

Test Booklet Code &amp; 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)

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(Name) .....

OMR Sheet No.

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(To be filled by the Candidate)

**SEP - 39221****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 of Paper II will be compulsory.
- 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 पृष्ठावरील वरच्या कोपऱ्यात लिहावा. तसेच आपणास दिलेल्या उत्तरपत्रिकेचा क्रमांक त्याखाली लिहावा.
- सदर प्रश्नपत्रिकेत **100** बहुपर्यायी प्रश्न आहेत. प्रत्येक प्रश्नास **दोन** गुण आहेत. या प्रश्नपत्रिकेतील **सर्व** प्रश्न सोडविणे अनिवार्य आहे.
- परीक्षा सुरू झाल्यावर विद्यार्थ्याला प्रश्नपत्रिका दिली जाईल. सुरुवातीच्या 5 मिनीटांमध्ये 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 पाहिल्यानंतरच 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) |
|-----|-----|-----|-----|
- या प्रश्नपत्रिकेतील प्रश्नांची उत्तरे ओ.एम.आर. उत्तरपत्रिकेतच दर्शवावीत. इतर ठिकाणी लिहिलेली उत्तरे तपासली जाणार नाहीत.
- आत दिलेल्या सूचना काळजीपूर्वक वाचाव्यात.
- प्रश्नपत्रिकेच्या शेवटी जोडलेल्या कोन्या 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 गैरमार्गांचा अवलंब केल्यास विद्यार्थ्याला परीक्षेस अपात्र ठरविण्यात येईल.
- परीक्षा संपल्यानंतर विद्यार्थ्याने मूळ ओ.एम.आर. उत्तरपत्रिका पर्यवेक्षकांकडे परत करणे आवश्यक आहे. तथापि, 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.

**SEP - 39221/II—C**



SEP - 39221/II—C

## Forensic Science

### Paper II

**Time Allowed : 120 Minutes]****[Maximum Marks : 200**

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

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| <p>1. In newly introduced currency note of Rs. 2,000, the micro-printing on Gandhiji's spectacles depicts :</p> <p>(A) RBI<br/>(B) 2000<br/>(C) INDIA<br/>(D) Bharat in Devnagari</p> <p>2. "SWGDRUG" is associated with :</p> <p>(A) A confirmatory test for illicit drug<br/>(B) A new street drug<br/>(C) An international committee that sets standard for analysis of drug<br/>(D) The federal agency with responsibility of tracking drug traffickers</p> <p>3. Indented writing means :</p> <p>(A) Invisible writing<br/>(B) Coding<br/>(C) Marginal writing<br/>(D) Sub-surface impressions</p> <p>4. Which of the following is a principal sign of disguise ?</p> <p>(A) Poor rhythm<br/>(B) Lack of internal consistencies<br/>(C) Poor line quality<br/>(D) Slowly executed writings</p> | <p>5. Match the following :</p> <p style="text-align: center;"><b>List I</b></p> <p>(a) Charred Documents<br/>(b) Exemplar<br/>(c) Natural Variations<br/>(d) Infrared Luminescence</p> <p style="text-align: center;"><b>List II</b></p> <p>(i) Normal deviations found between repeated specimens of an individual's handwriting or any printing device.<br/>(ii) An authentic samples used for comparison purposes such as handwriting.<br/>(iii) A property exhibited by some dyes that emit IR light when exposed to blue-green light.<br/>(iv) Any document that has become darkened and brittle through exposure to fire or excessive heat.</p> <p><b>Codes :</b></p> <p>(a) (b) (c) (d)<br/>(A) (iv) (iii) (ii) (i)<br/>(B) (iii) (iv) (i) (ii)<br/>(C) (iv) (ii) (i) (iii)<br/>(D) (iv) (i) (ii) (iii)</p> |
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| <p>6. The Asia Pacific Accreditation Cooperation (APAC) was established in :</p> <p>(A) 2019<br/>(B) 1997<br/>(C) 1995<br/>(D) 1992</p> <p>7. Which of the following is the <i>correct</i> sequence of process that occurs in the flame atomizer of AAS ?</p> <p>(A) Nebulisation, desolvation, volatilization, dissociation<br/>(B) Volatilization, nebulisation, dissociation, desolvation<br/>(C) Desolvation, dissociation, nebulisation, volatilization<br/>(D) Dissociation, volatilization, desolvation, nebulisation</p> <p>8. A Plaster of Paris Cast can't be prepared in snow because of :</p> <p>(A) Exothermic nature<br/>(B) Cheap product<br/>(C) Setting time<br/>(D) Expansion factor</p> <p>9. BitPim is an open source software to manipulate and view data in which of the following cell phones ?</p> <p>(A) GSM<br/>(B) TDMA<br/>(C) CDMA<br/>(D) FDMA</p> | <p>10. The distance between the centres of the front and the rear wheels is better known as :</p> <p>(A) Wheel distance<br/>(B) Wheel base<br/>(C) Wheel width<br/>(D) Section width</p> <p>11. Which of the following is the smallest addressable unit on a file system ?</p> <p>(A) Sector<br/>(B) Cluster<br/>(C) Tracu<br/>(D) Cylinder</p> <p>12. The sectional density of a bullet of mass 158 g and diameter 0.357 inch is :</p> <p>(A) 445 g/inch<sup>2</sup><br/>(B) 56 g/inch<sup>2</sup><br/>(C) 1239 g/inch<sup>2</sup><br/>(D) 935 g/inch<sup>2</sup></p> <p>13. The most suitable reagent for chemical etching of aluminum alloy surfaces in cases of restoration of erased number is :</p> <p>(A) Fry's reagent<br/>(B) Villella's reagent<br/>(C) Thomas's reagent<br/>(D) William's reagent</p> |
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| <p>14. The scattering in which the scattered radiation has exactly the same wavelength as that of incident wavelength, is known as :</p> <p>(A) Stokes scattering<br/>(B) Anti-Stokes scattering<br/>(C) Rayleigh scattering<br/>(D) Inelastic scattering</p> <p>15. Which of the following is a transducer used in mass spectrometer ?</p> <p>(A) Electron capture detector<br/>(B) Electron multiplier<br/>(C) Bolometer<br/>(D) Phototube</p> <p>16. Which of the following is the study of projectiles in weapons ?</p> <p>(A) External Ballistics<br/>(B) Intermediate Ballistics<br/>(C) Internal Ballistics<br/>(D) Interior Ballistics</p> <p>17. Disputed paternity can be resolved, based on one of these :</p> <p>(A) Nysten's law<br/>(B) Casper's formula<br/>(C) Hardy-Weinberg principle<br/>(D) Locard principle of exchange</p> <p>18. In which of the following F-number lens opening is the maximum :</p> <p>(A) F-2<br/>(B) F-6<br/>(C) F-8<br/>(D) F-22</p> | <p>19. Anthropometric facial landmarks are also known as :</p> <p>(A) Fudicial points<br/>(B) Geometric points<br/>(C) Geometric landmarks<br/>(D) Portrait landmarks</p> <p>20. Sequential steps involved in DNA profiling :</p> <p>(A) Isolation, Amplification, Statistical Interpretation and Visualization<br/>(B) Isolation, Amplification, Visualization and Statistical Interpretation<br/>(C) Isolation, Visualization, Amplification and Statistical Interpretation<br/>(D) Visualization, Isolation, Amplification and Statistical Interpretation</p> <p>21. FDP test is used to identify :</p> <p>(A) Semen<br/>(B) Vomit<br/>(C) Menstrual blood<br/>(D) Faecal matter</p> <p>22. Unvoiced sound is produced by :</p> <p>(A) Periodic vibration of vocal folds<br/>(B) Rhythmic vibration of vocal folds<br/>(C) Turbulence at some constriction in the vocal tract<br/>(D) Periodic vibration of vocal tract</p> |
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23. Which of the following explosive is having the highest detonation velocity ?  
(A) TNT  
(B) PETN  
(C) RDX  
(D) HMX
24. Which of the following doesn't act as PCR inhibitors ?  
(A) Haeme  
(B) Melamin  
(C) Indigo dyes  
(D) Violet blue dye
25. Choline is produced from :  
(A) Seminal vesicles  
(B) Prostate  
(C) Seminiferous tubules  
(D) Bulbourethral glands
26. Club formation takes place during which growth phase of hair ?  
(A) Anagen  
(B) Catagen  
(C) Telogen  
(D) Pre-anagen
27. In phonetics, vowel quality is better known as :  
(A) Harmonics  
(B) Timbre  
(C) Formant  
(D) Syllable
28. The concept of Edgeoscopy was first developed by :  
(A) Edmond Locard  
(B) E.R. Henry  
(C) Salil K. Chatterjee  
(D) Cummins and Midlo
29. Which of the following is *correct* in forming final opinion on DNA profile comparison ?  
(I) Matching  
(II) Exclusionary  
(III) Inconclusive  
(A) (I) and (II) are correct  
(B) (I) and (III) are correct  
(C) (II) and (III) are correct  
(D) (I), (II) and (III) are correct
30. Iodine vapours interact with the fingerprint residues to produce a visible print with the following colour :  
(A) Purple  
(B) Green  
(C) Yellowish brown  
(D) Black
31. The distance between two consecutive circles of the Battley's Lens, used for single digit classification system of fingerprint is :  
(A) 1 mm  
(B) 2 mm  
(C) 3 mm  
(D) 4 mm

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32. Blood groups can pass through one generation to another is discovered by :  
(A) Lutheran  
(B) Landsteiner  
(C) Dungern and Hirzfeld  
(D) Epstein and Ottenberg
33. Which of the following is not a characteristic of casting material for tool marks ?  
(A) Reproduction of finest details  
(B) No or only slight shrinkage  
(C) Inherent structure of material  
(D) Opacity and high reflectivity
34. The 1st Chemical Examiner Laboratory was set up in India at :  
(A) Madras  
(B) Calcutta  
(C) Agra  
(D) Mumbai
35. The formula which represents the simple ratio of atoms in a compound is called its :  
(A) Molecular formula  
(B) Structural formula  
(C) Rational formula  
(D) Empirical formula
36. Aldrich-Mees Lines are observed in subacute poisoning due to which of the following ?  
(A) Antimony  
(B) Nickel  
(C) Arsenic  
(D) Manganese
37. The measurement of the change in the isotopic ratio when portions of radiolabeled and non-labeled form of the same chemical species are mixed :  
(A) Isotope dilution analysis  
(B) Reverse isotope dilution analysis  
(C) Isotope addition analysis  
(D) Isotope exchange method
38. Which of the following pyromaterial is used for pyroelectric transducer in infrared detection system ?  
(A) 3-aminophthalate  
(B) Nd : YAG  
(C) 1, 2 - dimethoxyethane  
(D) Triglycine sulfate
39. Which of the undermentioned wavelength range in micrometer ( $\mu\text{m}$ ) corresponds to near IR range ?  
(A) 0.25 to 0.80  
(B) 0.80 to 2.50  
(C) 2.50 to 50  
(D) 50 to 1000
40. Spandex and Lycra are examples of ..... fiber.  
(A) Acrylic  
(B) Urethane  
(C) Olefins  
(D) Polyester

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| <p>41. Dum-dum bullets were first manufactured in :</p> <p>(A) New Delhi<br/>(B) Mumbai<br/>(C) Chennai<br/>(D) Kolkata</p> <p>42. In Gustafson's method of age estimation from teeth which of the following parameters is not considered ?</p> <p>(A) Periodontosis<br/>(B) Root resorption<br/>(C) Diastema<br/>(D) Cementum apposition</p> <p>43. Match the following :</p> <p style="text-align: center;"><b>List I</b></p> <p>(a) Oil<br/>(b) Pigments<br/>(c) Solvent<br/>(d) Latex</p> <p style="text-align: center;"><b>List II</b></p> <p>(i) Inorganic oxides<br/>(ii) Triglycerides<br/>(iii) Acrylic polymers<br/>(iv) Organic liquids</p> <p><b>Codes :</b></p> <p>(a) (b) (c) (d)<br/>(A) (ii) (i) (iv) (iii)<br/>(B) (i) (ii) (iii) (iv)<br/>(C) (iv) (i) (ii) (iii)<br/>(D) (ii) (i) (iii) (iv)</p> | <p>44. Chloroform test is used to determine which of the following properties of cement :</p> <p>(A) Specific gravity<br/>(B) Melting point<br/>(C) Refractive index<br/>(D) Elasticity</p> <p>45. "No person accused of any offence shall be compelled to be a witness against himself." The statement is under which of the following articles of constitution of India ?</p> <p>(A) Article 20(3)<br/>(B) Article 22(2)<br/>(C) Article 23(1)<br/>(D) Article 25(2)</p> <p>46. The benefits of Anti-lock Braking Systems (ABS) are all, <i>except</i> :</p> <p>(A) Reduced stopping distance under braking conditions<br/>(B) Increased directional stability under braking conditions<br/>(C) Added steering control during maximum braking<br/>(D) Longer skid marks on the rough roads</p> <p>47. Uniqueness of iris is in :</p> <p>(A) Random color variations<br/>(B) Random pigment variations<br/>(C) Random textural variations<br/>(D) Random shape variations</p> |
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48. Which of the following is not a constituent of black powder ?  
(A) Potassium nitrate  
(B) Charcoal  
(C) Ammonium nitrate  
(D) Sulphur
49. Which of the following is not a sedimentary rock ?  
(A) Sand stone  
(B) Mud stone  
(C) Conglomerate  
(D) Granite
50. The maximum number of judges in Supreme Court of India including Chief Justice is :  
(A) 28  
(B) 29  
(C) 30  
(D) 31
51. Gratings, which are produced by photographic means using lasers are known as :  
(A) Littrow Grating  
(B) Holographic Gratings  
(C) Echelle Gratings  
(D) Ebert Grating
52. Which of the following microscope has the highest resolution ?  
(A) SEM  
(B) TEM  
(C) Stereo Microscope  
(D) Fluorescence Microscope
53. Which of the following solvents are of the lowest polarity ?  
(A) Acetonitrile  
(B) Ethanol  
(C) Methanol  
(D) Water
54. At an alleged suicide case, the door was found open, the evidence of this kind is better known as :  
(A) Associative evidence  
(B) Transfer evidence  
(C) Depicting evidence  
(D) Conditional evidence
55. A jet of steam is useful for restoration of erased number from which of the following surfaces ?  
(A) Leather  
(B) Rubber  
(C) Polymer  
(D) Wood
56. The mark left due to lateral movement between the two contacting surface is better known as :  
(A) Lateral marks  
(B) Striation marks  
(C) Compression marks  
(D) Friction marks
57. Which of the following is a method used to determine the gender of a biologic sample ?  
(A) Mitochondrial typing  
(B) RFLP typing  
(C) PCR  
(D) Amelogenin type

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| <p>58. Which of the following methods can be used for determining the age of an ink ?</p> <ul style="list-style-type: none"><li>(A) IR spectrophotometer</li><li>(B) Thin layer chromatography</li><li>(C) Fluorescence spectroscopy</li><li>(D) LC-MS</li></ul> <p>59. Which of the following statements is <i>not</i> true ?</p> <ul style="list-style-type: none"><li>(A) Soil sample should be dried and gently crushed to a uniform consistency before dry examination is made</li><li>(B) Type of lighting plays a critical role in the comparison of soil sample for color</li><li>(C) Mineral grains may be present in a soil sample that can exist in a similar range of particle size</li><li>(D) The particle size distribution can be estimated using the microscope</li></ul> <p>60. A transparent resinous liquid to give a smooth, hard, glossy finish to a surface and prevent it from atmospheric action is known as :</p> <ul style="list-style-type: none"><li>(A) Varnish</li><li>(B) Distemper</li><li>(C) Drier</li><li>(D) Vehicle</li></ul> | <p>61. P-30 is secreted by :</p> <ul style="list-style-type: none"><li>(A) Prostrate gland</li><li>(B) Salivary gland</li><li>(C) Parotid glands</li><li>(D) Pancreatic glands</li></ul> <p>62. R-ratio, percent extraction and dye ratio are the terms related to :</p> <ul style="list-style-type: none"><li>(A) Amount of pigment in paint</li><li>(B) Ratio of pigment and vehicle in paint</li><li>(C) Extent of layering in paint</li><li>(D) Relative age of ink</li></ul> <p>63. Collection of fire debris at crime scene cannot be accomplished by packing in airtight container with :</p> <ul style="list-style-type: none"><li>(A) Adsorption tubes</li><li>(B) Charcoal strips</li><li>(C) Tenax</li><li>(D) Carbonate strips</li></ul> <p>64. “Drop-on-demand” and “continuous drop” are the examples of which of the following printing technology ?</p> <ul style="list-style-type: none"><li>(A) Dot-matrix</li><li>(B) Thermal</li><li>(C) Inkjet</li><li>(D) Laser</li></ul> |
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65. Fired bullet found at a crime scene must be collected by using :
- (A) Forceps  
(B) Tweezers  
(C) Tongs  
(D) Gloves in hand
66. While taking a close-up photograph of the subject at crime scene, flash attachment is covered with a tissue/handkerchief to prevent :
- (A) Washing-out effect  
(B) Shadow formation  
(C) Bouncing effect  
(D) Glaring effect
67. Seeds of 'Hop' can be distinguished from that of cannabis by the presence of :
- (A) Endospermic shell  
(B) Tortoise shell  
(C) Shrivelled shell  
(D) Hard shell
68. In human skull, the suture between basi-sphenoid and basi-occipital, the basilar suture, generally obliterates :
- (A) Between 18 and 25 years  
(B) Between 35 and 45 years  
(C) Between 25 and 35 years  
(D) Between 55 and 65 years
69. Patella and Fabella are examples of which type of bones ?
- (A) Sesamoid bones  
(B) Pneumatic bones  
(C) Miniature long bones  
(D) Flat bones
70. In summer season a cadaver was recovered in a state of putrefaction and infested with maggots of housefly. This indicates the time since death would be approximately :
- (A) 1 day  
(B) 15 days  
(C) 2 to 3 days  
(D) 10 to 11 days
71. Match the following :
- List I**
- (a) Silica glass  
(b) Light sensitive eyeglass  
(c) Decolorized glass  
(d) Colored glass
- List II**
- (i) Chromium oxide  
(ii) Barium sulphate  
(iii) Molten quartz  
(iv) Silver halide
- Codes :**
- (a) (b) (c) (d)  
(A) (iii) (i) (iv) (ii)  
(B) (iii) (ii) (i) (iv)  
(C) (iii) (i) (ii) (iv)  
(D) (iii) (iv) (ii) (i)

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72. Which of the following is a poor water resistance explosive ?  
(A) Poured ANFO  
(B) Gelatin Dynamite  
(C) Packaged ANFO  
(D) Cartridge emulsion
73. Out of the following, which statement is true with respect to footprint examination ?  
(A) Height of a person can be roughly estimated from the footprints  
(B) Race of a person can be determined from the footprint  
(C) Caste of a person can be estimated from footprints  
(D) Ethnicity can be determined from footprints
74. Sex chromosome constitution in persons with Turner's syndrome is :  
(A) XY  
(B) XYY  
(C) OX  
(D) XXX
75. A footwear print observed on the clothes worn by a victim of an alleged murder case could be best lifted by using :  
(A) Adhesive tape  
(B) Electrostatic dust-print lifting device  
(C) Liquid wax  
(D) Plaster of Paris
76. A combination of one shot gun and one rifle barrel is known as :  
(A) Cierling  
(B) Trilling  
(C) Vierling  
(D) Drilling
77. Which of the following samples is collected to evaluate the effect of extraneous variable ?  
(A) Sample of unknown origin  
(B) Special sample  
(C) Control sample  
(D) Extraneous sample
78. EMV in view of credit card is :  
(A) Standard for chip based card  
(B) Standard for RAID based card  
(C) Standard for magnetic stripe based card  
(D) Standard for electrostatic card
79. ABFO scale no. 2 is used in cases of :  
(A) Tool marks  
(B) Bite marks  
(C) Finger marks  
(D) Bullet marks
80. Which of the following materials is not commonly used as die for pre-inked stamp ?  
(A) Pre-mixed gel  
(B) Squeeze effect  
(C) Foam and powder  
(D) Photopolymer

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81. According to FDA guidelines for method validation by LC-MS, which of the following is not a relevant parameter :
- (A) Accuracy  
(B) Precision  
(C) Retention  
(D) Carry over
82. For detecting the presence of lead (Pb) at microgram level ( $\mu\text{g}$  level) in ground water, the recommended analytical instrumental technique will be :
- (A) AAS  
(B) NMR  
(C) NAA  
(D) GCMS
83. Which of the following is not an ionization source in LC-MS/MS ?
- (A) Electrospray Ionization  
(B) Atmospheric Pressure Chemical Ionization  
(C) Atmospheric Pressure Photo-ionization  
(D) Field Ionization
84. In adipocere formation the following change occurs :
- (A) Blood into watery serum  
(B) Muscle into fatty tissue  
(C) Body fats into soapy and waxy  
(D) Bone and tendons into gelatinous mass
85. Which of the following refers to criminal intent ?
- (A) Mens rea  
(B) Neurosis  
(C) Compos men tis  
(D) Empathy
86. Bruise of green color is observed in a victim. Time since injury would be which of the following ?
- (A) 7-12 days  
(B) 2 days  
(C) 4-5 days  
(D) 1 day
87. Which of the following is not a method of hymen examination ?
- (A) Glaister-keene rods  
(B) Foley's catheter  
(C) Through urethra  
(D) Through rectum
88. Blue colouration of nails in case of asphyxia is known as :
- (A) Edema  
(B) Cyanosis  
(C) Petechial hemorrhages  
(D) Indigosis

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89. The polygraph measures all *except* :

- (A) Heart rate
- (B) Electro-dermal activity
- (C) Blood pressure
- (D) P-300

90. Match the following :

**List I**

- (a) Hanging
- (b) Gagging
- (c) Choking
- (d) Smothering

**List II**

- (i) Foreign object is pushed through mouth
- (ii) External orifices of respiration are blocked
- (iii) Foreign objects enters trachea
- (iv) Exclusion of air from lungs is by ligature around neck

**Codes :**

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

91. Select the *incorrect* statement among the following about diatoms :

- (A) Acid digestion technique is used to extract diatoms from tissues
- (B) Diatoms have an extracellular coat composed of magnesium
- (C) Diatoms are aquatic unicellular plant
- (D) Presence of diatoms in femoral bone is an indication of antemortem aspiration of water

92. Match the following :

**List I**

- (a) Bhilawanol
- (b) Hyoscyamine
- (c) Nerin
- (d) Calatoxin

**List II**

- (i) *Calatropis gigantea*
- (ii) *Nerium oleander*
- (iii) *Semecarpus anacardium*
- (iv) *Atropa belladonna*

**Codes :**

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

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93. Which of the following is *not* a carbamate poison ?  
(A) Aldicarb  
(B) Propoxur  
(C) Carbofuran  
(D) Aldrin
94. Ganja is obtained from which of the following parts of plant ?  
(A) Dried leaves  
(B) Flowering tops  
(C) Roots  
(D) Fresh leaves
95. Which of the following dye is added to petrol to give color to it ?  
(A) Phenyl azo 2-naphthol  
(B) Di-alkyl amino anthraquinone  
(C) Alizarin yellow  
(D) Sudan II
96. The knock rating of a gasoline is expressed also by its :  
(A) Heptane number  
(B) Octane number  
(C) Propane number  
(D) Aniline gravity
97. The octanol/water partition coefficient of a chemical is an indicative of ..... in human.  
(A) Carcinogenesis  
(B) Long half life  
(C) Potential bioaccumulation  
(D) Toxicity
98. Which group of drugs is not suited for intranasal administration ?  
(A) Cannabis  
(B) Opioids  
(C) Nicotine  
(D) Oleander
99. Sinistrality means :  
(A) An ambidextrous individual  
(B) Right handedness  
(C) Left handedness  
(D) Hyodactylic individual
100. Ninhydrine is the trade name of which of the following chemicals ?  
(A) Hydroquinone  
(B) Triketohydrindine hydrate  
(C) 3, 5, 3, 5, tetramethyl benzene  
(D) Osmium trioxide

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**ROUGH WORK**

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