

SET-"X"

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

(MPH/PHD/URS-EE-2020)

FORENSIC SCIENCE

Code

A

Sr. No. 10001

Time : 1½ Hours

Total Questions : 100

Max. Marks : 100

Roll No. _____

(in figure)

(in words)

Name : _____

Father's Name : _____

Mother's Name : _____

Date of Examination : _____

(Signature of the candidate)

(Signature of the Invigilator)

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3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
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7. Use only Black or Blue **BALL POINT PEN** of good quality in the OMR Answer-Sheet.
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Question No.	Questions
1.	<p>Who among the following is connected to critical criminology ?</p> <p>(1) William J. Chambliss (2) Richard A. Cloward (3) R. E. Park (4) E. H. Southerland</p>
2.	<p>Which of the following records the movement of evidence ?</p> <p>(1) Chain of custody (2) Chain of command (3) Chain of packing (4) Chain of crime</p>
3.	<p>Dying declaration is to be preferably recorded by :</p> <p>(1) Magistrate (2) Doctor (3) Jury member (4) Police</p>
4.	<p>Police inquest is conducted under section :</p> <p>(1) 174 IPC (2) 174 CrPC (3) 176 IPC (4) 176 CrPC</p>
5.	<p>Locard's Exchange Principle is for :</p> <p>(1) Detecting toxicity (2) Knowing time since death (3) Detecting crime (4) Estimating the age</p>
6.	<p>Cadaveric spasm indicates :</p> <p>(1) Homicide (2) Suicide (3) Last act of a person before death (4) Natural death</p>

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7.	<p>"Tache Noire Sclerotiques" is a post-mortem feature seen in :</p> <p>(1) Mouth (2) Nose (3) Ears (4) Eyes</p>
8.	<p>Which of the following are examples of unnatural sexual offence :</p> <p>(i) Sodomy (ii) Incest (iii) Buccal coitus (iv) Bestiality</p> <p>(1) i, iii, iv (2) i, ii, iii (3) iv, ii, i (4) i, ii, iv</p>
9.	<p>To ensure integrity, validate your tools and verify your evidence with</p> <p>(1) Watermarks (2) Digital certificate (3) Steganography (4) Hashing algorithms</p>
10.	<p>Human trafficking is a form of :</p> <p>(1) Organised crime (2) Love jihad (3) Hate crime (4) Forgery</p>
11.	<p>Which of the following is a feature of genuine signatures :</p> <p>(1) Pen strokes with tapering ends (2) Evidence of touching (3) Unnatural pen lifts (4) Pen strokes with blunt ends</p>

Question No.	Questions
12.	<p>The most commonly used material in the production of paper is :</p> <p>(1) Sisal (2) Cotton (3) Wood from coniferous trees (4) Wood from deciduous trees</p>
13.	<p>Which of the following is not a counterfeiting measure :</p> <p>(1) a dandy roll (2) a hologram patch (3) a water mark (4) an iridescent stripe</p>
14.	<p>Segments of writing obscured by correction fluid are known as :</p> <p>(1) Corrections (2) Erasures (3) Embellishments (4) Obliterations</p>
15.	<p>ESDA is not used to :</p> <p>(1) date inks (2) visualise indented writing (3) determine sequence of writing impressions (4) examine torn pages of paper for matching</p>
16.	<p>Which of the following method is used to determine the age of an ink by tracking the degradation of certain dyes :</p> <p>(1) LDMS (2) HPLC (3) TLC (4) GC</p>

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22.	<p>Which of the following cannot be used as an absorbent in Column absorption chromatography :</p> <p>(1) Potassium permanganate (2) Silica gel (3) Magnesium oxide (4) Activated alumina</p>
23.	<p>Mass spectrometer is used to determine :</p> <p>(1) Properties of samples (2) Relative mass of atoms (3) Composition of sample (4) Element concentration in sample</p>
24.	<p>Which of the following is not correct about Absorption spectroscopy :</p> <p>(1) Reflection is kept maximum (2) Scattering is kept maximum (3) Intensity of radiation indicates concentration (4) It involves transmission</p>
25.	<p>In Chromatography, the stationary phase can be supported on a :</p> <p>(1) Liquid only (2) Solid only (3) Liquid or gas (4) Solid or liquid</p>
26.	<p>Mass spectroscopy was invented by :</p> <p>(1) Aston (2) Nikola Tesla (3) Goldstein (4) J. J. Thompson</p>

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27.	<p>Which of the following was NOT true about HPLC :</p> <p>(1) It has high sensitivity (2) It is performed in columns (3) There is no need to vaporise the samples (4) It needs high pressure for separation</p>
28.	<p>Chromatography is a physical method used to separate and analyse :</p> <p>(1) Complex mixtures (2) Metals (3) Simple mixtures (4) Viscous mixtures</p>
29.	<p>NMR spectroscopy is used for determining structure in which of the following :</p> <p>(1) Liquids (2) Gases (3) Radioactive materials (4) Insoluble compounds</p>
30.	<p>The most suitable solvent system for TLC of inks is :</p> <p>(1) Amyl alcohol : Acetic acid : Pyridine (6 : 1 : 2) (2) Ethanol : Acetic acid : Acetone (4 : 5 : 1) (3) Amyl alcohol : Acetic acid : Chloroform (6 : 1 : 2) (4) N-butanol : Pyridine : Water (3 : 1 : 1.5)</p>
31.	<p>Forensic Palynology deals with :</p> <p>(1) Dust (2) Diatoms (3) Pollen and spores (4) Fossils</p>

Question No.	Questions
32.	For examination of diatoms, sample should be taken from : (1) Buccal cavity (2) Stomach (3) Lungs (4) Bone marrow
33.	In Wildlife forensic, animals are identified by : (1) Pug marks (2) Photography (3) Trapping (4) Poaching
34.	Lifting of footprints on snow can be done by : (1) Wax casting (2) Tracing (3) Sulphur casting (4) Plaster of Paris cast
35.	Which of the following is NOT the component of Kastle-Meyer test : (1) Glacial acetic acid (2) Potassium hydroxide (3) Phenolphthalein (4) Zinc dust
36.	Presence of menstrual blood stain is confirmed by : (1) Restriction enzymes (2) Isozyme markers (3) Fibrin Degradation Product (4) Benzidine test
37.	Seminal fluid is secreted by prostate gland, seminal vesicles and : (1) Thyroid gland (2) Adrenal gland (3) Pineal gland (4) Cowper's gland

Question No.	Questions
38.	Lanugo hair are : (1) Thin and soft (2) Medullated (3) Having complex scale pattern (4) Pigmented
39.	Which of the following is added to harden Plaster of Paris cast of footprint (1) Sodium sulphate (2) Talcum powder (3) Sodium chloride (4) Sodium carbonate
40.	Scales are found on which of the following fibres : (1) Silk (2) Wool (3) Cotton (4) Linen
41.	ABO grouping is based on : (1) Nuclear chromatin (2) Red cell enzyme (3) Plasma proteins (4) Red cell surface antigens
42.	Sex can be established by examination of WBC for the presence of : (1) Ribosomes (2) Plasma membrane (3) Drum-stick (4) Golgi bodies
43.	Confirmatory test for human origin of blood stain is : (1) Takayama test (2) Teichmann's test (3) Benzidine test (4) Precipitin test

Question No.	Questions
44.	Minisatellites are : (1) short non-coding repetitive sequences in DNA (2) 10-40 bp short sequences within the genes (3) short coding repetitive sequences in DNA (4) short exons
45.	DNA profiling to show similarity between different animal species with reference to some specific protein coding DNA sequence is called : (1) Animal blot (2) Zoo blot (3) Phylogenetic blot (4) Dot blot
46.	DNA Fingerprinting technique was developed by : (1) James Watson (2) Francis Crick (3) Lalji Singh (4) Alec Jeffreys
47.	Blood grouping in old dried blood stains is done by : (1) Hemin crystal test (2) Absorption elution test (3) Benzidine test (4) Acid elution test
48.	Which of the following is NOT a test for blood : (1) Benzidine test (2) Teichmann's test (3) Acid phosphatase test (4) Hemochromogen test
49.	Eucleated biconcave RBC in blood stains indicates that it belongs to a : (1) Bird (2) Camel (3) Amphibian (4) Human

Question No.	Questions
50.	<p>Which of the following method is used to identify an aspermic male involved in sexual offence case :</p> <p>(1) RFLP (2) Y-STR (3) Y-body (4) DNA barcoding</p>
51.	<p>Toxic action of metallic poisons involve :</p> <p>(1) binding with lipids (2) binding with amino acids, proteins and polypeptides (3) binding with sugars (4) binding with cholesterol</p>
52.	<p>Which of the following is known as ecstasy :</p> <p>(1) 3, 4 Methylenedioxymethamphetamine (2) 3, 4 Methylenedioxyamphetamine (3) Amphetamine (4) Methamphetamine</p>
53.	<p>Which of the following toxins comes from castor oil plant :</p> <p>(1) Ricin (2) Digitanin (3) Aetropin (4) Paraffin</p>
54.	<p>The method used for the isolation of sulphuric acid from the charred shir is :</p> <p>(1) Infusion with water (2) Infusion with ethanol (3) Distillation (4) Dialysis</p>

Question No.	Questions
55.	<p>A drug that induces alterations in mood and perception is known as :</p> <p>(1) hallucinogen (2) stimulant (3) seductive (4) depressant</p>
56.	<p>Toxicity level of Datura plant based on increasing level is :</p> <p>(1) Leaf, Root, Fruit, Seed (2) Seed, Leaf, Root, Fruit (3) Root, Seed, Fruit, Leaf (4) Fruit, Root, Leaf, Seed</p>
57.	<p>Which preservative is recommended for the preservation of blood sample in case of Carbon monoxide poisoning :</p> <p>(1) Sodium chloride (2) Sodium carbonate (3) Sodium citrate (4) No preservative</p>
58.	<p>Free Sulphuric acid is rarely found in stomach content in acid poisoning cases because :</p> <p>(1) It may be neutralised by alkalies given as antidotes (2) It may combine chemically with tissues (3) It may be vomitted out (4) All the above</p>
59.	<p>LSD is derived from :</p> <p>(1) <i>Claviceps purpurea</i> (2) <i>Cannabis species</i> (3) <i>Papaver somniferum</i> (4) <i>Calotropis species</i></p>

Question No.	Questions
60.	Chemical etching method is used for restoration of erased marks on : (1) Plastic (2) Wood (3) Metal (4) Leather
61.	Who coined the term Forensic Ballistic ? (1) J. Thompson (2) Charles Daly (3) Calvin Goddard (4) Martin Marz
62.	In ballistics, Ratchet mechanism is associated with : (1) Revolver (2) Rifled firearm (3) Semi-automatic firearm (4) None of the above
63.	In "5.6 × 57 mmR" term, the 'R' stands for which type of the cartridge case? (1) Rebated (2) Rimless (3) Rimmed (4) Rough
64.	Smokeless propellant version of Express cartridge is called : (1) Paper Express (2) Nitro Express (3) Blast Express (4) Smokeless Express
65.	At a crime scene, a very old cartridge of early 1900s was found having designation 0.32-0.30. If 0.32 is the caliber, what does 0.30 signify ? (1) Length of cartridge case (2) Length of bullet (3) Weight of bullet (4) Weight of black powder

Question No.	Questions
66.	<p>What is caliber in ballistic ?</p> <p>(1) Internal diameter of the barrel</p> <p>(2) Diameter of the bullet</p> <p>(3) External diameter of the barrel</p> <p>(4) Diameter of the cartridge case</p>
67.	<p>The bore of 12 bore gun is :</p> <p>(1) 0.731 (2) 0.723</p> <p>(3) 0.727 (4) 0.729</p>
68.	<p>Arrange the following firearms in the proper chronological order :</p> <p>(a) Flint lock (b) Wheel lock</p> <p>(c) Match lock (d) Percussion lock</p> <p>(1) c, a, b, d (2) a, d, c, b</p> <p>(3) b, c, d, a (4) d, b, a, c</p>
69.	<p>Which of the following is NOT an advantage of Aluminium cased ammunition:</p> <p>(1) Less effective accuracy (2) Less robust than brass</p> <p>(3) Cost-effective (4) For shot gun ammunition use only</p>
70.	<p>What is the ammunition loading mechanism of a match lock pistol ?</p> <p>(1) Top-lift load (2) Muzzle load</p> <p>(3) Breach load (4) None of the above</p>

Question No.	Questions
71.	Origin of the bones for facial reproduction requires which of the following forensic examination : (1) Serological (2) Bio-chemical (3) Anthropological (4) Odontological
72.	Height of the body can be deduced from the length of humerus, where humerus is : (1) 20 percent of height (2) 35 percent of height (3) 10 percent of height (4) 15 percent of height
73.	Ischiopubic index is used to determine : (1) Race (2) Age (3) Stature (4) Sex
74.	Medial end of clavicle fuses at the age of : (1) 16-17 years (2) 30-40 years (3) 18-22 years (4) 10-15 years
75.	The single best criterion to distinguish the female from male pelvis is (1) shape of acetabulum (2) shape of greater sciatic notch (3) shape of ischial tuberosities (4) shape of foramen

Question No.	Questions
76.	Xiphoid process unites with sternum at the age of : (1) 40 years (2) 60 years (3) 30 years (4) 20 years
77.	Closure of all skull sutures indicate age more than : (1) 70 years (2) 40 years (3) 50 years (4) 60 years
78.	Coronal suture completely fuses by the age of : (1) 50 years (2) 30 years (3) 40 years (4) 16 years
79.	Which of the following adult bone is most useful in sex establishment : (1) Clavicle (2) Pelvis (3) Femur (4) Humerus
80.	Attainment of 16 years of age is diagnosed by X-ray of : (1) Elbow (2) Ankle (3) Knee (4) Wrist
81.	Which of the following is used to determine the time of death : (1) MR spectroscopy (2) CT scan (3) Photomicrography (4) 3-D Surface scanning
82.	The first permanent tooth to erupt is : (1) Incisor (2) Canine (3) Molar (4) Premolar

Question No.	Questions
83.	A girl has 8 temporary teeth and 20 permanent teeth. Her age is likely to be : (1) 12 years (2) 10 years (3) 16 years (4) 18 years
84.	For determination of age, the most useful secondary change in tooth is (1) Root transparency (2) Root resorption (3) Attrition (4) Secondary dentin deposition
85.	Cusp of Carabelli is found on : (1) Bicuspids (2) Canines (3) Tricuspids (4) Incisors
86.	According to ISO 9001, inspection and testing comes under what management responsibility? (1) Servicing (2) Non-confirming product control (3) Document control (4) Process control
87.	Ontology is : (1) classification of internet based documents (2) an indexing method (3) documentation service (4) cataloguing of internet based documents

Question No.	Questions
88.	<p>Which of the following is the first step in the research process :</p> <ol style="list-style-type: none"> (1) Searching for solutions to the problem (2) Identification of problem (3) Review of literature (4) Searching sampling methods
89.	<p>During research process 'Formulation of Hypothesis' is followed by :</p> <ol style="list-style-type: none"> (1) Selection of research tools (2) Collection of data (3) Statement of objectives (4) Analysis of data
90.	<p>Bibliometry is :</p> <ol style="list-style-type: none"> (1) Library service (2) Information management tool (3) Function of library network (4) Literature service
91.	<p>The skid marks on the road in a vehicular accident may give an indication of :</p> <ol style="list-style-type: none"> (1) Weight of the vehicle (2) Make of the vehicle (3) Speed of the vehicle (4) Length of the vehicle

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92.	<p>When the temperature of a liquid is raised, its refractive index will :</p> <p>(1) decrease (2) increase (3) remain unchanged (4) disappear</p>
93.	<p>Light having pulsating waves in unison is called :</p> <p>(1) Polychromatic (2) Polaroid (3) Laser (4) Monochromatic</p>
94.	<p>In order for photographs to be admissible in court, they must be ruled</p> <p>(1) fair and accurate (2) black and white (3) digital and coloured (4) none of the above</p>
95.	<p>What type of scale is required for measuring bite marks :</p> <p>(1) Ruler (2) Coins (3) Round scale (4) ABFO</p>
96.	<p>Reports and logs generated by forensic tools are typically in plain format, a word processor format or format.</p> <p>(1) TXT (2) HTML (3) PDF (4) PS</p>
97.	<p>Paraben, a leading mobile forensic software, provides many tools inclu which can be used to acquire data from different phone mo</p> <p>(1) Data Pilot (2) MOBI Ledit (3) Device Seizure (4) Bit Pim</p>

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98.	<p>Log files and files provide useful information to an e-mail investigator:</p> <p>(1) scripts (2) .rts (3) batch (4) configuration</p>
99.	<p>A bootable forensic CD can be created by and perform a live acquisition.</p> <p>(1) Neon (2) Inquisitor (3) Helix (4) DTDD</p>
100.	<p>Put the following Forensic Psychology events of breakthroughs in chronological order from earliest to most recent :</p> <p>(a) Eye witness testing (b) Development of Polygraph (c) DNA profiling (d) Development of Stanford-Binet IQ test</p> <p>(1) a, d, b, c (2) d, c, b, a (3) a, d, c, b (4) b, c, a, d</p>

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13.	Which of the following toxins comes from castor oil plant : (1) Ricin (2) Digitanin (3) Aetropin (4) Paraffin
14.	The method used for the isolation of sulphuric acid from the charred shirt is : (1) Infusion with water (2) Infusion with ethanol (3) Distillation (4) Dialysis
15.	A drug that induces alterations in mood and perception is known as : (1) hallucinogen (2) stimulant (3) seductive (4) depressant
16.	Toxicity level of Datura plant based on increasing level is : (1) Leaf, Root, Fruit, Seed (2) Seed, Leaf, Root, Fruit (3) Root, Seed, Fruit, Leaf (4) Fruit, Root, Leaf, Seed
17.	Which preservative is recommended for the preservation of blood sample in case of Carbon monoxide poisoning : (1) Sodium chloride (2) Sodium carbonate (3) Sodium citrate (4) No preservative

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18.	<p>Free Sulphuric acid is rarely found in stomach content in acid pois cases because :</p> <p>(1) It may be neutralised by alkalies given as antidotes (2) It may combine chemically with tissues (3) It may be vomitted out (4) All the above</p>
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22.	<p>For examination of diatoms, sample should be taken from :</p> <p>(1) Buccal cavity (2) Stomach (3) Lungs (4) Bone marrow</p>
23.	<p>In Wildlife forensic, animals are identified by :</p> <p>(1) Pug marks (2) Photography (3) Trapping (4) Poaching</p>

MPH/PHD/URS-EE-2020 (Forensic Science) Code-B

Question No.	Questions
24.	Lifting of footprints on snow can be done by : (1) Wax casting (2) Tracing (3) Sulphur casting (4) Plaster of Paris cast
25.	Which of the following is NOT the component of Kastle-Meyer test : (1) Glacial acetic acid (2) Potassium hydroxide (3) Phenolphthalein (4) Zinc dust
26.	Presence of menstrual blood stain is confirmed by : (1) Restriction enzymes (2) Isozyme markers (3) Fibrin Degradation Product (4) Benzidine test
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28.	Lanugo hair are : (1) Thin and soft (2) Medullated (3) Having complex scale pattern (4) Pigmented

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29.	<p>Which of the following is added to harden Plaster of Paris cast of for</p> <p>(1) Sodium sulphate (2) Talcum powder</p> <p>(3) Sodium chloride (4) Sodium carbonate</p>
30.	<p>Scales are found on which of the following fibres :</p> <p>(1) Silk (2) Wool</p> <p>(3) Cotton (4) Linen</p>
31.	<p>Which of the following is a feature of genuine signatures :</p> <p>(1) Pen strokes with tapering ends</p> <p>(2) Evidence of touching</p> <p>(3) Unnatural pen lifts</p> <p>(4) Pen strokes with blunt ends</p>
32.	<p>The most commonly used material in the production of paper is :</p> <p>(1) Sisal</p> <p>(2) Cotton</p> <p>(3) Wood from coniferous trees</p> <p>(4) Wood from deciduous trees</p>
33.	<p>Which of the following is not a counterfeiting measure :</p> <p>(1) a dandy roll</p> <p>(2) a hologram patch</p> <p>(3) a water mark</p> <p>(4) an iridescent stripe</p>

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34.	Segments of writing obscured by correction fluid are known as : (1) Corrections (2) Erasures (3) Embellishments (4) Obliterations
35.	ESDA is not used to : (1) date inks (2) visualise indented writing (3) determine sequence of writing impressions (4) examine torn pages of paper for matching
36.	Which of the following method is used to determine the age of an ink by tracking the degradation of certain dyes : (1) LDMS (2) HPLC (3) TLC (4) GC
37.	In handwriting comparison the crossing in 't' and the dots in 'i' and 'j' are known as : (1) Loop signs (2) Connective signs (3) Shoulder signs (4) Diacritic signs
38.	Which of the following is a sign of forgery : (1) Pen lifts (2) Retouching (3) Connecting strokes (4) All of the above

Question No.	Questions
39.	<p>The Fingerprint Bureau was first established in which of the following country ?</p> <p>(1) India (2) USA (3) England (4) France</p>
40.	<p>Fingerprints can be permanently changed by :</p> <p>(1) Scleroderma (2) Eczema (3) Leprosy (4) Psoriasis</p>
41.	<p>The skid marks on the road in a vehicular accident may give an indication of :</p> <p>(1) Weight of the vehicle (2) Make of the vehicle (3) Speed of the vehicle (4) Length of the vehicle</p>
42.	<p>When the temperature of a liquid is raised, its refractive index will</p> <p>(1) decrease (2) increase (3) remain unchanged (4) disappear</p>
43.	<p>Light having pulsating waves in unison is called :</p> <p>(1) Polychromatic (2) Polaroid (3) Laser (4) Monochromatic</p>
44.	<p>In order for photographs to be admissible in court, they must be ruled</p> <p>(1) fair and accurate (2) black and white (3) digital and coloured (4) none of the above</p>

Question No.	Questions
45.	What type of scale is required for measuring bite marks : (1) Ruler (2) Coins (3) Round scale (4) ABFO
46.	Reports and logs generated by forensic tools are typically in plain text format, a word processor format or format. (1) TXT (2) HTML (3) PDF (4) PS
47.	Paraben, a leading mobile forensic software, provides many tools including which can be used to acquire data from different phone models (1) Data Pilot (2) MOBI Ledit (3) Device Seizure (4) Bit Pim
48.	Log files and files provide useful information to an e-mail investigator. (1) scripts (2) .rts (3) batch (4) configuration
49.	A bootable forensic CD can be created by and perform a live acquisition. (1) Neon (2) Inquisitor (3) Helix (4) DTDD

Question No.	Questions
50.	<p>Put the following Forensic Psychology events of breakthrough chronological order from earliest to most recent :</p> <p>(a) Eye witness testing (b) Development of Polygraph</p> <p>(c) DNA profiling (d) Development of Stanford-Binet</p> <p>(1) a, d, b, c (2) d, c, b, a</p> <p>(3) a, d, c, b (4) b, c, a, d</p>
51.	<p>Who coined the term Forensic Ballistic ?</p> <p>(1) J. Thompson (2) Charles Daly</p> <p>(3) Calvin Goddard (4) Martin Marz</p>
52.	<p>In ballistics, Ratchet mechanism is associated with :</p> <p>(1) Revolver (2) Rifled firearm</p> <p>(3) Semi-automatic firearm (4) None of the above</p>
53.	<p>In "5.6 × 57 mmR" term, the 'R' stands for which type of the case?</p> <p>(1) Rebated (2) Rimless</p> <p>(3) Rimmed (4) Rough</p>
54.	<p>Smokeless propellant version of Express cartridge is called :</p> <p>(1) Paper Express</p> <p>(2) Nitro Express</p> <p>(3) Blast Express</p> <p>(4) Smokeless Express</p>

Question No.	Questions
55.	<p>At a crime scene, a very old cartridge of early 1900s was found having designation 0.32-0.30. If 0.32 is the caliber, what does 0.30 signify ?</p> <p>(1) Length of carried case (2) Length of bullet (3) Weight of bullet (4) Weight of black powder</p>
56.	<p>What is caliber in ballistic ?</p> <p>(1) Internal diameter of the barrel (2) Diameter of the bullet (3) External diameter of the barrel (4) Diameter of the cartridge case</p>
57.	<p>The bore of 12 bore gun is :</p> <p>(1) 0.731 (2) 0.723 (3) 0.727 (4) 0.729</p>
58.	<p>Arrange the following firearms in the proper chronological order :</p> <p>(a) Flint lock (b) Wheel lock (c) Match lock (d) Percussion lock</p> <p>(1) c, a, b, d (2) a, d, c, b (3) b, c, d, a (4) d, b, a, c</p>
59.	<p>Which of the following is NOT an advantage of Aluminium cased ammunition:</p> <p>(1) Less effective accuracy (2) Less robust than brass (3) Cost-effective (4) For shot gun ammunition use only</p>

Question No.	Questions
66.	<p>According to ISO 9001, inspection and testing comes under which management responsibility ?</p> <ol style="list-style-type: none">(1) Servicing(2) Non-confirming product control(3) Document control(4) Process control
67.	<p>Ontology is :</p> <ol style="list-style-type: none">(1) classification of internet based documents(2) an indexing method(3) documentation service(4) cataloguing of internet based documents
68.	<p>Which of the following is the first step in the research process :</p> <ol style="list-style-type: none">(1) Searching for solutions to the problem(2) Identification of problem(3) Review of literature(4) Searching sampling methods
69.	<p>During research process 'Formulation of Hypothesis' is followed by :</p> <ol style="list-style-type: none">(1) Selection of research tools(2) Collection of data(3) Statement of objectives(4) Analysis of data

Question No.	Questions
70.	Bibliometry is : (1) Library service (2) Information management tool (3) Function of library network (4) Literature service
71. ✓	ABO grouping is based on : (1) Nuclear chromatin (2) Red cell enzyme (3) Plasma proteins (4) Red cell surface antigens
72.	Sex can be established by examination of WBC for the presence of : (1) Ribosomes (2) Plasma membrane (3) Drum-stick (4) Golgi bodies
73.	Confirmatory test for human origin of blood stain is : (1) Takayama test (2) Teichmann's test (3) Benzidine test (4) Precipitin test
74.	Minisatellites are : (1) short non-coding repetitive sequences in DNA (2) 10-40 bp short sequences within the genes (3) short coding repetitive sequences in DNA (4) short exons

Question No.	Questions
75.	DNA profiling to show similarity between different animal species with reference to some specific protein coding DNA sequence is called : (1) Animal blot (2) Zoo blot (3) Phylogenetic blot (4) Dot blot
76.	DNA Fingerprinting technique was developed by : (1) James Watson (2) Francis Crick (3) Lalji Singh (4) Alec Jeffreys
77.	Blood grouping in old dried blood stains is done by : (1) Hemin crystal test (2) Absorption elution test (3) Benzidine test (4) Acid elution test
78.	Which of the following is NOT a test for blood : (1) Benzidine test (2) Teichmann's test (3) Acid phosphatase test (4) Hemochromogen test
79.	Enucleated biconcave RBC in blood stains indicates that it belongs to a : (1) Bird (2) Camel (3) Amphibian (4) Human
80. ✓	Which of the following method is used to identify an aspermic male involved in sexual offence case : (1) RFLP (2) Y-STR (3) Y-body (4) DNA barcoding

Question No.	Questions
✓ 81.	<p>Beer Lambert law shows the relation between :</p> <p>(1) Energy absorption and reflected radiation</p> <p>(2) Energy absorption and concentration</p> <p>(3) Reflected radiation and concentration</p> <p>(4) Scattered radiation and concentration</p>
82.	<p>Which of the following cannot be used as an absorbent in Column chromatography :</p> <p>(1) Potassium permanganate (2) Silica gel</p> <p>(3) Magnesium oxide (4) Activated alumina</p>
83.	<p>Mass spectrometer is used to determine :</p> <p>(1) Properties of samples (2) Relative mass of atoms</p> <p>(3) Composition of sample (4) Element concentration in sample</p>
84.	<p>Which of the following is not correct about Absorption spectroscopy</p> <p>(1) Reflection is kept maximum</p> <p>(2) Scattering is kept maximum</p> <p>(3) Intensity of radiation indicates concentration</p> <p>(4) It involves transmission</p>
85.	<p>In Chromatography, the stationary phase can be supported on a</p> <p>(1) Liquid only (2) Solid only</p> <p>(3) Liquid or gas (4) Solid or liquid</p>

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Question No.	Questions
86.	Mass spectroscopy was invented by : (1) Aston (2) Nikola Tesla (3) Goldstein (4) J. J. Thompson
87.	Which of the following was NOT true about HPLC : (1) It has high sensitivity (2) It is performed in columns (3) There is no need to vaporise the samples (4) It needs high pressure for separation
88.	Chromatography is a physical method used to separate and analyse : (1) Complex mixtures (2) Metals (3) Simple mixtures (4) Viscous mixtures
89.	NMR spectroscopy is used for determining structure in which of the following : (1) Liquids (2) Gases (3) Radioactive materials (4) Insoluble compounds
90.	The most suitable solvent system for TLC of inks is : (1) Amyl alcohol : Acetic acid : Pyridine (6 : 1 : 2) (2) Ethanol : Acetic acid : Acetone (4 : 5 : 1) (3) Amyl alcohol : Acetic acid : Chloroform (6 : 1 : 2) (4) N-butanol : Pyridine : Water (3 : 1 : 1.5)

Question No.	Questions
91.	<p>Who among the following is connected to critical criminology ?</p> <p>(1) William J. Chambliss (2) Richard A. Cloward (3) R. E. Park (4) E. H. Southerland</p>
92.	<p>Which of the following records the movement of evidence ?</p> <p>(1) Chain of custody (2) Chain of command (3) Chain of packing (4) Chain of crime</p>
93.	<p>Dying declaration is to be preferably recorded by :</p> <p>(1) Magistrate (2) Doctor (3) Jury member (4) Police</p>
94.	<p>Police inquest is conducted under section :</p> <p>(1) 174 IPC (2) 174 CrPC (3) 176 IPC (4) 176 CrPC</p>
95.	<p>Locard's Exchange Principle is for :</p> <p>(1) Detecting toxicity (2) Knowing time since death (3) Detecting crime (4) Estimating the age</p>
96.	<p>Cadaveric spasm indicates :</p> <p>(1) Homicide (2) Suicide (3) Last act of a person before death (4) Natural death</p>

Question No.	Questions
97.	<p>"Tache Noire Sclerotiques" is a post-mortem feature seen in :</p> <p>(1) Mouth (2) Nose (3) Ears (4) Eyes</p>
98.	<p>Which of the following are examples of unnatural sexual offence :</p> <p>(i) Sodomy (ii) Incest (iii) Buccal coitus (iv) Bestiality</p> <p>(1) i, iii, iv (2) i, ii, iii (3) iv, ii, i (4) i, ii, iv</p>
99.	<p>To ensure integrity, validate your tools and verify your evidence with :</p> <p>(1) Watermarks (2) Digital certificate (3) Steganography (4) Hashing algorithms</p>
100.	<p>Human trafficking is a form of :</p> <p>(1) Organised crime (2) Love jihad (3) Hate crime (4) Forgery</p>

SET-“X”

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

(MPH/PHD/URS-EE-2020)

FORENSIC SCIENCE

Code

C

Sr. No. 10003

Time : 1½ Hours

used for Jumbling
Total Questions : 100

Max. Marks : 100

Roll No. _____ (in figure) _____ (in words)

Name : _____ Father's Name : _____

Mother's Name : _____ Date of Examination : _____

(Signature of the candidate)

(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/
INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.**

1. All questions are compulsory.
2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
5. The candidate **MUST NOT** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers **MUST NOT** be ticked in the Question book-let.
6. There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
7. Use only Black or Blue **BALL POINT PEN** of good quality in the OMR Answer-Sheet.
8. **BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.**

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31.	<p>Which of the following is used to determine the time of death :</p> <p>(1) MR spectroscopy (2) CT scan</p> <p>(3) Photomicrography (4) 3-D Surface scanning</p>
32.	<p>The first permanent tooth to erupt is :</p> <p>(1) Incisor (2) Canine</p> <p>(3) Molar (4) Premolar</p>
33.	<p>A girl has 8 temporary teeth and 20 permanent teeth. Her age is likely be :</p> <p>(1) 12 years (2) 10 years</p> <p>(3) 16 years (4) 18 years</p>

Question No.	Questions
34.	<p>For determination of age, the most useful secondary change in tooth is</p> <p>(1) Root transparency (2) Root resorption (3) Attrition (4) Secondary dentin deposition</p>
35.	<p>Cusp of Carabelli is found on :</p> <p>(1) Bicuspids (2) Canines (3) Tricuspid (4) Incisors</p>
36.	<p>According to ISO 9001, inspection and testing comes under which management responsibility ?</p> <p>(1) Servicing (2) Non-confirming product control (3) Document control (4) Process control</p>
37.	<p>Ontology is :</p> <p>(1) classification of internet based documents (2) an indexing method (3) documentation service (4) cataloguing of internet based documents</p>
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Question No.	Questions
49.	<p>Which of the following is NOT an advantage of Aluminium case ammunition:</p> <p>(1) Less effective accuracy (2) Less robust than brass (3) Cost-effective (4) For shot gun ammunition use only</p>
50.	<p>What is the ammunition loading mechanism of a match lock pistol ?</p> <p>(1) Top-lift load (2) Muzzle load (3) Breach load (4) None of the above</p>
51.	<p>Forensic Palynology deals with :</p> <p>(1) Dust (2) Diatoms (3) Pollen and spores (4) Fossils</p>
52.	<p>For examination of diatoms, sample should be taken from :</p> <p>(1) Buccal cavity (2) Stomach (3) Lungs (4) Bone marrow</p>
53.	<p>In Wildlife forensic, animals are identified by :</p> <p>(1) Pug marks (2) Photography (3) Trapping (4) Poaching</p>
54.	<p>Lifting of footprints on snow can be done by :</p> <p>(1) Wax casting (2) Tracing (3) Sulphur casting (4) Plaster of Paris cast</p>

Question No.	Questions
55.	<p>Which of the following is NOT the component of Kastle-Meyer test :</p> <p>(1) Glacial acetic acid (2) Potassium hydroxide (3) Phenolphthalein (4) Zinc dust</p>
56.	<p>Presence of menstrual blood stain is confirmed by :</p> <p>(1) Restriction enzymes (2) Isozyme markers (3) Fibrin Degradation Product (4) Benzidine test</p>
57.	<p>Seminal fluid is secreted by prostate gland, seminal vesicles and :</p> <p>(1) Thyroid gland (2) Adrenal gland (3) Pineal gland (4) Cowper's gland</p>
58.	<p>Lanugo hair are :</p> <p>(1) Thin and soft (2) Medullated (3) Having complex scale pattern (4) Pigmented</p>
59.	<p>Which of the following is added to harden Plaster of Paris cast of footprints</p> <p>(1) Sodium sulphate (2) Talcum powder (3) Sodium chloride (4) Sodium carbonate</p>

Question No.	Questions
60.	<p>Scales are found on which of the following fibres :</p> <p>(1) Silk (2) Wool (3) Cotton (4) Linen</p>
61.	<p>Origin of the bones for facial reproduction requires which of the following forensic examination :</p> <p>(1) Serological (2) Bio-chemical (3) Anthropological (4) Odontological</p>
62.	<p>Height of the body can be deduced from the length of humerus, where humerus is :</p> <p>(1) 20 percent of height (2) 35 percent of height (3) 10 percent of height (4) 15 percent of height</p>
63.	<p>Ischiopubic index is used to determine :</p> <p>(1) Race (2) Age (3) Stature (4) Sex</p>
64.	<p>Medial end of clavicle fuses at the age of :</p> <p>(1) 16-17 years (2) 30-40 years (3) 18-22 years (4) 10-15 years</p>
65.	<p>The single best criterion to distinguish the female from male pelvis is</p> <p>(1) shape of acetabulum (2) shape of greater sciatic notch (3) shape of ischial tuberosities (4) shape of foramen</p>

Question No.	Questions
72.	When the temperature of a liquid is raised, its refractive index will (1) decrease (2) increase (3) remain unchanged (4) disappear
73.	Light having pulsating waves in unison is called : (1) Polychromatic (2) Polaroid (3) Laser (4) Monochromatic
74.	In order for photographs to be admissible in court, they must be ruled (1) fair and accurate (2) black and white (3) digital and coloured (4) none of the above
75.	What type of scale is required for measuring bite marks : (1) Ruler (2) Coins (3) Round scale (4) ABFO
76.	Reports and logs generated by forensic tools are typically in plain format, a word processor format or format. (1) TXT (2) HTML (3) PDF (4) PS
77.	Paraben, a leading mobile forensic software, provides many tools incl which can be used to acquire data from different phone m (1) Data Pilot (2) MOBI Ledit (3) Device Seizure (4) Bit Pim

Question No.	Questions
78.	<p>Log files and files provide useful information to an e-mail investigator.</p> <p>(1) scripts (2) .rts (3) batch (4) configuration</p>
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80.	<p>Put the following Forensic Psychology events of breakthroughs in chronological order from earliest to most recent :</p> <p>(a) Eye witness testing (b) Development of Polygraph (c) DNA profiling (d) Development of Stanford-Binet IQ test</p> <p>(1) a, d, b, c (2) d, c, b, a (3) a, d, c, b (4) b, c, a, d</p>
81.	<p>Which of the following is a feature of genuine signatures :</p> <p>(1) Pen strokes with tapering ends (2) Evidence of touching (3) Unnatural pen lifts (4) Pen strokes with blunt ends</p>

Question No.	Questions
87.	<p>In handwriting comparison the crossing in 't' and the dots in 'i' and 'j' are known as :</p> <p>(1) Loop signs (2) Connective signs (3) Shoulder signs (4) Diacritic signs</p>
88.	<p>Which of the following is a sign of forgery :</p> <p>(1) Pen lifts (2) Retouching (3) Connecting strokes (4) All of the above</p>
89.	<p>The Fingerprint Bureau was first established in which of the following country ?</p> <p>(1) India (2) USA (3) England (4) France</p>
90.	<p>Fingerprints can be permanently changed by :</p> <p>(1) Scleroderma (2) Eczema (3) Leprosy (4) Psoriasis</p>
91.	<p>Toxic action of metallic poisons involve :</p> <p>(1) binding with lipids (2) binding with amino acids, proteins and polypeptides (3) binding with sugars (4) binding with cholesterol</p>

Question No.	Questions
92.	Which of the following is known as ecstasy : (1) 3, 4 Methylenedioxymethamphetamine (2) 3, 4 Methylenedioxyamphetamine (3) Amphetamine (4) Methamphetamine
93.	Which of the following toxins comes from castor oil plant : (1) Ricin (2) Digitanin (3) Aetropin (4) Paraffin
94.	The method used for the isolation of sulphuric acid from the charred is : (1) Infusion with water (2) Infusion with ethanol (3) Distillation (4) Dialysis
95.	A drug that induces alterations in mood and perception is known as : (1) hallucinogen (2) stimulant (3) seductive (4) depressant
96.	Toxicity level of Datura plant based on increasing level is : (1) Leaf, Root, Fruit, Seed (2) Seed, Leaf, Root, Fruit (3) Root, Seed, Fruit, Leaf (4) Fruit, Root, Leaf, Seed
97.	Which preservative is recommended for the preservation of blood s in case of Carbon monoxide poisoning : (1) Sodium chloride (2) Sodium carbonate (3) Sodium citrate (4) No preservative

Question No.	Questions
98.	<p>Free Sulphuric acid is rarely found in stomach content in acid poisoning cases because :</p> <p>(1) It may be neutralised by alkalies given as antidotes (2) It may combine chemically with tissues (3) It may be vomitted out (4) All the above</p>
99.	<p>LSD is derived from :</p> <p>(1) <i>Claviceps purpurea</i> (2) <i>Cannabis species</i> (3) <i>Papaver somniferum</i> (4) <i>Calotropis species</i></p>
100.	<p>Chemical etching method is used for restoration of erased marks on :</p> <p>(1) Plastic (2) Wood (3) Metal (4) Leather</p>

SET-"X"

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU ARE ASKED TO DO SO)

(BPH/PHD/URS-EE-2020)

FORENSIC SCIENCE

Sr. No. 10004

Code **D**

Used for Jumbling

Time : 1½ Hours

Total Questions : 100

Max. Marks : 100

Roll No. _____

(in figure)

(in words)

Name : _____

Father's Name : _____

Mother's Name : _____

Date of Examination : _____

(Signature of the candidate)

(Signature of the Invigilator)

CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

1. All questions are compulsory.
2. The candidates must return the Question book-let as well as OMR answer-sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A,B,C and D code will be got uploaded on the university website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E-Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
5. The candidate **MUST NOT** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question book-let itself. Answers **MUST NOT** be ticked in the Question book-let.
6. There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.
7. Use only Black or Blue **BALL POINT PEN** of good quality in the OMR Answer-Sheet.
8. **BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE BOOK-LET. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER STARTING OF THE EXAMINATION.**

Question No.	Questions
1.	<p>Which of the following is a feature of genuine signatures :</p> <p>(1) Pen strokes with tapering ends (2) Evidence of touching (3) Unnatural pen lifts (4) Pen strokes with blunt ends</p>
2.	<p>The most commonly used material in the production of paper is :</p> <p>(1) Sisal (2) Cotton (3) Wood from coniferous trees (4) Wood from deciduous trees</p>
3.	<p>Which of the following is not a counterfeiting measure :</p> <p>(1) a dandy roll (2) a hologram patch (3) a water mark (4) an iridescent stripe</p>
4.	<p>Segments of writing obscured by correction fluid are known as :</p> <p>(1) Corrections (2) Erasures (3) Embellishments (4) Obliterations</p>
5.	<p>ESDA is not used to :</p> <p>(1) date inks (2) visualise indented writing (3) determine sequence of writing impressions (4) examine torn pages of paper for matching</p>

Question No.	Questions
6.	<p>Which of the following method is used to determine the age of an ink tracking the degradation of certain dyes :</p> <p>(1) LDMS (2) HPLC (3) TLC (4) GC</p>
7.	<p>In handwriting comparison the crossing in 't' and the dots in 'i' and 'j' known as :</p> <p>(1) Loop signs (2) Connective signs (3) Shoulder signs (4) Diacritic signs</p>
8.	<p>Which of the following is a sign of forgery :</p> <p>(1) Pen lifts (2) Retouching (3) Connecting strokes (4) All of the above</p>
9.	<p>The Fingerprint Bureau was first established in which of the following country ?</p> <p>(1) India (2) USA (3) England (4) France</p>
10.	<p>Fingerprints can be permanently changed by :</p> <p>(1) Scleroderma (2) Eczema (3) Leprosy (4) Psoriasis</p>

Question No.	Questions
11.	<p>The skid marks on the road in a vehicular accident may give an indication of :</p> <p>(1) Weight of the vehicle (2) Make of the vehicle (3) Speed of the vehicle (4) Length of the vehicle</p>
12.	<p>When the temperature of a liquid is raised, its refractive index will :</p> <p>(1) decrease (2) increase (3) remain unchanged (4) disappear</p>
13.	<p>Light having pulsating waves in unison is called :</p> <p>(1) Polychromatic (2) Polaroid (3) Laser (4) Monochromatic</p>
14.	<p>In order for photographs to be admissible in court, they must be ruled as :</p> <p>(1) fair and accurate (2) black and white (3) digital and coloured (4) none of the above</p>
15.	<p>What type of scale is required for measuring bite marks :</p> <p>(1) Ruler (2) Coins (3) Round scale (4) ABFO</p>
16.	<p>Reports and logs generated by forensic tools are typically in plain text format, a word processor format or format.</p> <p>(1) TXT (2) HTML (3) PDF (4) PS</p>

Question No.	Questions
17.	<p>Paraben, a leading mobile forensic software, provides many tools incl which can be used to acquire data from different phone n</p> <p>(1) Data Pilot (2) MOBI Ledit (3) Device Seizure (4) Bit Pim</p>
18.	<p>Log files and files provide useful information to an e investigator.</p> <p>(1) scripts (2) .rts (3) batch (4) configuration</p>
19.	<p>A bootable forensic CD can be created by and perform acquisition.</p> <p>(1) Neon (2) Inquisitor (3) Helix (4) DTDD</p>
20.	<p>Put the following Forensic Psychology events of breakthrough chronological order from earliest to most recent :</p> <p>(a) Eye witness testing (b) Development of Polygraph (c) DNA profiling (d) Development of Stanford-Binet IQ</p> <p>(1) a, d, b, c (2) d, c, b, a (3) a, d, c, b (4) b, c, a, d</p>
21.	<p>Origin of the bones for facial reproduction requires which of the follow forensic examination :</p> <p>(1) Serological (2) Bio-chemical (3) Anthropological (4) Odontological</p>

MPH/PHD/URS-EE-2020 (Forensic Science) Code-D

Question No.	Questions
22.	Height of the body can be deduced from the length of humerus, where humerus is : (1) 20 percent of height (2) 35 percent of height (3) 10 percent of height (4) 15 percent of height
23.	Ischiopubic index is used to determine : (1) Race (2) Age (3) Stature (4) Sex
24.	Medial end of clavicle fuses at the age of : (1) 16-17 years (2) 30-40 years (3) 18-22 years (4) 10-15 years
25.	The single best criterion to distinguish the female from male pelvis is (1) shape of acetabulum (2) shape of greater sciatic notch (3) shape of ischial tuberosities (4) shape of foramen
26.	Xiphoid process unites with sternum at the age of : (1) 40 years (2) 60 years (3) 30 years (4) 20 years
27.	Closure of all skull sutures indicate age more than : (1) 70 years (2) 40 years (3) 50 years (4) 60 years

Question No.	Questions
34.	<p>The method used for the isolation of sulphuric acid from the charred shirt is :</p> <p>(1) Infusion with water (2) Infusion with ethanol (3) Distillation (4) Dialysis</p>
35.	<p>A drug that induces alterations in mood and perception is known as :</p> <p>(1) hallucinogen (2) stimulant (3) seductive (4) depressant</p>
36.	<p>Toxicity level of Datura plant based on increasing level is :</p> <p>(1) Leaf, Root, Fruit, Seed (2) Seed, Leaf, Root, Fruit (3) Root, Seed, Fruit, Leaf (4) Fruit, Root, Leaf, Seed</p>
37.	<p>Which preservative is recommended for the preservation of blood sample in case of Carbon monoxide poisoning :</p> <p>(1) Sodium chloride (2) Sodium carbonate (3) Sodium citrate (4) No preservative</p>
38.	<p>Free Sulphuric acid is rarely found in stomach content in acid poisoning cases because :</p> <p>(1) It may be neutralised by alkalies given as antidotes (2) It may combine chemically with tissues (3) It may be vomitted out (4) All the above</p>

Question No.	Questions
39.	LSD is derived from : (1) <i>Claviceps purpurea</i> (2) <i>Cannabis species</i> (3) <i>Papaver somniferum</i> (4) <i>Calotropis species</i>
40.	Chemical etching method is used for restoration of erased marks on (1) Plastic (2) Wood (3) Metal (4) Leather
41.	Forensic Palynology deals with : (1) Dust (2) Diatoms (3) Pollen and spores (4) Fossils
42.	For examination of diatoms, sample should be taken from : (1) Buccal cavity (2) Stomach (3) Lungs (4) Bone marrow
43.	In Wildlife forensic, animals are identified by : (1) Pug marks (2) Photography (3) Trapping (4) Poaching
44.	Lifting of footprints on snow can be done by : (1) Wax casting (2) Tracing (3) Sulphur casting (4) Plaster of Paris cast
45.	Which of the following is NOT the component of Kastle-Meyer test : (1) Glacial acetic acid (2) Potassium hydroxide (3) Phenolphthalein (4) Zinc dust

Question No.	Questions
46.	Presence of menstrual blood stain is confirmed by : (1) Restriction enzymes (2) Isozyme markers (3) Fibrin Degradation Product (4) Benzidine test
47.	Seminal fluid is secreted by prostate gland, seminal vesicles and : (1) Thyroid gland (2) Adrenal gland (3) Pineal gland (4) Cowper's gland
48.	Lanugo hair are : (1) Thin and soft (2) Medullated (3) Having complex scale pattern (4) Pigmented
49.	Which of the following is added to harden Plaster of Paris cast of footprints (1) Sodium sulphate (2) Talcum powder (3) Sodium chloride (4) Sodium carbonate
50.	Scales are found on which of the following fibres : (1) Silk (2) Wool (3) Cotton (4) Linen

Question No.	Questions
51.	Beer Lambert law shows the relation between : (1) Energy absorption and reflected radiation (2) Energy absorption and concentration (3) Reflected radiation and concentration (4) Scattered radiation and concentration
52.	Which of the following cannot be used as an absorbent in Column absorpti chromatography : (1) Potassium permanganate (2) Silica gel (3) Magnesium oxide (4) Activated alumina
53.	Mass spectrometer is used to determine : (1) Properties of samples (2) Relative mass of atoms (3) Composition of sample (4) Element concentration in sample
54.	Which of the following is not correct about Absorption spectroscopy : (1) Reflection is kept maximum (2) Scattering is kept maximum (3) Intensity of radiation indicates concentration (4) It involves transmission
55.	In Chromatography, the stationary phase can be supported on a : (1) Liquid only (2) Solid only (3) Liquid or gas (4) Solid or liquid

Question No.	Questions
56.	Mass spectroscopy was invented by : (1) Aston (2) Nikola Tesla (3) Goldstein (4) J. J. Thompson
57.	Which of the following was NOT true about HPLC : (1) It has high sensitivity (2) It is performed in columns (3) There is no need to vaporise the samples (4) It needs high pressure for separation
58.	Chromatography is a physical method used to separate and analyse : (1) Complex mixtures (2) Metals (3) Simple mixtures (4) Viscous mixtures
59.	NMR spectroscopy is used for determining structure in which of the following : (1) Liquids (2) Gases (3) Radioactive materials (4) Insoluble compounds
60.	The most suitable solvent system for TLC of inks is : (1) Amyl alcohol : Acetic acid : Pyridine (6 : 1 : 2) (2) Ethanol : Acetic acid : Acetone (4 : 5 : 1) (3) Amyl alcohol : Acetic acid : Chloroform (6 : 1 : 2) (4) N-butanol : Pyridine : Water (3 : 1 : 1.5)

Question No.	Questions
61.	ABO grouping is based on : (1) Nuclear chromatin (2) Red cell enzyme (3) Plasma proteins (4) Red cell surface antigens
62.	Sex can be established by examination of WBC for the presence of : (1) Ribosomes (2) Plasma membrane (3) Drum-stick (4) Golgi bodies
63.	Confirmatory test for human origin of blood stain is : (1) Takayama test (2) Teichmann's test (3) Benzidine test (4) Precipitin test
64.	Minisatellites are : (1) short non-coding repetitive sequences in DNA (2) 10-40 bp short sequences within the genes (3) short coding repetitive sequences in DNA (4) short exons
65.	DNA profiling to show similarity between different animal species reference to some specific protein coding DNA sequence is called (1) Animal blot (2) Zoo blot (3) Phylogenetic blot (4) Dot blot
66.	DNA Fingerprinting technique was developed by : (1) James Watson (2) Francis Crick (3) Lalji Singh (4) Alec Jeffreys

Question No.	Questions
67.	Blood grouping in old dried blood stains is done by : (1) Hemin crystal test (2) Absorption elution test (3) Benzidine test (4) Acid elution test
68.	Which of the following is NOT a test for blood : (1) Benzidine test (2) Teichmann's test (3) Acid phosphatase test (4) Hemochromogen test.
69.	Eucleated biconcave RBC in blood stains indicates that it belongs to a : (1) Bird (2) Camel (3) Amphibian (4) Human
70.	Which of the following method is used to identify an aspermic male involved in sexual offence case : (1) RFLP (2) Y-STR (3) Y-body (4) DNA barcoding
71.	Who coined the term Forensic Ballistic ? (1) J. Thompson (2) Charles Daly (3) Calvin Goddard (4) Martin Marz
72.	In ballistics, Ratchet mechanism is associated with : (1) Revolver (2) Rifled firearm (3) Semi-automatic firearm (4) None of the above

Question No.	Questions
73.	<p>In "5.6 × 57 mmR" term, the 'R' stands for which type of the case?</p> <p>(1) Rebated (2) Rimless (3) Rimmed (4) Rough</p>
74.	<p>Smokeless propellant version of Express cartridge is called :</p> <p>(1) Paper Express (2) Nitro Express (3) Blast Express (4) Smokeless Express</p>
75.	<p>At a crime scene, a very old cartridge of early 1900s was found with designation 0.32-0.30. If 0.32 is the caliber, what does 0.30 signify ?</p> <p>(1) Length of cartridge case (2) Length of bullet (3) Weight of bullet (4) Weight of black powder</p>
76.	<p>What is caliber in ballistic ?</p> <p>(1) Internal diameter of the barrel (2) Diameter of the bullet (3) External diameter of the barrel (4) Diameter of the cartridge case</p>
77.	<p>The bore of 12 bore gun is :</p> <p>(1) 0.731 (2) 0.723 (3) 0.727 (4) 0.729</p>

Question No.	Questions
78.	Arrange the following firearms in the proper chronological order : (a) Flint lock (b) Wheel lock (c) Match lock (d) Percussion lock (1) c, a, b, d (2) a, d, c, b (3) b, c, d, a (4) d, b, a, c
79.	Which of the following is NOT an advantage of Aluminium cased ammunition: (1) Less effective accuracy (2) Less robust than brass (3) Cost-effective (4) For shot gun ammunition use only
80.	What is the ammunition loading mechanism of a match lock pistol ? (1) Top-lift load (2) Muzzle load (3) Breach load (4) None of the above
81.	Who among the following is connected to critical criminology ? (1) William J. Chambliss (2) Richard A. Cloward (3) R. E. Park (4) E. H. Southerland
82.	Which of the following records the movement of evidence ? (1) Chain of custody (2) Chain of command (3) Chain of packing (4) Chain of crime
83.	Dying declaration is to be preferably recorded by : (1) Magistrate (2) Doctor (3) Jury member (4) Police

Question No.	Questions
84.	<p>Police inquest is conducted under section :</p> <p>(1) 174 IPC (2) 174 CrPC (3) 176 IPC (4) 176 CrPC</p>
85.	<p>Locard's Exchange Principle is for :</p> <p>(1) Detecting toxicity (2) Knowing time since death (3) Detecting crime (4) Estimating the age</p>
86.	<p>Cadaveric spasm indicates :</p> <p>(1) Homicide (2) Suicide (3) Last act of a person before death (4) Natural death</p>
87.	<p>"Tache Noire Sclerotiques" is a post-mortem feature seen in :</p> <p>(1) Mouth (2) Nose (3) Ears (4) Eyes</p>
88.	<p>Which of the following are examples of unnatural sexual offence :</p> <p>(i) Sodomy (ii) Incest (iii) Buccal coitus (iv) Bestiality</p> <p>(1) i, iii, iv (2) i, ii, iii (3) iv, ii, i (4) i, ii, iv</p>
89.	<p>To ensure integrity, validate your tools and verify your evidence w.</p> <p>(1) Watermarks (2) Digital certificate (3) Steganography (4) Hashing algorithms</p>

Question No.	Questions
90.	Human trafficking is a form of : (1) Organised crime (2) Love jihad (3) Hate crime (4) Forgery
91.	Which of the following is used to determine the time of death : (1) MR spectroscopy (2) CT scan (3) Photomicrography (4) 3-D Surface scanning
92.	The first permanent tooth to erupt is : (1) Incisor (2) Canine (3) Molar (4) Premolar
93.	A girl has 8 temporary teeth and 20 permanent teeth. Her age is likely to be : (1) 12 years (2) 10 years (3) 16 years (4) 18 years
94.	For determination of age, the most useful secondary change in tooth is (1) Root transparency (2) Root resorption (3) Attrition (4) Secondary dentin deposition
95.	Cusp of Carabelli is found on : (1) Bicuspids (2) Canines (3) Tricuspids (4) Incisors

Question No.	Questions
96.	<p>According to ISO 9001, inspection and testing comes under management responsibility ?</p> <ol style="list-style-type: none"> (1) Servicing (2) Non-confirming product control (3) Document control (4) Process control
97.	<p>Ontology is :</p> <ol style="list-style-type: none"> (1) classification of internet based documents (2) an indexing method (3) documentation service (4) cataloguing of internet based documents
98.	<p>Which of the following is the first step in the research process :</p> <ol style="list-style-type: none"> (1) Searching for solutions to the problem (2) Identification of problem (3) Review of literature (4) Searching sampling methods
89.	<p>To</p> <ol style="list-style-type: none"> (1) (3) Sta

MPH/PHD/URS

(Forensic Science) Code-D
(18)

Question No.	Questions
100.	Bibliometry is : (1) Library service (2) Information management tool (3) Function of library network (4) Literature service

**Answer Keys of the exam Ph.D/URS-
EE-2020 (Forensic Science) held on : 29-12-
2020**

Q. No.	A	B	C	D
1	2	3	4	1
2	1	1	3	3
3	1	4	4	1
4	2	3	1	4
5	3	2	2	1
6	3	1	4	2
7	4	4	2	3
8	1	1	3	4
9	4	2	4	1
10	1	1	2	3
11	1	2	2	3
12	3	1	1	1
13	1	1	2	3
14	4	2	1	1
15	1	1	4	4
16	2	1	4	2
17	3	4	3	3
18	4	4	1	4
19	1	1	1	3
20	3	3	4	1
21	2	3	2	3
22	1	4	1	1
23	2	1	1	4
24	1	3	2	3
25	4	1	3	2
26	4	3	3	1
27	3	4	4	4
28	1	1	1	1
29	1	4	4	2
30	4	2	1	1
31	3	1	1	2
32	4	3	3	1
33	1	1	2	1
34	3	4	1	2
35	1	1	3	1
36	3	2	4	1
37	4	3	1	4
38	1	4	2	4
39	4	1	1	1
40	2	3	2	3
41	4	3	3	3
42	3	1	1	4
43	4	3	3	1
44	1	1	2	3
45	2	4	4	1
46	4	2	1	3

47	2	3	4	4
48	3	4	1	1
49	4	3	2	4
50	2	1	2	2
51	2	3	3	2
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68	1	2	1	3
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90	2	4	3	1
91	3	2	2	1
92	1	1	1	3
93	3	1	1	2
94	1	2	2	1
95	4	3	1	3
96	2	3	1	4
97	3	4	4	1

98	4	1	4	2
99	3	4	1	1
100	1	1	3	2