light bulb</p> <p>82. Analysis of a drug by UHPLC generates a pressure of 14000 psi. A column with which of the following particle size is most suitable for analysis :</p> <p>(A) 10 μm</p> <p>(B) 2 μm</p> <p>(C) 5 μm</p> <p>(D) 20 μm</p> <p>83. Which of the following states has <i>not</i> a separate high court ?</p> <p>(A) Sikkim</p> <p>(B) Manipur</p> <p>(C) Meghalaya</p> <p>(D) Mizoram</p> | <p>84. is used to generate X-ray.</p> <p>(A) Anger tube</p> <p>(B) West tube</p> <p>(C) Mayer tube</p> <p>(D) Coolidge tube</p> <p>85. HPFS and exFAT are examples of which of the following operating systems ?</p> <p>(A) Windows XP</p> <p>(B) Linux</p> <p>(C) Mac OSX</p> <p>(D) Windows 98</p> <p>86. Tenax TA is a porous polymer resin based on..... is specifically designed for trapping of true volatile or semivolatile compound from air.</p> <p>(A) Asahipak NH₂P-504E</p> <p>(B) 2,4 Dinitrophenyl hydrazine</p> <p>(C) 2, 4, 6-tribromoaniline</p> <p>(D) 2, 6-diphenylene oxide</p> <p>87. Bertillon system of personal identification developed in the late 19th century in France was primarily based on :</p> <p>(A) Fingerprints</p> <p>(B) Anthropometry</p> <p>(C) Retina pattern</p> <p>(D) Facial features</p> |
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88. **Assertion** : Rapid hardening cement is prefabricated concrete construction and road works.
Reason : With the same water, cement ratio at a fixed day of application strength of rapid hardening cement is more than ordinary portland cement.
- (A) Both Assertion and Reason are correct
 (B) Assertion is correct but Reason is false
 (C) Assertion is false but Reason is correct
 (D) Both Assertion and Reason are false
89. In adults, the transparency of roots of teeth :
- (A) Decreases with increase in age
 (B) Increases with increase in age
 (C) Remains constant throughout life
 (D) First increases and then decreases with age increase
90. Woods metal, which is used to make cast of tool marks is composed of :
- (A) Bismuth, lead, tin, cadmium
 (B) Bismuth, copper, cadmium, lead
 (C) Bismuth, zinc, cadmium, tin
 (D) Bismuth, copper, zinc, cadmium
91. The fast-drying coatings that dry by evaporation of the solvent rather than by oxidation or polymerization is better known as :
- (A) Varnish
 (B) Vehicle
 (C) Lacquer
 (D) Resins
92. When the temperature of liquid is raised, its refractive index :
- (A) Increases
 (B) Decreases
 (C) Remains unchanged
 (D) First increases then decreases
93. A footwear impression left on a hard flat dusty surface by the clean outsole of a shoe is a :
- (A) Three-dimensional footwear impression
 (B) Positive two-dimensional footwear impression
 (C) Negative two-dimensional footwear impression
 (D) Positive three-dimensional footwear impression

94. Which of the following marks are produced during the dynamic process ?
- (A) Compression marks
 - (B) Striations marks
 - (C) Indentation marks
 - (D) Imprints
95. Tool marks does *not* consist of :
- (A) Indents
 - (B) Striations
 - (C) Elemental composition
 - (D) Drill
96. Paint analysis does *not* include :
- (A) Sequence of layers
 - (B) Minerological profile
 - (C) Pyrolysis gas chromatography
 - (D) Trace elemental composition
97. The MRM is a technique in mass spectrometer stands for :
- (A) Multiple reaction monitoring
 - (B) Multiple range monitoring
 - (C) Multiple ratio monitoring
 - (D) Magnetic resonance monitoring
98. Miscope is a/an :
- (A) Small hand held digital microscope
 - (B) IR microscope
 - (C) Microphotograph
 - (D) Spectroscopic instrument
99. Which of the following are *correct* parameters which influence the nature of tool marks ?
- I. Horizontal angle of tool
 - II. Vertical angle of tool
 - III. Pressure on tool
 - IV. Side of the tool blade
- (A) I & II are correct
 - (B) I & III are correct
 - (C) I, II and III are correct
 - (D) I, II, III & IV are correct
100. Which of the following liquids is used to separate the soil grain on the basis of specific gravity ?
- (A) Ethanol
 - (B) Sodium hydroxide solution
 - (C) Bromoform
 - (D) Nitrobenzene

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ROUGH WORK