SET-"Y"

(Total No. of Printed Pages: 24)

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(PG-EE-JUNE-2023)

10005

Code



FORENSIC SCIENCE

Sr. No.____

Time: 11/4 Hours

Total Questions: 100

Max. Marks: 100

Roll No.

(in figure)

Date of Birth: ______(in words)

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 shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint in any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. 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 booklet itself. Answer

MUST NOT be ticked in the Question booklet.

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.	A tent is in the form of a cylinder of diameter 8 m and height 2 m, surmounted by a cone of equal base and height 3 m. The canvas used for making the tent is equal to
	(1) $36 \pi \text{m}^2$ (2) $28 \pi \text{m}^2$
i describer	(3) $24 \pi \text{m}^2$ (4) $32 \pi \text{m}^2$
2.	HTML stands for
-	(1) Hyper Text Makeup Lineage
	(2) Hyper Text Makeup Language
* .	(3) Hyper Text Markup Language
	(4) Hyper Text Markup Lineage
3.	Select the option in which the numbers are related in the same way as are the numbers of the following set:
	(7, 63, 79)
	(1) (5, 35, 47) (2) (6, 30, 44)
	(3) (7, 34, 48) (4) (8, 72, 96)
4.	Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the number-pair that is different.
	(1) 11:119 (2) 12:135
	(3) 21:440 (4) 15:228

PG-EE-JUNE,2023(Forensic Science) Code-A
(1)

uestion No.	Questions
5.	5 years ago, my friend's age was 5 times of my age, now it is 3 times only. What is my friend's present age (in years)?
	(1) 30 (2) 25
	(3) 20 (4) 15
6.	Select the correct combination of mathematical signs that can sequentially replace the signs balance the given equations 65 * 5 * 45 * 2 * 30 * 73
	(1) \div , \times , $+$, $-$, $=$ (2) $+$, \div , \times , $=$, $-$
	(3) \div , +, ×, =, - (4) \div , +, ×, -, =
7.	Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different.
* * * / t	(1) Obstacle (2) Interference
	(3) Progress (4) Hindrance
8.	Maximum diffraction in a given system happen for
	(1) Visible rays (2) UV rays
	(3) IR rays (4) Radio wave
9.	Study of life in outer space is known as
	(1) Endobiology (2) Exobiology
	(3) Enterobiology (4) Neobiology
	요즘 요즘 아니라 가장 그는 사람들이 되었다. 그는 사람들은 사람들이 가장 하는 것이 되었다. 그는 사람들이 그를 가장 하는 것이 되었다. 그는 것이 없는 것이 없는 것이 없는 것이 없는 것이다.

PG-EE-JUNE, 2023 (Forensic Science) Code-A

Question No.	Questions
10.	Platelets initiate blood clotting by releasing a substance is called:
	(1) Prothrombin (2) Thrombin
	(3) Thromboplastin (4) Fibrinogen
11.	Choose the word from the options given below that is most opposite in meaning to the given word: Frequency
	(1) periodicity (2) rarity (3) gradualness (4) persistency
12.	25 persons are in a room 15 of them play hockey, 17 of them play football and 10 of them play hockey and football. Then the number of persons playing neither hockey nor football is
N.	(1) 2 (2) 17 (3) 13 (4) 3
13.	A and B are friends. They decide to meet between 1 PM and 2 PM on a given day. There is a conditions that whoever arrives first will not wait for the other for more than 15 minutes. The probability that they will meet on that days is
	(1) 1/4 (2) 1/16 (3) 7/16 (4) 9/16
DC T	(3) 7/16 (4) 9/16 EE-IUNE 2022 (Foresia Science) Code A

PG-EE-JUNE,2023(Forensic Science) Code-A

Question No.	Questions
14.	If the speed of a driver be 5 km/h more than the original speed he would have covered a fixed distance 20 minutes earlier. If his speed was 3 km/h less than the original speed he would have taken 15 minutes more to cover that fixed distance. Calculate the original speed,
	(1) 35 kmph (2) 40 kmph (3) 30 kmph (4) 45 kmph
15.	A cube of side 100 cm is painted Red on all the faces and then cut into smaller cubes of sides 10 cm each. Find the number of smaller cubes having all the three faces painted.
	(1) 32 (2) 64 (3) 28 (4) 8
16.	Dental formula of deciduous teeth is (1) 2123/2123 (2) 2130/2130 (3) 2120/2120 (4) 2023/2023
17.	Puppe's Rule' helps in determination of: (1) Identity of fire arm (2) Range of fire arm (3) Sequence in which shots were fired (4) Nature of injury caused by fire arm

PG-EE-JUNE,2023(Forensic Science) Code-A

uestion No.	Questions
18.	Erasure of writing by using soft rubber is called
	(1) Chemical Erasure (2) Soft Erasure
	(3) Hard Erasure (4) Mechanical Erasure
19.	The terms "FFFFg", "FFFg", "FFg" and "Fg" are used in relation to:
	(1) Black powder (2) Cartridge
	(3) Bore of a gun (4) Make of a gun
20.	Reinsch Test is satisfactorily used for the detection of
	(1) Phosphorus (2) Arsenic
	(3) Copper (4) Lead
21.	Charred document is stabilized by
	(1) Poly vinyl acetate (2) Super Glue
	(3) EDTA (4) Starch Solution
22	Vitreous humor is particularly examined for checking
	(1) Poisoning cases (2) Metabolic
	(3) Alcohol level (4) Exhumed
	The second secon

PG-EE-JUNE, 2023 (Forensic Science) Code-A (5)

Question No.	Questions
23.	'Stass-Otto' process is used for
	(1) Extraction of poisons (2) Extraction of DNA
	(3) Extraction of antigens (4) Isolation of compliments
24.	Amatol contains
	(1) TNT and RDX (2) TNT and Tetryl
	(3) TNT and PETN (4) TNT and Ammonium Nitrate
25.	The Algorithm associated with the speed determination of vehicle is
Y	(1) Optical flow Algorithm
	(2) Dijkstra's Algorithm
	(3) Floyd Warshall Algorithm
	(4) Kruskal's Algorithm
26.	After bomb scene debris has been examined microscopically, the next step
1.5	is to
	(1) Examine explosive using AAS
government of the second	(2) Identify the detonating material with SEM-EDX
	(3) Rinse the recovered debris with acetone to separate the debris from
	explosive material
	(4) Utilize H1-NMR to fingerprint the explosive residue
and the second	HINE 2023(Forensic Science) Code-A

PG-EE-JUNE, 2023 (Forensic Science) Code-A
(6)

Question No.	Questions	
27.	The analysis of variance can be considered as an extension of	
	(1) T-test (2) F-test	
	(3) One-tailed test (4) Z-test	
28.	Hampi denomination is present in which Indian currency:	38
	(1) 2000 (2) 200	
	(3) 10 (4) 50	
29.	The melting point of Vicara fiber is:	-04
	(1) 245-260°C (2) 265-275°C (3) 192-210°C (4) 288-300°C	
30.	The database designed for collection, restoration and comparing images is	g of tool
	(1) AFTE (2) TRAX	
	(3) NBTRD (4) NIST	
31.	1°,2°,3° and 4° carbon atoms are present in	
galata de s	(1) 2, 2, 3-trimethylpentane	5 47 × 17 mg/s
	(2) 2, 3, 4-trimethylpentane	
	(3) 2, 4-dimethylpentane	
PC 1	(4) 3, 3-dimethylpentane	

PG-EE-JUNE, 2023 (Forensic Science) Code-A (7)

Question No.	Questions
32.	The distance between two adjacent carbon atoms is longest in
	(1) ethene (2) benzene
	(3) ethyne (4) ethane
33.	The correct structure of ethanoyl chloride is
	(1) CH_3CH_2Cl (2) CH_3COCl
	(3) CCl ₃ CHO (4) CH ₂ ClCOOH
34.	Among the given compounds the most susceptive to nucleophile attack at the carbonyl group is
	(1) MeCOCl (2) MeCHO
	(3) MeCO ₂ Me (4) MeCO ₂ COMe
35.	Benzyl carbonium ion is highly stabilized because
	(1) there is extended delocalization of π electrons
	(2) it is a 1° carbonium ion
	(3) it has electron releasing groups
	(4) all of the above
36.	The percentage of s-character of the hybrid orbital of carbon in ethane, ethene and ethyne respectively are
	(1) 25, 33, 50 (2) 20, 50, 33
	(3) 25, 50, 75 (4) 33, 66, 99

PG-EE-JUNE,2023(Forensic Science) Code-A
(8)

Question No.	Questions
37.	Which of the following statement is incorrect?
	(1) The rate of S_N 2 reaction is increased in aprotic solvent.
	(2) The rate of S_N1 reaction is independent of the concentration of nucleophile.
	(3) An S_N1 reaction proceeds with inversion of configuration
	(4) An S _N 2 reaction proceeds with stereo chemical inversion.
38.	Purification of petroleum is carried out by (1) fractional distillation
	(2) steam distillation(3) vacuum distillation(4) simple distillation
39.	Lindlar's catalyst is
	(1) Pt in ethanol (2) Pd + BaSO ₄ (3) Ni in quinolone (4) Na in liquid NH ₃
40.	The reaction between Fe(II) and ferrozine is catalyzed by:
	(1) Short-wave UV light (2) Long-wave UV light
	(3) Short-wave X-rays (4) Long-wave X-rays

PG-EE-JUNE,2023(Forensic Science) Code-A
(9)

Question No.	Questions
41.	Which of the following compounds cannot be stored in glass vessels?
	(1) XeF_6 (2) XeO_3
	(3) XeF_2 (4) XeF_4
42.	Clathrates are
	(1) normal salts
	(2) interstitial compounds
	(3) complex compounds
	(4) non-stoichiometric compounds
43.	Which is thermodynamically most stable form of carbon?
	(1) Graphite (2) Diamond
	(3) Coal (4) Coke
44.	What is oil dag?
	(1) Silicone oil
	(2) Suspension of graphite in oil
	(3) Distillation products of paraffin oil
	(4) Colloidal solution of graphite

PG-EE-JUNE,2023(Forensic Science) Code-A
(10)

uestion No.	Questions
45.	The alkane that gives only one mono-chloro product on chlorination with Cl_2 in the presence of diffused sunlight is:
	(1) 2, 2-dimethylbutane (2) n-pentane
	(3) neopentane (4) Isopentane
46.	The element used in high temperature thermometers is
	(1) Na (2) Ga
	(3) Tl (4) Hg
47.	Which of the following is not a Lewis acid?
	(1) $AlCl_3$ (2) $Al(OH)_3$
ŷ.	(3) BF_3 (4) $B(OH)_3$
48.	What is 'X' in the following reaction?
	$MgCl_2 + 2H_2O \rightarrow X + 2HCl + H_2O$
	(1) MgO
	(3) Mg(OH) ₂ (4) Mg(OH)Cl
49.	A compound 'X' upon reaction with H_2O produces a colorless gas 'Y' with rotten fish smell. Gas 'Y' is absorbed in a solution of $CuSO_4$ to give Cu_3P_2 as one of the products. Predict the compound 'X'
	(1) Ca_3P_2 (2) NH_4Cl
	(3) As_2O_3 (4) $Ca_3(PO_4)_2$

Question No.	Questions
50.	When neutral or faintly alkaline KMnO ₄ is treated with potassium iodide, iodide ion is converted into 'X'. 'X' is
	(1) I_2 (2) IO_4 (3) IO_3 (4) IO^-
51.	The low density of ice compared to water is due to (1) hydrogen bonding interactions (2) dipole-dipole interactions (3) dipole induced dipole interactions (4) induced dipole induced dipole interactions
52.	Calgon is (1) $Na_{2}[Na_{4}(PO_{3})_{6}]$ (2) $Na_{4}[Na_{2}(PO_{3})]_{6}$ (3) $Na_{2}[Na_{3}(PO_{4})]_{6}$ (4) $Na_{3}[Na_{2}(PO_{4})_{6}]$
53.	The maximum amount of BaSO ₄ precipitated on mixing 20 ml of 0.5M BaCl ₂ with 20 ml of 1M H ₂ SO ₄ is (1) 0.25 mole (2) 0.5 mole (3) 1 mole (4) 0.01 mole
54.	Kinetic Energy of one mole of He at 0°C is (1) 819.0 cal (2) 84.43 cal (3) 8.143 cal (4) None of these C-IUNE, 2023 (Forensic Science) Code-A

PG-EE-JUNE, 2023 (Forensic Science) Code-A
(12)

Question No.	Questions
55.	The number of hydrogen bonded water molecule(s) associated with CuSO ₄ .5H ₂ O is
	(1) 3
	(3) 2
56.	Vascular bundles in Pinus stem are:
	(1) Radial (2) Collateral and closed
	(3) Collateral and open (4) Bicollateral
57.	Which one of the following gymnosperms is said to have double fertilization?
11	(1) Ginkgo (2) Ephedra
	(3) Cycas (4) Pinus
58.	In Bougainvillea thorns are the modifications of:
	(1) Adventitious root (2) Leaf
	(3) Stem (4) Stipules
59	Spores of fern are:
	(1) Haploid (2) Diploid
	(3) Triploid (4) Polyploid
	TO HIME 2022 (Forensic Science) Code-A

PG-EE-JUNE, 2023 (Forensic Science) Code-A (13)

Question No.	Questions	porte many many many
60.	Chlorenchyma is known to develop in:	
	(1) Pollen tube of Pinus	
	(2) Cytoplasm of Chlorella	
	(3) Spore capsule of a moss	
	(4) Mycelium of a green mould	
61.	Sex organs in Funaria develop:	
	(1) In the protonema	
, j. d	(2) Inside the capsule	
	(3) In the axils of leaves	
	(4) At the tip of gametophore	
62.	Nitrogen fixers in Azolla are:	A in
	(1) Nostoc (2) Anabaena	
	(3) Aulosira (4) Azospirillum	
63.	The cell wall of Spirogyra is made up of:	g s
	(1) Cellulose (2) Pectin	
	(3) Lignin (4) Chitin	

PG-EE-JUNE, 2023 (Forensic Science) Code-A (14)

Question No.	Questions
64.	A group of fungi with septate mycelium in which sexual reproduction is either unknown or lacking is classified under:
	(1) Phycomycetes (2) Deuteromycetes
	(3) Ascomycetes (4) Basidiomycetes
65.	The fungus without mycelium is:
	(1) Puccinia (2) Phylophihora
	(3) Rhizopus (4) Saccharomyces
66.	The nucleic acid in Tobacco Mosaic Virus is
	(1) Single stranded DNA (2) Single stranded RNA
	(3) Double stranded DNA (4) Double stranded RNA
67.	Pneumatophores occur in
	(1) Halophytes (2) Free-floating hydrophytes
<u>.</u>	(3) Carnivorous plants (4) Submerged hydrophytes
68.	Double fertilization is
	(1) Fusion of two male gametes of a pollen tube with two different eggs
	(2) Fusion of one male gemete with two polar nuclei
	(3) Fusion of two male gametes with one egg
	(4) Syngamy and triple fusion

PG-EE-JUNE,2023(Forensic Science) Code-A
(15)

Question No.	
69.	Which of the following elements is responsible for maintaining turgor i
	cells?
	(1) Magnesium (2) Potassium
	(3) Sodium (4) Calcium
70.	The vascular cambium normally gives rise to:
* - *	(1) Primary phloem (2) Secondary xylem
	(3) Periderm (4) Phelloderm
71.	The Tetradon is commonly known as
	(1) Cow fish (2) Devil fish
,	(3) Globe fish (Puffer) (4) Cave fish
72.	Which one of the following is correctly matched?
	(1) Epiceratodus - double lung
	(2) Protopterus - single lung
	(3) Lepidosiren - single lung
	(4) Polypterus - no lung
73.	Bone marrow is absent in
	(1) fishes (2) birds
	(3) amphibians (4) reptiles

PG-EE-JUNE,2023(Forensic Science) Code-A
(16)

Question No.	Questions
74.	Ultrafiltration occurs in a glomerulus when
	(1) hydrostatic pressure exceeds osmotic pressure
	(2) osmotic pressure exceeds hydrostatic pressure
	(3) capsular hydrostatic pressure exceeds glomerular hydrostatic pressure
	(4) colloidal osmotic pressure plus the capsular pressure remain less than glomerular hydrostatic pressure
75.	Study of interaction of antigen and antibody in blood is termed (1) serology
	(2) cryobiology
1 5 77	(3) angiology
	(4) haematology
76.	Addison's disease results from
	(1) Hyposecretion of adrenal cortex
	(2) Hypersecretion of adrenal cortex
	(3) Hypertrophy of gonads
	(4) Hyperactivity of cells of Leydig

Question No.	
77.	A cricket player is fast chasing a ball in the field. Which one of the following groups of bones are directly contributing in this movement?
	(1) Pelvis, ulna, patella, tarsals
	(2) Sternum, femur, tibia, fibula
	(3) Tarsals, femur, metatarsals, tibia
	(4) Femur, malleus, tibia, metatarsals
778.	Industrial melanism is an example of
	(1) drug resistance
	(2) protective resemblance with the surroundings
	(3) darkening of skin due to smoke from industries
	(4) defensive adaptation of skin against ultraviolet radiations
79.	Stomata in grass leaf are
	(1) Dumb-bell shaped (2) Kidney shaped
	(3) Rectangular (4) Barrel shaped
80.	The Golgi complex participates in
	(1) Fatty acid breakdown
	(2) Formation of secretory vesicles
	(3) Respiration in bacteria
· ·	(4) Activation of amino acid
	TIME 2023(Forensic Science) Code-A

PG-EE-JUNE, 2023 (Forensic Science) Code-A

Question No.	Questions
81.	Sensory epithelial cells are modified
	(1) Nerve cells
	(2) Columnar cells
	(3) Glandular cells
,	(4) None of these
82.	Which of the following hormones can play a significant role in osteoporosis?
	(1) Aldosterone and Prolactin
	(2) Progesterone and Aldosterone
	(3) Estrogen and Parathyroid hormone
	(4) Parathyroid hormone and Prolactin
83.	Identify the vertebrate group of animals characterized by crop and gizzard in its digestive system.
	(1) Amphibia (2) Aves
t selection	(3) Reptilia (4) Osteichthyes
84.	The hepatic portal vein drains blood to liver from:
	(1) Stomach (2) Kidneys
	(3) Intestine (4) Heart

PG-EE-JUNE, 2023 (Forensic Science) Code-A (19)

Question No.	Questions
85.	A disease caused by an autosomal primary non-disjunction is:
	(1) Klinefelter's Syndrome
	(2) Turner's Syndrome
	(3) Sickel Cell Anemia
	(4) Down's Syndrome
86.	y-component of velocity is 20 and x-component of velocity is 10. The
	direction of motion of the body with the horizontal at this instant is
	(1) $tan^{-1}(2)$ (2) 45°
	(3) tan ⁻¹ (1/2) (4) 0°
87.	A bullet is fired horizontally towards North with a velocity 500m/s at a place where angle of latitude is 30°. Its displacement when bullet strikes
th Alguetts	the tangent placed at a distance of 250 m. If the mass of bullet is 100gm, then the coriolis force acting on the bullet is
	(1) $1 \times 10^{-2} \text{ N}$ (2) $4.4 \times 10^{-3} \text{ N}$
	(3) $3.64 \times 10^{-3} \text{ N}$ (4) $5 \times 10^{-2} \text{ N}$
88.	If the radioactive decay constant of radium is 4.28×10^{-4} per year, its half-life period is approximately
	(1) 2000 yr (2) 2260 yr
	(3) 1620 yr (4) 1240 yr
	IUNE 2023(Forensic Science) Code

PG-EE-JUNE, 2023 (Forensic Science) Code-A (20)

Question No.	Questions
89.	Light of wavelength 3500 Å is incident on two metals A of work function
	4.2 eV and B of work function 1.19 eV. The photoelectrons will be emitted by
	(1) Metal A
	(2) Both metal A and B (3) Metal B
	(4) Neither metal A nor metal B
90.	A string 1m long is drawn by a 300Hz vibrator attached to its end. The string vibrates in three segments. The speed of transverse waves in the string is equal to: (1) 100 ms ⁻¹ (2) 200 ms ⁻¹
	(3) 300 ms^{-1} (4) 400 ms^{-1}
91.	Two particles execute S.H.M. of the same amplitude and frequency along the same straight line. Then pass one another travelling in opposite directions, whenever their displacement is half their amplitude. The phase-difference between the two is:
	(1) $2\pi/3$ (2) $\pi/6$
	(3) π (4) $\pi/3$ $\approx 10^{1} \text{ m/s}$

PG-EE-JUNE,2023(Forensic Science) Code-A
(21)

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Question No.	Questions
92.	A water wave is an example of:
	(1) A longitudinal wave motion
	(2) Stationary wave
	(3) Transverse wave motion
	(4) None of the above
93.	The conductivity of intrinsic Ge at 300°K is equal to
	(1) 0.0224 s/cm (2) 0.0234 s/cm
all bas	(3) 0.0244 s/cm (4) 0.0254 s/cm
94.	The primary function of a bias circuit is to
	(1) hold the circuit stable at $V_{\rm cc}$
	(2) hold the circuit stable at V_{in}
	(3) ensure proper gain is achieved
· · · · · · · · · · · · · · · · · · ·	(4) a hold the circuit stable at designed Q-point
95.	An ion with a charge of +3.2×10 ⁻¹⁹ C is in a region where a uniform electric field of 5×10 ⁴ V/m is perpendicular to a uniform magnetic field of 0.8T. If its acceleration is zero then its speed must be:
	(1) $1.6 \times 10^4 \text{ m/s}$ (2) $4.0 \times 10^4 \text{ m/s}$
	(3) $6.3 \times 10^4 \mathrm{m/s}$ (4) 0

uestion No.	Questions
96.	A triangle with vertices $(4, 0)$, $(-1, -1)$, $(3, 5)$ is:
	(1) Isosceles and right angled
	(2) Isosceles but not right angled
	(3) Right angled but not isosceles
	(4) Neither right angled nor isosceles
97.	Which of the following is true?
	(1) Mode = 2Median – Mean
	(2) Mode = 3Median + 2Mean
	(3) Mode = 3Median – 2Mean
	(4) None of these
98.	Which of the following can not be determined graphically:
	(1) Mean (2) Median
	(3) Mode (4) Standard deviation
99.	From a group of 3 men and 2 women, two persons are selected at random.
	Find the probability that at least one woman is selected.
	(1) $\frac{1}{5}$ (2) $\frac{7}{10}$
	(3) $\frac{2}{5}$ (4) None of these

uestion No.	Questions
100.	If the roots of the quadratic equation $x^2 + px + q = 0$ are tan 300 and tan 150, then the value of $2 + q - p$ is
	(1) 1 (2) 2
	(3) 3 (4) 0
	grandeminaturina diperiore di series de la companya del companya de la companya de la companya del companya de la companya del companya de la companya de la companya de la companya de la companya del companya de la companya della companya de la companya de la companya della companya della companya della companya della companya della companya della c
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(PG-EE-JUNE-2023)

Code B

FORENSIC SCIENCE

sr. No. 10002

Time: 11/4 Hours

Total Questions 100

Max. Marks: 100

Roll No. _____

(in figure) Date of Birth:

(in words)

Name: _____ Father's Name:_

Mother's Name:_

Date of Examination:_

(Signature of the candidate)

(Signature of the Invigilator)

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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 shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint in any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. 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 booklet itself. Answer

MUST NOT be ticked in the Question booklet.

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.	Choose the word from the options given below that is most opposite in meaning to the given word: Frequency
	(1) periodicity (2) rarity
	(3) gradualness (4) persistency
2.	25 persons are in a room 15 of them play hockey, 17 of them play football and 10 of them play hockey and football. Then the number of persons
San a grand	playing neither hockey nor football is
	(1) 2 (2) 17
	(3) 13 (4) 3
3.	A and B are friends. They decide to meet between 1 PM and 2 PM on a
	given day. There is a conditions that whoever arrives first will not wait for
	the other for more than 15 minutes. The probability that they will meet on
	that days is
	(1) 1/4 (2) 1/16
17 19	(3) 7/16 (4) 9/16
4.	If the speed of a driver be 5 km/h more than the original speed he would have covered a fixed distance 20 minutes earlier. If his speed was 3 km/h
	less than the original speed he would have taken 15 minutes more to cover
	that fixed distance. Calculate the original speed,
	(1) 35 kmph (2) 40 kmph
•	(3) 30 kmph (4) 45 kmph

Ques No

A cube of side 100 cm is painted Red on all the faces and then cut into smaller cubes of sides 10 cm each. Find the number of smaller cubes having
all the three faces painted. (1) 32
Dental formula of deciduous teeth is
(1) 2123/2123 (2) 2130/2130 (3) 2120/2120 (4) 2023/2023
Puppe's Rule' helps in determination of :
(1) Identity of fire arm(2) Range of fire arm
(3) Sequence in which shots were fired (4) Nature of injury caused by fire arm
Erasure of writing by using soft rubber is called
 (1) Chemical Erasure (2) Soft Erasure (3) Hard Erasure (4) Mechanical Erasure

PG-EE-JUNE,2023(Forensic Science) Code-B
(2)

uestion No.		Questions	(1. 22.)
9.	The terms "FFFFg",	"FFFg", "FFg" and "Fg" are used i	n relation to:
	(1) Black powder	(2) Cartridge	200 40
	(3) Bore of a gun	(4) Make of a gun	And the last of the second of
10.	Reinsch Test is satis	sfactorily used for the detection of	onligati (N. A.
	(1) Phosphorus	(2) Arsenic	blod. (C)
i i	(3) Copper	(4) Lead	s pacas (fro
11.	Two particles execut	te S.H.M. of the same amplitude a	and frequency alon
11.	the same straight l		velling in opposit
11.	the same straight l directions, whenever	line. Then pass one another tra their displacement is half their an	velling in opposit
11.	the same straight l directions, whenever difference between t	line. Then pass one another tra their displacement is half their an the two is:	velling in opposit
11.	the same straight ladirections, whenever difference between the contract of t	line. Then pass one another traction their displacement is half their and the two is: (2) $\pi/6$ (4) $\pi/3$	velling in opposit
1002 D	the same straight ladirections, whenever difference between to $2\pi/3$ (3) π	line. Then pass one another traction their displacement is half their and the two is: (2) $\pi/6$ (4) $\pi/3$ example of:	velling in opposit
78.0	the same straight ladirections, whenever difference between to (1) 2π/3 (3) π A water wave is an e	line. Then pass one another traction their displacement is half their another two is: (2) $\pi/6$ (4) $\pi/3$ example of:	velling in opposit
100/12 (188.1)	the same straight ladirections, whenever difference between to (1) 2π/3 (3) π A water wave is an equal to (1) A longitudinal wave is an equal to (1) and (1) are the content of the con	line. Then pass one another traction their displacement is half their another two is: (2) $\pi/6$ (4) $\pi/3$ example of:	velling in opposit

Question No.	Questions
13.	The conductivity of intrinsic Ge at 300°K is equal to
	(1) 0.0224 s/cm (2) 0.0234 s/cm
	(3) 0.0244 s/cm (4) 0.0254 s/cm
14.	The primary function of a bias circuit is to
	(1) hold the circuit stable at V_{cc}
	(2) hold the circuit stable at V _{in}
	(3) ensure proper gain is achieved
	(4) hold the circuit stable at designed Q-point
15.	An ion with a charge of $+3.2\times10^{-19}$ C is in a region where a uniform electric field of 5×10^4 V/m is perpendicular to a uniform magnetic field of $0.8T$. If its acceleration is zero then its speed must be:
* * * * * * * * * * * * * * * * * * * *	(1) $1.6 \times 10^4 \text{ m/s}$ (2) $4.0 \times 10^4 \text{ m/s}$
	(3) $6.3 \times 10^4 \text{ m/s}$ (4) 0
16.	A triangle with vertices $(4, 0)$, $(-1, -1)$, $(3, 5)$ is:
	(1) Isosceles and right angled
	(2) Isosceles but not right angled
	(3) Right angled but not isosceles
	(4) Neither right angled nor isosceles

PG-EE-JUNE, 2023 (Forensic Science) Code-B
(4)

Question No.	Questions
17.	Which of the following is true?
	(1) Mode = 2Median – Mean
	(2) Mode = 3Median + 2Mean
	(3) Mode = 3Median – 2Mean
	(4) None of these
18.	Which of the following can not be determined graphically:
	(1) Mean (2) Median
	(3) Mode (4) Standard deviation
19.	From a group of 3 men and 2 women, two persons are selected at random. Find the probability that at least one woman is selected.
	(1) $\frac{1}{5}$ (2) $\frac{7}{10}$
	(3) $\frac{2}{5}$ (4) None of these
20.	If the roots of the quadratic equation $x^2 + px + q = 0$ are tan 300 and tan 150,
	then the value of 2 + q - p is
	(1) 1 (2) 2
	(3) 3

PG-EE-JUNE, 2023 (Forensic Science) Code-B
(5)

Question No.	Questions
21.	The Tetradon is commonly known as
	(1) Cow fish (2) Devil fish
	(3) Globe fish (Puffer) (4) Cave fish
22.	Which one of the following is correctly matched?
	(1) Epiceratodus - double lung
	(2) Protopterus - single lung
	(3) Lepidosiren - single lung
	(4) Polypterus - no lung
23.	Bone marrow is absent in
aringu)	(1) fishes (2) birds
	(3) amphibians (4) reptiles
24.	Ultrafiltration occurs in a glomerulus when
	(1) hydrostatic pressure exceeds osmotic pressure
and the second	(2) osmotic pressure exceeds hydrostatic pressure
14231-18324	(3) capsular hydrostatic pressure exceeds glomerular hydrostatic
	pressure
	(4) colloidal osmotic pressure plus the capsular pressure remain les
	than glomerular hydrostatic pressure

Question No.	Questions	111111111111111111111111111111111111111
25.	Study of interaction of antigen and antibody in blood is termed	,
	(1) serology	
	(2) cryobiology	
	(3) angiology decides the service of the language of the service o	
	(4) haematology	
26.	Addison's disease results from	4 0
	(1) Hyposecretion of adrenal cortex	
and the second	(2) Hypersecretion of adrenal cortex	
	(3) Hypertrophy of gonads	
	(4) Hyperactivity of cells of Leydig	
27.	A cricket player is fast chasing a ball in the field. Which one of the groups of bones are directly contributing in this movement?	followin
	(1) Pelvis, ulna, patella, tarsals	
	(2) Sternum, femur, tibia, fibula and the grant and any state of the s	
	(3) Tarsals, femur, metatarsals, tibia	
	(4) Femur, malleus, tibia, metatarsals	
		1

Question No.	Questions
28.	Industrial melanism is an example of
	(1) drug resistance
	(2) protective resemblance with the surroundings
	(3) darkening of skin due to smoke from industries
_	(4) defensive adaptation of skin against ultraviolet radiations
29.	Stomata in grass leaf are
	(1) Dumb-bell shaped (2) Kidney shaped
	(3) Rectangular (4) Barrel shaped
30.	The Golgi complex participates in
	(1) Fatty acid breakdown
	(2) Formation of secretory vesicles
	(3) Respiration in bacteria
	(4) Activation of amino acid
31.	The low density of ice compared to water is due to
	(1) hydrogen bonding interactions
	(2) dipole-dipole interactions
	(3) dipole induced dipole interactions
	(4) induced dipole induced dipole interactions

PG-EE-JUNE,2023(Forensic Science) Code-B
(8)

Question No.	Questions
32.	Calgon is
	(1) $Na_2[Na_4(PO_3)_6]$ (2) $Na_4[Na_2(PO_3)]_6$
	(3) $Na_{2}[Na_{3}(PO_{4})]_{6}$ (4) $Na_{3}[Na_{2}(PO_{4})_{6}]$
33.	The maximum amount of BaSO ₄ precipitated on mixing 20 ml of 0.5M BaCl ₂ with 20 ml of 1M H ₂ SO ₄ is
7 - 2 - 7	(1) 0.25 mole (2) 0.5 mole
	(3) 1 mole (4) 0.01 mole
34.	Kinetic Energy of one mole of He at 0°C is
•	(1) 819.0 cal (2) 84.43 cal
	(3) 8.143 cal (4) None of these
35.	The number of hydrogen bonded water molecule(s) associated with CuSO ₄ .5H ₂ O is
	(1) 3 (2) 1
,	(3) 2 (4) 5
36.	Vascular bundles in Pinus stem are :
	(1) Radial (2) Collateral and closed
	(3) Collateral and open (4) Bicollateral

PG-EE-JUNE,2023(Forensic Science) Code-B
(9)

Question No.	Questions
37.	Which one of the following gymnosperms is said to have double fertilization?
	(1) Ginkgo (2) Ephedra
	(3) Cycas (4) Pinus
38.	In Bougainvillea thorns are the modifications of:
	(1) Adventitious root (2) Leaf
	(3) Stem (4) Stipules
39.	Spores of fern are:
	(1) Haploid (2) Diploid
	(3) Triploid (4) Polyploid
40.	Chlorenchyma is known to develop in:
	(1) Pollen tube of Pinus
	(2) Cytoplasm of Chlorella
T	(3) Spore capsule of a moss
	(4) Mycelium of a green mould
41.	1°, 2°, 3° and 4° carbon atoms are present in
	(1) 2, 2, 3-trimethylpentane
	(2) 2, 3, 4-trimethylpentane
	(3) 2, 4-dimethylpentane
	(4) 3, 3-dimethylpentane

PG-EE-JUNE,2023(Forensic Science) Code-B
(10)

Question No.	Questions		
42.	The distance between two adjacent carbon atoms is longest in		
	(1) ethene (2) benzene		
	(3) ethyne (4) ethane		
43.	The correct structure of ethanoyl chloride is		
	(1) CH ₃ CH ₂ Cl (2) CH ₃ COCl		
	(3) CCl ₃ CHO (4) CH ₂ ClCOOH		
44.	Among the given compounds the most susceptive to nucleophile attack at the carbonyl group is		
	(1) MeCOCl (2) MeCHO		
	(3) MeCO ₂ Me (4) MeCO ₂ COMe		
45.	Benzyl carbonium ion is highly stabilized because		
	(1) there is extended delocalization of π electrons		
	(2) it is a 1° carbonium ion		
	(3) it has electron releasing groups		
	(4) all of the above		
46.	The percentage of s-character of the hybrid orbital of carbon in ethane, ethene and ethyne respectively are		
	(1) 25, 33, 50 (2) 20, 50, 33		
	(3) 25, 50, 75 (4) 33, 66, 99		

PG-EE-JUNE, 2023 (Forensic Science) Code-B (11)

Set-Y Code-B

Question No.	Questions
47.	Which of the following statement is incorrect?
	(1) The rate of S _N 2 reaction is increased in aprotic solvent.
	(2) The rate of S _N 1 reaction is independent of the concentration of
	nucleophile.
	(3) An S _N 1 reaction proceeds with inversion of configuration
	(4) An S _N 2 reaction proceeds with stereo chemical inversion.
48.	Purification of petroleum is carried out by
	(1) fractional distillation
	(2) steam distillation
	(3) vacuum distillation
	(4) simple distillation
49.	Lindlar's catalyst is
	(1) Pt in ethanol (2) Pd + BaSO ₄
	(3) Ni in quinolone (4) Na in liquid NH ₃
50.	The reaction between Fe(II) and ferrozine is catalyzed by:
	(1) Short-wave UV light (2) Long-wave UV light
	(3) Short-wave X-rays (4) Long-wave X-rays

PG-EE-JUNE,2023(Forensic Science) Code-B
(12)

uestion No.	Questions			
51.	Charred document is stabilized by			
	(1) Poly vinyl acetate (2) Super Glue			
	(3) EDTA (4) Starch Solution			
52.	Vitreous humor is particularly examined for checking			
	(1) Poisoning cases (2) Metabolic			
and the same of th	(3) Alcohol level (4) Exhumed			
53.	'Stass-Otto' process is used for			
	(1) Extraction of poisons (2) Extraction of DNA			
	(3) Extraction of antigens (4) Isolation of compliments			
54.	Amatol contains			
	(1) TNT and RDX (2) TNT and Tetryl			
	(3) TNT and PETN (4) TNT and Ammonium Nitrate			
55.	The Algorithm associated with the speed determination of vehicle is			
A n	(1) Optical flow Algorithm			
	(2) Dijkstra's Algorithm			
	(3) Floyd Warshall Algorithm			
	(4) Kruskal's Algorithm			

PG-EE-JUNE,2023(Forensic Science) Code-B
(13)

Question No.	Questions
No. 56.	After bomb scene debris has been examined microscopically, the next step is to (1) Examine explosive using AAS (2) Identify the detonating material with SEM-EDX (3) Rinse the recovered debris with acetone to separate the debris from explosive material
	(4) Utilize H1-NMR to fingerprint the explosive residue
57.	The analysis of variance can be considered as an extension of
	(1) T-test (2) F-test (3) One-tailed test (4) Z-test
58.	Hampi denomination is present in which Indian currency:
	(1) 2000 (2) 200 (3) 10 (4) 50
59.	The melting point of Vicara fiber is:
	(1) 245-260°C (2) 265-275°C (3) 192-210°C (4) 288-300°C
60.	The database designed for collection, restoration and comparing of too images is
	(1) AFTE (2) TRAX (3) NBTRD (4) NIST

Question No.	je		Questio	ns	, s. v
61.	Wh	ich of the following	compounds	cannot be stored in	glass vessels?
	(1)	XeF_6	(2)	$\mathrm{XeO_3}$	
	(3)	XeF ₂	(4)	XeF ₄	516 U+
62.	Cla	thrates are		readinal nebect see	
	(1)	normal salts	in the		
	(2)	interstitial compo	unds (b)		
	(3)	complex compoun	ds	ica segar water as	in deally large
	(4)	non-stoichiometri	c compounds	3	land a
63.	Whi	ich is thermodynan	nically most	stable form of carbo	on?
	(1)	Graphite	(2)	Diamond	Saran A
	(3)	Coal	(4)	Coke	
64.	Wha	at is oil dag?	May (a)		The Market of the Control of the Con
TV-V	(1)	Silicone oil	out diese	or the same of the	DANKE A STATE OF THE STATE OF T
(1)	(2)	Suspension of grap	phite in oil	Tard Y are Samuel	edinesses
	(3)	Distillation produ	cts of paraffi	n oil	All to sup
	(4)	Colloidal solution	of graphite		
*** ** * ** ** ** ** ** ** ** ** ** **	راير في ويه بعد (عوسة				

PG-EE-JUNE,2023(Forensic Science) Code-B
(15)

Question No.	ar and a second and	iestions	-tion with
65.	The alkane that gives only of Cl_2 in the presence of diffuse	ne mono-chloro product on chloris d sunlight is :	nation with
	(1) 2, 2-dimethylbutane	(2) n-pentane	
	(3) neopentane	(4) Isopentane	
66.	The element used in high ter	mperature thermometers is	
	(1) Na	(2) Ga	
	(3) Tl	(4) Hg	•
67.	Which of the following is not	a Lewis acid?	
	(1) AlCl ₃	(2) $Al(OH)_3$	
	(3) BF ₃	(4) B(OH) ₃	
68.	What is 'X' in the following r	eaction?	
	$\mathrm{MgC}l_{2} + 2\mathrm{H}_{2}\mathrm{O} \rightarrow \mathrm{X} + 2\mathrm{HC}l + 2$	+ H ₂ O	
	(1) MgO	(2) Mg	and the same of
	(3) Mg(OH) ₂	(4) Mg(OH)Cl	
69.		on with H ₂ O produces a colorless bsorbed in a solution of CuSO ₄ to the compound 'X'	
	(1) Ca ₃ P ₂	(2) NH ₄ C <i>l</i>	1.18
	(3) As ₂ O ₃	(4) Ca ₃ (PO ₄) ₂	

Set-Y Code-B

Question No.	Questions	
70.	When neutral or faintly alkaline KMnO ₄ is treated with potassium iodide ion is converted into 'X'. 'X' is	iodide,
	(1) I_2 (2) IO_4^-	
	(3) IO ₃ (4) IO	100 2 3
71.	Sex organs in Funaria develop:	
	(1) In the protonema	
	(2) Inside the capsule	
	(3) In the axils of leaves	
	(4) At the tip of gametophore	and the
72.	Nitrogen fixers in Azolla are:	***
	(1) Nostoc (2) Anabaena	
	(3) Aulosira (4) Azospirillum	
73.	The cell wall of Spirogyra is made up of:	
	(1) Cellulose (2) Pectin	
	(3) Lignin (4) Chitin	

PG-EE-JUNE, 2023 (Forensic Science) Code-B

(17)

Question No.	Questions				
74.	A group of fungi with septate mycelium in which sexual reproduction is either unknown or lacking is classified under:				
	(1) Phycomycetes (2) Deuteromycetes				
	(3) Ascomycetes (4) Basidiomycetes				
75.	The fungus without mycelium is:				
	(1) Puccinia (2) Phylophihora				
	(3) Rhizopus (4) Saccharomyces				
76.	The nucleic acid in Tobacco Mosaic Virus is				
	(1) Single stranded DNA (2) Single stranded RNA				
	(3) Double stranded DNA (4) Double stranded RNA				
77.	Pneumatophores occur in				
4	(1) Halophytes (2) Free-floating hydrophytes				
	(3) Carnivorous plants (4) Submerged hydrophytes				
78.	Double fertilization is				
	(1) Fusion of two male gametes of a pollen tube with two different eggs				
	(2) Fusion of one male gemete with two polar nuclei				
	(3) Fusion of two male gametes with one egg				
	(4) Syngamy and triple fusion				

Set-Y Code-B

No.	Questions				
79.	Which of the following elements is responsible for maintaining turgor in				
	cells?				
	(1) Magnesium (2) Potassium				
	(3) Sodium (4) Calcium				
80.	The vascular cambium normally gives rise to:				
	(1) Primary phloem (2) Secondary xylem				
	(3) Periderm (4) Phelloderm				
81.	A tent is in the form of a cylinder of diameter 8 m and height 2 m				
	surmounted by a cone of equal base and height 3 m. The canvas used for				
, 4.	surmounted by a cone of equal base and height 3 m. The canvas used for making the tent is equal to				
	making the tent is equal to				
82.	making the tent is equal to $(1) 36 \pi m^2 \qquad (2) 28 \pi m^2$				
82.	making the tent is equal to $(1) \ \ 36 \ \pi m^2 \qquad \qquad (2) \ \ 28 \ \pi m^2$ $(3) \ \ 24 \ \pi m^2 \qquad \qquad (4) \ \ 32 \ \pi m^2$				
82.	making the tent is equal to $(1) 36\pim^2 \qquad \qquad (2) 28\pim^2$ $(3) 24\pim^2 \qquad \qquad (4) 32\pim^2$ HTML stands for				
82.	making the tent is equal to $(1) 36 \pi m^2 \qquad (2) 28 \pi m^2$ $(3) 24 \pi m^2 \qquad (4) 32 \pi m^2$ HTML stands for $(1) \text{ Hyper Text Makeup Lineage}$				
82.	making the tent is equal to $(1) 36 \pi m^2 \qquad (2) 28 \pi m^2$ $(3) 24 \pi m^2 \qquad (4) 32 \pi m^2$ HTML stands for $(1) \text{ Hyper Text Makeup Lineage}$ $(2) \text{ Hyper Text Makeup Language}$				

PG-EE-JUNE, 2023 (Forensic Science) Code-B (19)

Ques N

Question No.	Questions
83.	Select the option in which the numbers are related in the same way as are the numbers of the following set:
	(7, 63, 79)
ga saya gada saya sa	(1) (5, 35, 47) (2) (6, 30, 44)
	(3) (7, 34, 48) (4) (8, 72, 96)
84.	Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the number-pair that is different.
	(1) 11:119 (2) 12:135
	(3) 21:440 (4) 15:228
85.	5 years ago, my friend's age was 5 times of my age, now it is 3 times only. What is my friend's present age (in years)?
	(1) 30 (2) 25
	(3) 20 (4) 15
86.	Select the correct combination of mathematical signs that can sequentially replace the signs balance the given equations $65*5*45*2*30*73$
	(1) \div , \times , $+$, $-$, $=$ (2) $+$, \div , \times , $=$, $-$
	(1) \div , \times , $+$, $-$, $=$ (2) $+$, \div , \times , $=$, $-$ (3) \div , $+$, \times , $=$, $-$ (4) \div , $+$, \times , $-$, $=$

Set-Y Code-B

Question No.	Questions	
87.	Four words have been given, out of which three are alike in some mand one is different. Select the word that is different.	anner
	(1) Obstacle (2) Interference	
	(3) Progress (4) Hindrance	
88.	Maximum diffraction in a given system happen for	
	(1) Visible rays (2) UV rays	
	(3) IR rays (4) Radio wave	
89.	Study of life in outer space is known as	
	(1) Endobiology (2) Exobiology	
t to the	(3) Enterobiology (4) Neobiology	
90.	Platelets initiate blood clotting by releasing a substance is called :	
	(1) Prothrombin (2) Thrombin	
	(3) Thromboplastin (4) Fibrinogen	endants to a seption
91.	Sensory epithelial cells are modified	
	(1) Nerve cells	
	(2) Columnar cells	
	(3) Glandular cells	
	(4) None of these	

PG-EE-JUNE,2023(Forensic Science) Code-B
(21)

Qu

Question No.	Questions
92.	Which of the following hormones can play a significant role in osteoporosis?
	(1) Aldosterone and Prolactin
	(2) Progesterone and Aldosterone
	(3) Estrogen and Parathyroid hormone
	(4) Parathyroid hormone and Prolactin
93.	Identify the vertebrate group of animals characterized by crop and gizzard in its digestive system.
	(1) Amphibia (2) Aves
	(3) Reptilia (4) Osteichthyes
94.	The hepatic portal vein drains blood to liver from:
	(1) Stomach (2) Kidneys
	(3) Intestine (4) Heart
95.	A disease caused by an autosomal primary non-disjunction is:
	(1) Klinefelter's Syndrome
	(2) Turner's Syndrome
	(3) Sickel Cell Anemia
	(4) Down's Syndrome

PG-EE-JUNE,2023(Forensic Science) Code-B
(22)

Question No.	Questions
96.	y-component of velocity is 20 and x-component of velocity is 10. The direction of motion of the body with the horizontal at this instant is (1) tan ⁻¹ (2) (2) 45° (3) tan ⁻¹ (1/2) (4) 0°
97.	A bullet is fired horizontally towards North with a velocity 500m/s at a place where angle of latitude is 30°. Its displacement when bullet strikes the tangent placed at a distance of 250 m. If the mass of bullet is 100gm, then the coriolis force acting on the bullet is
125	(1) $1 \times 10^{-2} \text{ N}$ (2) $4.4 \times 10^{-3} \text{ N}$ (3) $3.64 \times 10^{-3} \text{ N}$ (4) $5 \times 10^{-2} \text{ N}$
98.	If the radioactive decay constant of radium is 4.28×10^{-4} per year, its half-life period is approximately (1) 2000 yr (2) 2260 yr (3) 1620 yr (4) 1240 yr
99.	Light of wavelength 3500 Å is incident on two metals A of work function 4.2 eV and B of work function 1.19 eV. The photoelectrons will be emitted by (1) Metal A (2) Both metal A and B (3) Metal B (4) Neither metal A nor metal B

PG-EE-JUNE, 2023 (Forensic Science) Code-B (23)

uestion No.	Questions
100.	A string 1m long is drawn by a 300Hz vibrator attached to its end. The string vibrates in three segments. The speed of transverse waves in the string is equal to:
	(1) $100 \mathrm{ms^{-1}}$ (2) $200 \mathrm{ms^{-1}}$
	(3) 300 ms^{-1} (4) 400 ms^{-1}
2011	Factor of the second side of the second side of the second
	Entropy of the second s
717	The second of th
	[BB] [18] [18] [18] [18] [18] [18] [18] [18

SET "Y"

(Total No. of Printed Pages: 24)

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(PG-EE-JUNE-2023)

Code	C	FORENS
Time: 1	14 Hours	Total Qu

GSCIENCE Sr. No 10007

Time: 11/4 Hours Potal Question	s Max. Marks: 100
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Date of Examination:	

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

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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.

Question Booklet along-with answer key of all the A,B,C and D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint in any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.

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 booklet itself. Answer

MUST NOT be ticked in the Question booklet.

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There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer 6. in OMR Answer-Sheet will be treated as incorrect answer.

Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-7.

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Set-Y Code-C

Question No.	Questions	4		
1.	Which of the following compounds cannot be stored in glass	vessels?		
	(1) XeF_6 (2) XeO_3			
	(3) XeF_2 (4) XeF_4			
2.	Clathrates are			
	(1) normal salts	oiei H. I		
	(2) interstitial compounds	(8)		
ny mantana ara-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-a-	(3) complex compounds	different		
	(4) non-stoichiometric compounds	(1)		
3.	Which is thermodynamically most stable form of carbon?			
	(1) Graphite (2) Diamond	dv last.		
	(3) Coal (4) Coke	Maria		
4.	What is oil dag?	(0)		
	(1) Silicone oil			
with the state of	(2) Suspension of graphite in oil			
1. 11	(2) Suspension of graphite in oil	Many (
	(3) Distillation products of paraffin oil	fine in		

PG-EE-JUNE, 2023 (Forensic Science) Code-C (1)

Question	
No. 5.	The alkane that gives only one mono-chloro product on chlorination with Cl_2 in the presence of diffused sunlight is :
to the second se	 (1) 2, 2-dimethylbutane (2) n-pentane (3) neopentane (4) Isopentane
6.	The element used in high temperature thermometers is
	(1) Na (2) Ga (3) Tl (4) Hg
7.	Which of the following is not a Lewis acid? (1) $AlCl_3$ (2) $Al(OH)_3$ (3) BF_3 (4) $B(OH)_3$
8.	What is 'X' in the following reaction ? $ MgCl_2 + 2H_2O \rightarrow X + 2HCl + H_2O $
	(1) MgO (2) Mg (3) Mg(OH) ₂ (4) Mg(OH)Cl
9.	A compound 'X' upon reaction with H ₂ O produces a colorless gas 'Y' with rotten fish smell. Gas 'Y' is absorbed in a solution of CuSO ₄ to give Cu ₃ P ₂ at one of the products. Predict the compound 'X'
	(1) $Ca_{3}P_{2}$ (2) $NH_{1}Cl$ (3) $As_{2}O_{3}$ (4) $Ca_{3}(PO_{4})_{2}$

PG-EE-JUNE,2023(Forensic Science) Code-C (2)

uestion No.	Questions
10.	When neutral or faintly alkaline $KMnO_4$ is treated with potassium iodide, iodide ion is converted into 'X'. 'X' is
	(1) I_2 (2) IO_4^-
	(3) IO ₃
11.	Charred document is stabilized by
	(1) Poly vinyl acetate (2) Super Glue
	(3) EDTA (4) Starch Solution
12.	Vitreous humor is particularly examined for checking
AN OF WAR	(1) Poisoning cases (2) Metabolic
	(3) Alcohol level (4) Exhumed
13.	'Stass-Otto' process is used for
	(1) Extraction of poisons (2) Extraction of DNA
	(3) Extraction of antigens (4) Isolation of compliments
14.	Amatol contains
	(1) TNT and RDX (2) TNT and Tetryl
	(3) TNT and PETN (4) TNT and Ammonium Nitrate

PG-EE-JUNE, 2023 (Forensic Science) Code-C
(3)

Question No.	Questions		
15.	The Algorithm associated with the speed determination of vehicle is		
	(1) Optical flow Algorithm		
	(2) Dijkstra's Algorithm		
	(3) Floyd Warshall Algorithm		
*	(4) Kruskal's Algorithm		
16.	After bomb scene debris has been examined microscopically, the next step		
	is to		
i Najvije	(1) Examine explosive using AAS		
	(2) Identify the detonating material with SEM-EDX		
	(3) Rinse the recovered debris with acetone to separate the debris from explosive material		
en e	(4) Utilize H1-NMR to fingerprint the explosive residue		
17.	The analysis of variance can be considered as an extension of		
	(1) T-test (2) F-test		
7	(3) One-tailed test (4) Z-test		
18.	Hampi denomination is present in which Indian currency:		
. 1			
	(1) 2000 (2) 200		
	(1) 2000 (2) 200 (3) 10 (4) 50		

PG-EE-JUNE,2023(Forensic Science) Code-C

<u>Set-Y</u> Code-C

Question No.	Questions		e de Verene	
19.	The melting point of Vi	cara fiber is	·	
	(1) 245-260°C	(2)	265-275°C	
	(3) 192-210°C	(4)	288-300°C	
20.	The database designed images is	l for collecti	on, restoration and co	omparing of too
Santa + 1994	(1) AFTE	(2)	TRAX	
	(3) NBTRD	(4)		orac una
21.	A tent is in the form surmounted by a cone	of equal bas		
	making the tent is equal $(1) 36 \pi m^2$		$28\pi\mathrm{m}^2$	
	(1) 36mm^2 (3) 24mm^2		$28\pim^2$ $32\pim^2$	
22.	(1) 36m^2	(2)	arcaem, strend on s	
22.	 (1) 36 π m² (3) 24 π m² 	(2)	arcaem, strend on s	
22.	 (1) 36 π m² (3) 24 π m² HTML stands for 	(2) (4) up Lineage	$32\pi\mathrm{m}^2$	
22.	 (1) 36 πm² (3) 24 πm² HTML stands for (1) Hyper Text Makeu 	(2) (4) up Lineage up Language	$32\pim^2$	

PG-EE-JUNE, 2023 (Forensic Science) Code-C (5)

No.	Select the option in which the numbers are related in the same way as are
3	the numbers of the following set:
	(7, 63, 79)
	(1) (5, 35, 47) (2) (6, 30, 44)
	(3) (7, 34, 48) (4) (8, 72, 96)
24.	Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the number-pair that is different.
	(1) 11:119
X V	(3) 21:440
25.	5 years ago, my friend's age was 5 times of my age, now it is 3 times only.
	What is my friend's present age (in years)?
	(1) 30
	(3) 20
26.	Select the correct combination of mathematical signs that can sequentially
	replace the signs balance the given equations 65 * 5 * 45 * 2 * 30 * 73
	(1) \div , \times , \div , $-$, $=$ (2) \div , \div , \times , $=$, $-$
	(3) \div , $+$, \times , $=$, $-$ (4) \div , $+$, \times , $-$, $=$

Question No.	Questions		
27.	Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different. (1) Obstacle (2) Interference (3) Progress (4) Hindrance		
28.	Maximum diffraction in a given system happen for (1) Visible rays (2) UV rays (3) IR rays (4) Radio wave		
29.	Study of life in outer space is known as (1) Endobiology (2) Exobiology (3) Enterobiology (4) Neobiology		
30.	Platelets initiate blood clotting by releasing a substance is called: (1) Prothrombin (2) Thrombin (3) Thromboplastin (4) Fibrinogen		
31.	Two particles execute S.H.M. of the same amplitude and frequency along the same straight line. Then pass one another travelling in opposit directions, whenever their displacement is half their amplitude. The phase difference between the two is: (1) $2\pi/3$ (2) $\pi/6$ (3) π (4) $\pi/3$		

Set-Y Code-C

Questic No.

36.

37

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Questions		
A water wave is an example of: (1) A longitudinal wave motion (2) Stationary wave (3) Transverse wave motion (4) None of the above		
The conductivity of intrinsic Ge at 300°K is equal to		
(1) 0.0224 s/cm (2) 0.0234 s/cm		
(3) 0.0244 s/cm (4) 0.0254 s/cm		
The primary function of a bias circuit is to		
(1) hold the circuit stable at V _{cc}		
(2) hold the circuit stable at V _{in}		
(3) ensure proper gain is achieved		
(4) hold the circuit stable at designed Q-point		
An ion with a charge of $+3.2\times10^{-19}$ C is in a region where a uniform electric field of 5×10^4 V/m is perpendicular to a uniform magnetic field of 0.8T. If its acceleration is zero then its speed must be: (1) 1.6×10^4 m/s (2) 4.0×10^4 m/s (3) 6.3×10^4 m/s (4) 0		

PG-EE-JUNE, 2023 (Forensic Science) Code-C (8)

Question No.	Questions				
36.	A triangle with vertices $(4, 0), (-1, -1), (3, 5)$ is:				
	(1) Isosceles and right angled				
	(2) Isosceles but not right angled				
	(3) Right angled but not isosceles				
	(4) Neither right angled nor isosceles				
37.	Which of the following is true?				
	(1) Mode = 2Median – Mean				
	(2) Mode = 3Median + 2Mean				
	(3) Mode = 3Median – 2Mean				
	(4) None of these				
38.	Which of the following can not be determined graphically:				
	(1) Mean (2) Median				
	(3) Mode (4) Standard deviation				
39.	From a group of 3 men and 2 women, two persons are selected at random Find the probability that at least one woman is selected.				
	(1) $\frac{1}{5}$ (2) $\frac{7}{10}$				
	(3) $\frac{2}{5}$ (4) None of these				

Questio No.	Questions	
40.	If the roots of the quadratic equation $x^2 + px + q = 0$ are tan 300 and t	an150,
	then the value of $2 + q - p$ is	
	(1) 1 (2) 2	
	(3) 3	
41.	Sex organs in Funaria develop:	
	(1) In the protonema	
	(2) Inside the capsule	
	(3) In the axils of leaves	
	(4) At the tip of gametophore	
42.	Nitrogen fixers in Azolla are:	61,
	(1) Nostoc (2) Anabaena	
	(3) Aulosira (4) Azospirillum	
43.	The cell wall of Spirogyra is made up of:	
	(1) Cellulose (2) Pectin	
	(3) Lignin (4) Chitin	N. A.
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Question No.	Questions		
44.	A group of fungi with septate mycelium in which sexual reproduction is either unknown or lacking is classified under:		
	(1) Phycomycetes (2) Deuteromycetes		
	(3) Ascomycetes (4) Basidiomycetes		
45.	The fungus without mycelium is:		
	(1) Puccinia (2) Phylophihora		
	(3) Rhizopus (4) Saccharomyces		
46.	The nucleic acid in Tobacco Mosaic Virus is		
	(1) Single stranded DNA (2) Single stranded RNA		
	(3) Double stranded DNA (4) Double stranded RNA		
47.	Pneumatophores occur in		
	(1) Halophytes (2) Free-floating hydrophytes		
	(3) Carnivorous plants (4) Submerged hydrophytes		
48.	Double fertilization is		
	(1) Fusion of two male gametes of a pollen tube with two different eggs		
	(2) Fusion of one male gemete with two polar nuclei		
	(3) Fusion of two male gametes with one egg		
	(4) Syngamy and triple fusion		

198

Set-Y Code-C

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5

No.	Questions
49.	Which of the following elements is responsible for maintaining turgor in cells?
	(1) Magnesium (2) Potassium
	(3) Sodium (4) Calcium
50.	The vascular cambium normally gives rise to:
	(1) Primary phloem (2) Secondary xylem
	(3) Periderm (4) Phelloderm
51.	1°, 2°, 3° and 4° carbon atoms are present in
	(1) 2, 2, 3-trimethylpentane
	(2) 2, 3, 4-trimethylpentane
	(3) 2, 4-dimethylpentane
	(4) 3, 3-dimethylpentane
52.	The distance between two adjacent carbon atoms is longest in
	(1) ethene (2) benzene
	(3) ethyne (4) ethane
53.	The correct structure of ethanoyl chloride is
7.	(1) CH ₃ CH ₂ Cl (2) CH ₃ COCl
	(3) CCl ₃ CHO (4) CH ₂ ClCOOH

PG-EE-JUNE, 2023 (Forensic Science) Code-C (12)

Question No.	Questions		
54.	Among the given compounds the most susceptive to nucleophile attack at		
	the carbonyl group is		
	(1) MeCOCl (2) MeCHO		
	(3) MeCO ₂ Me (4) MeCO ₂ COMe		
55.	Benzyl carbonium ion is highly stabilized because		
	(1) there is extended delocalization of π electrons		
	(2) it is a 1° carbonium ion		
	(3) it has electron releasing groups		
	(4) all of the above		
56.	The percentage of s-character of the hybrid orbital of carbon in ethane,		
	ethene and ethyne respectively are		
	(1) 25, 33, 50 (2) 20, 50, 33		
	(3) 25, 50, 75 (4) 33, 66, 99		
57.	Which of the following statement is incorrect?		
	(1) The rate of S _N 2 reaction is increased in aprotic solvent.		
	(2) The rate of S _N 1 reaction is independent of the concentration of		
	nucleophile.		
	(3) An S _N 1 reaction proceeds with inversion of configuration		
	(4) An S _N 2 reaction proceeds with stereo chemical inversion.		

Questions	
Purification of petroleum is carried out by	100
(1) fractional distillation	
(2) steam distillation	
(3) vacuum distillation	
(4) simple distillation	
Lindlar's catalyst is	
(1) Pt in ethanol (2) Pd + BaSO ₄	
(3) Ni in quinolone (4) Na in liquid NH ₃	
The reaction between Fe(II) and ferrozine is catalyzed by:	()
(1) Short-wave UV light	
(2) Long-wave UV light	
(3) Short-wave X-rays	1
(4) Long-wave X-rays	
The Tetradon is commonly known as	
(1) Cow fish (2) Devil fish	
(3) Globe fish (Puffer) (4) Cave fish	
tion to at the made of the call the another manner tree of the	
	Purification of petroleum is carried out by (1) fractional distillation (2) steam distillation (3) vacuum distillation (4) simple distillation Lindlar's catalyst is (1) Pt in ethanol (2) Pd + BaSO ₄ (3) Ni in quinolone (4) Na in liquid NH ₃ The reaction between Fe(II) and ferrozine is catalyzed by: (1) Short-wave UV light (2) Long-wave UV light (3) Short-wave X-rays (4) Long-wave X-rays The Tetradon is commonly known as (1) Cow fish (2) Devil fish

			Code-	_
Question No.	Questions			
62.	Wh	ich one of the following is correc	etly matched?	
	(1)	Epiceratodus - double lung		
	(2)	Protopterus - single lung	northe he designed as a second	
	(3)	Lepidosiren - single lung		
	(4)	Polypterus - no lung		
63.	Bon	e marrow is absent in		
2251870.1.	(1)	fishes (2)	birds	
	(3)	amphibians (4)	reptiles	
64.	. Ultrafiltration occurs in a glomerulus when			
	(1)	hydrostatic pressure exceeds	osmotic pressure	
	(2)	osmotic pressure exceeds hyd	rostatic pressure	
	(3)	capsular hydrostatic pressu	ure exceeds glomerular hydrost	atic
		pressure	S. I joulustriairmellamista is an ex-	9
	(4)		us the capsular pressure remain	less
		than glomerular hydrostatic p	ressure	
65.	Study of interaction of antigen and antibody in blood is termed			
	(1)	serology (2)	cryobiology	
	(3)	angiology (4)	haematology	
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PG-EE-JUNE, 2023 (Forensic Science) Code-C (15)

uestion No.	Questions		
66.	Addison's disease results from		
1	(1) Hyposecretion of adrenal cortex		
	(2) Hypersecretion of adrenal cortex		
	(3) Hypertrophy of gonads		
	(4) Hyperactivity of cells of Leydig		
67.	A cricket player is fast chasing a ball in the field. Which one of the following groups of bones are directly contributing in this movement?		
	(1) Pelvis, ulna, patella, tarsals		
	(2) Sternum, femur, tibia, fibula		
	(3) Tarsals, femur, metatarsals, tibia		
	(4) Femur, malleus, tibia, metatarsals		
68.	Industrial melanism is an example of		
	(1) drug resistance		
	(2) protective resemblance with the surroundings		
	(3) darkening of skin due to smoke from industries		
	(4) defensive adaptation of skin against ultraviolet radiations		

Question No.	Questions	
69.	Stomata in grass leaf are	
	(1) Dumb-bell shaped (2) Kidney shaped	
	(3) Rectangular (4) Barrel shaped	
70.	The Golgi complex participates in	
	(1) Fatty acid breakdown	
	(2) Formation of secretory vesicles	
	(3) Respiration in bacteria	
	(4) Activation of amino acid	
71.	Sensory epithelial cells are modified	
	(1) Nerve cells	
	(2) Columnar cells	
	(3) Glandular cells	
	(4) None of these	
72.	Which of the following hormones can play a significant role in osteoporosis?	
	(1) Aldosterone and Prolactin	
	(2) Progesterone and Aldosterone	
	(3) Estrogen and Parathyroid hormone	
	(4) Parathyroid hormone and Prolactin	

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Question No.	Questions		
73.	Identify the vertebrate group of animals characterized by crop and gizzard		
	in its digestive system.		
	(1) Amphibia (2) Aves		
	(3) Reptilia (4) Osteichthyes		
74.	The hepatic portal vein drains blood to liver from:		
	(1) Stomach (2) Kidneys		
	(3) Intestine (4) Heart		
75.	A disease caused by an autosomal primary non-disjunction is:		
	(1) Klinefelter's Syndrome		
	(2) Turner's Syndrome		
	(3) Sickel Cell Anemia		
	(4) Down's Syndrome		
76.	y-component of velocity is 20 and x-component of velocity is 10. The direction of motion of the body with the horizontal at this instant is		
	(1) tan ⁻¹ (2) (2) 45°		
	(3) $tan^{-1}(1/2)$ (4) 0°		

PG-EE-JUNE, 2023 (Forensic Science) Code-C (18)

Question	Questions Code-C		
No.	9	questions	
77.	A bullet is fired horizontally towards North with a velocity 500m/s a place where angle of latitude is 30°. Its displacement when bullet strictly the tangent placed at a distance of 250 m. If the mass of bullet is 100 then the coriolis force acting on the bullet is		
	(1) $1 \times 10^{-2} \mathrm{N}$	(2) $4.4 \times 10^{-3} \text{ N}$	
	(3) $3.64 \times 10^{-3} \mathrm{N}$	(4) $5 \times 10^{-2} \text{ N}$	
78.	If the radioactive decay constant of radium is 4.28×10^{-4} per year, its half life period is approximately		
	(1) 2000 yr	(2) 2260 yr	
11001	(3) 1620 yr	(4) 1240 yr	
79.		is incident on two metals A of work function on 1.19 eV. The photoelectrons will be emitted	
2000	(1) Metal A		
	(2) Both metal A and B		
	(3) Metal B		
	(4) Neither metal A nor me	etal B	

Questi

84

Question				
No. 80.	A string 1m long is drawn by a 300Hz vibrator attached to its end. The string vibrates in three segments. The speed of transverse waves in the string is equal to: (1) 100 ms ⁻¹ (2) 200 ms ⁻¹ (3) 300 ms ⁻¹ (4) 400 ms ⁻¹			
81.	Choose the word from the options given below that is most opposite in			
	meaning to the given word: Frequency			
	(1) periodicity (2) rarity			
	(3) gradualness (4) persistency			
82.	25 persons are in a room 15 of them play hockey, 17 of them play footbal and 10 of them play hockey and football. Then the number of person playing neither hockey nor football is (1) 2 (2) 17 (3) 13 (4) 3			
83.	A and B are friends. They decide to meet between 1 PM and 2 PM on a given day. There is a conditions that whoever arrives first will not wait for the other for more than 15 minutes. The probability that they will meet of that days is (1) 1/4 (2) 1/16 (3) 7/16 (4) 9/16			

Question No.	Questions
84.	If the speed of a driver be 5 km/h more than the original speed he would have covered a fixed distance 20 minutes earlier. If his speed was 3 km/h less than the original speed he would have taken 15 minutes more to cover that fixed distance. Calculate the original speed,
	(1) 35 kmph (2) 40 kmph
	(3) 30 kmph (4) 45 kmph
85.	A cube of side 100 cm is painted Red on all the faces and then cut into smaller cubes of sides 10 cm each. Find the number of smaller cubes having all the three faces painted.
	(1) 32 (2) 64
	(3) 28 (4) 8
86.	Dental formula of deciduous teeth is
	(1) 2123/2123 (2) 2130/2130
	(3) 2120/2120 (4) 2023/2023
87.	Puppe's Rule' helps in determination of:
	(1) Identity of fire arm
	(2) Range of fire arm
	(3) Sequence in which shots were fired
	(4) Nature of injury caused by fire arm

PG-EE-JUNE, 2023 (Forensic Science) Code-C (21)

Question No.	Questions		
88.	Erasure of writing by using soft rubber is called		
	(1) Chemical Erasure (2) Soft Erasure		
	(3) Hard Erasure (4) Mechanical Erasure		
89,	The terms "FFFFg", "FFFg", "FFg" and "Fg" are used in relation to:		
	(1) Black powder (2) Cartridge		
tiesalie:	(3) Bore of a gun (4) Make of a gun		
90.	Reinsch Test is satisfactorily used for the detection of		
	(1) Phosphorus (2) Arsenic		
	(3) Copper (4) Lead		
91.	The low density of ice compared to water is due to		
	(1) hydrogen bonding interactions		
	(2) dipole-dipole interactions		
	(3) dipole induced dipole interactions		
	(4) induced dipole induced dipole interactions		
92.	Calgon is		
	(1) $Na_2[Na_4(PO_3)_6]$ (2) $Na_4[Na_2(PO_3)]_6$		
	(3) $Na_{2}[Na_{3}(PO_{4})]_{6}$ (4) $Na_{3}[Na_{2}(PO_{4})_{6}]$		

PG-EE-JUNE, 2023 (Forensic Science) Code-C (22)

uestion No.	Questions		
93.	The maximum amount of BaSO ₄ precipitated on mixing 20 ml of 0.5M		
	BaCl ₂ with 20 ml of 1M H ₂ SO ₄ is		
	(1) 0.25 mole (2) 0.5 mole		
	(3) 1 mole (4) 0.01 mole		
94.	Kinetic Energy of one mole of He at 0°C is		
	(1) 819.0 cal (2) 84.43 cal		
	(3) 8.143 cal (4) None of these		
95.	The number of hydrogen bonded water molecule(s) associated water	vith	
50.	CuSO ₄ .5H ₂ O is		
	(2) 1 (2) 1		
	(3) 2		
96.	Vascular bundles in Pinus stem are:		
	(1) Radial (2) Collateral and closed		
	(3) Collateral and open (4) Bicollateral		
97.	fallowing symnosperms is said to have double fertilization	ition	
".	(2) Ephedra		
	(3) Cycas (4) Pinus		
		3151	
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Question No.	Questions				
98.	In B	Bougainvillea thorns a	are the mod	ifications of:	
	(1)	Adventitious root	(2)	Leaf	
	(3)	Stem	(4)	Stipules	
99.	Spor	res of fern are :		New Commence of the Commence o	
	(1)	Haploid	(2)	Diploid	
	(3)	Triploid	(4)	Polyploid	
100.	Chl	orenchyma is known	to develop	in:	
	(1)	Pollen tube of Pinus	3		
	(2)	Cytoplasm of Chlor	ella		
	(3)	Spore capsule of a	moss		
	(4)	Mycelium of a gree	n mould	hander at the transfer to be the	
		And the second second	(a) (5) (4)	leiball (C.	
in the	neil	Philipping and the state of the			

PG-EE-JUNE, 2023 (Forensie (24)

SET-"Y"

(Total No. of Printed Pages : 24)

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

(PG-EE-JUNE-2023)

Code



FORENSIC SCIENCE

Sr. No. 10012

Time: 1¼ Hours	Total Questions, 100 Max. Marks: 100
Roll No.	(in figure) (in words
Name :	Date of Birth:

Father'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.

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.

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.

Question Booklet along-with answer key of all the A,B,C and D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint in any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case will be considered.

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 booklet itself. Answer

MUST NOT be ticked in the Question booklet.

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.

Use only Black or Blue BALL POINT PEN of good quality in the OMR Answer-7.

BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD 8. 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.	The Tetradon is commonly known as (1) Cow fish (2) Devil fish (3) Globe fish (Puffer) (4) Cave fish
2.	Which one of the following is correctly matched? (1) Epiceratodus - double lung (2) Protopterus - single lung (3) Lepidosiren - single lung (4) Polypterus - no lung
3.	Bone marrow is absent in (1) fishes (2) birds (3) amphibians (4) reptiles
4.	 Ultrafiltration occurs in a glomerulus when (1) hydrostatic pressure exceeds osmotic pressure (2) osmotic pressure exceeds hydrostatic pressure (3) capsular hydrostatic pressure exceeds glomerular hydrostatic pressure (4) colloidal osmotic pressure plus the capsular pressure remain less than glomerular hydrostatic pressure

Questions
Study of interaction of antigen and antibody in blood is termed
(1) serology
(2) cryobiology
(3) angiology
(4) haematology
Addison's disease results from
(1) Hyposecretion of adrenal cortex
(2) Hypersecretion of adrenal cortex
(3) Hypertrophy of gonads
(4) Hyperactivity of cells of Leydig
A cricket player is fast chasing a ball in the field. Which one of the following groups of bones are directly contributing in this movement?
(1) Pelvis, ulna, patella, tarsals
(2) Sternum, femur, tibia, fibula
(3) Tarsals, femur, metatarsals, tibia
(4) Femur, malleus, tibia, metatarsals

uestion No.	Questions
8.	 Industrial melanism is an example of (1) drug resistance (2) protective resemblance with the surroundings (3) darkening of skin due to smoke from industries (4) defensive adaptation of skin against ultraviolet radiations
9.	Stomata in grass leaf are (1) Dumb-bell shaped (2) Kidney shaped (3) Rectangular (4) Barrel shaped
10.	The Golgi complex participates in (1) Fatty acid breakdown (2) Formation of secretory vesicles (3) Respiration in bacteria (4) Activation of amino acid
11.	The low density of ice compared to water is due to (1) hydrogen bonding interactions (2) dipole-dipole interactions (3) dipole induced dipole interactions (4) induced dipole induced dipole interactions

PG-EE-JUNE,2023(Forensic Science) Code-D
(3)

Question No.	Questions
12.	Calgon is
	(1) $Na_{2}[Na_{1}(PO_{3})_{6}]$ (2) $Na_{4}[Na_{2}(PO_{3})]_{6}$
	(3) $Na_{2}[Na_{3}(PQ_{1})]_{6}$ (4) $Na_{3}[Na_{2}(PO_{1})_{6}]$
13.	The maximum amount of BaSO, precipitated on mixing 20 ml of 0.5M BaCl, with 20 ml of 1M H,SO, is
and the second	(1) 0.25 mole (2) 0.5 mole
	(3) 1 mole (4) 0.01 mole
14.	Kinetic Energy of one mole of He at 0°C is
	(1) 819.0 cal (2) 84.43 cal
f	(3) 8.143 cal (4) None of these
15.	The number of hydrogen bonded water molecule(s) associated with CuSO ₄ .5H ₂ O is
	(1) 3 (2) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	(3) 2 (4) 5
16.	Vascular bundles in Pinus stem are:
	(1) Radial (2) Collateral and closed
	(3) Collateral and open (4) Bicollateral

PG-EE-JUNE, 2023 (Forensic Science) Code-D
(4)

Question No.	Questions			
17.	Which one of the following gymnosperms is said to have double fertilization?			
	(1) Ginkgo (2) Ephedra			
	(3) Cycas (4) Pinus			
18.	In Bougainvillea thorns are the modifications of:			
	(1) Adventitious root (2) Leaf			
	(3) Stem (4) Stipules			
19.	Spores of fern are:			
	(1) Haploid (2) Diploid			
Porjins	(3) Triploid (4) Polyploid			
20.	Chlorenchyma is known to develop in :			
# Pre	(1) Pollen tube of Pinus			
	(2) Cytoplasm of Chlorella			
	(3) Spore capsule of a moss			
	(4) Mycelium of a green mould			
,				

PG-EE-JUNE, 2023 (Forensic Science) Code-D
(5)

Question	Questions
No. 21.	1°, 2°, 3° and 4° carbon atoms are present in
	(1) 2, 2, 3-trimethylpentane
	(2) 2, 3, 4-trimethylpentane
	(3) 2, 4-dimethylpentane
	(4) 3, 3-dimethylpentane
22.	The distance between two adjacent carbon atoms is longest in
	(1) ethene (2) benzene
	(3) ethyne (4) ethane
23.	The correct structure of ethanoyl chloride is
	(1) CH_3CH_2Cl (2) CH_3COCl
	(3) CCl ₃ CHO (4) CH ₂ ClCOOH
24.	Among the given compounds the most susceptive to nucleophile attack at
	the carbonyl group is
	(1) MeCOCl (2) MeCHO
	(3) MeCO ₂ Me (4) MeCO ₂ COMe
25.	Benzyl carbonium ion is highly stabilized because
	(1) there is extended delocalization of π electrons
, j	(2) it is a 1° carbonium ion
	(3) it has electron releasing groups
	(4) all of the above

PG-EE-JUNE,2023(Forensic Science) Code-D
(6)

Question No.	Control Contro		
26.	The percentage of s-character of the hybrid orbital of carbon in ethane, ethene and ethyne respectively are (1) 25, 33, 50 (2) 20, 50, 33		
	(1) 25, 33, 50 (2) 20, 50, 35 (3) 25, 50, 75 (4) 33, 66, 99		
27.	Which of the following statement is incorrect? (1) The rate of S_N2 reaction is increased in aprotic solvent. (2) The rate of S_N1 reaction is independent of the concentration of		
	nucleophile. (3) An S _N 1 reaction proceeds with inversion of configuration		
28.	(4) An S _N 2 reaction proceeds with stereo chemical inverse. Purification of petroleum is carried out by (1) fractional distillation		
	 (2) steam distillation (3) vacuum distillation (4) simple distillation 		
29.	Lindlar's catalyst is (1) Pt in ethanol (2) Pd + BaSO ₄		
	(3) Ni in quinolone (4) Na in liquid NH ₃		

Question No.	Questions			
30.	The reaction between Fe(II) and ferrozine is catalyzed by:			
	(1) Short-wave UV light (2) Long-wave UV light			
	(3) Short-wave X-rays (4) Long-wave X-rays			
31.	Choose the word from the options given below that is most opposite in			
	meaning to the given word: Frequency			
	(1) periodicity (2) rarity			
cololini	(3) gradualness (4) persistency			
32.	25 persons are in a room 15 of them play hockey, 17 of them play football			
	and 10 of them play hockey and football. Then the number of persons			
2000 E. gr	playing neither hockey nor football is			
	(1) 2 (2) 17			
	(3) 13 (4) 3			
33.	A and B are friends. They decide to meet between 1 PM and 2 PM on a			
	given day. There is a conditions that whoever arrives first will not wait for			
	the other for more than 15 minutes. The probability that they will meet on			
	that days is			
	(1) 1/4 (2) 1/16			
	(3) 7/16 (4) 9/16			

uestion No.	The state of the s			
34.	If the speed of a driver be 5 km/h more than the original speed he would have covered a fixed distance 20 minutes earlier. If his speed was 3 km/l less than the original speed he would have taken 15 minutes more to cove that fixed distance. Calculate the original speed,			
	(1) 35 kmph (2) 40 kmph			
	(3) 30 kmph (4) 45 kmph			
35.	A cube of side 100 cm is painted Red on all the faces and then cut into smaller cubes of sides 10 cm each. Find the number of smaller cubes having all the three faces painted.			
	(1) 32 (2) 64			
	(3) 28			
36.	Dental formula of deciduous teeth is			
	(1) 2123/2123 (2) 2130/2130			
	(3) 2120/2120 (4) 2023/2023			
37.	Puppe's Rule' helps in determination of:			
	(1) Identity of fire arm			
	(2) Range of fire arm			
4.1	(3) Sequence in which shots were fired			
	그 이 집에 다시 하는 사람들이 되는 것이 되었다. 그는 사람들이 되었다면 하는 것이 되었다면 하는 것이 되었다. 그는 사람들이 얼굴하게 되었다면 하는 것이 되었다.			

Question No.	Questions			
38.	Erasure of writing by using soft rubber is called			
	(1) Chemical Erasure (2) Soft Erasure			
	(3) Hard Erasure (4) Mechanical Erasure			
39.	The terms "FFFFg", "FFFg", "FFg" and "Fg" are used in relation to:			
	(1) Black powder (2) Cartridge			
	(3) Bore of a gun (4) Make of a gun			
40.	Reinsch Test is satisfactorily used for the detection of			
	(1) Phosphorus (2) Arsenic			
	(3) Copper (4) Lead			
41.	Two particles execute S.H.M. of the same amplitude and frequency along the same straight line. Then pass one another travelling in opposite directions, whenever their displacement is half their amplitude. The phase difference between the two is:			
	(1) $2\pi/3$ (2) $\pi/6$			
Man San	(3) π (4) π/3			

PG-EE-JUNE, 2023 (Forensic Science) Code-D (10)

uestion No.	Questions
42.	A water wave is an example of:
	(1) A longitudinal wave motion
	(2) Stationary wave
	(3) Transverse wave motion
	(4) None of the above
43.	The conductivity of intrinsic Ge at 300°K is equal to
	(1) 0.0224 s/cm (2) 0.0234 s/cm
	(3) 0.0244 s/cm (4) 0.0254 s/cm
44.	The primary function of a bias circuit is to
. a le saida	. (1) hold the circuit stable at $V_{\rm cc}$
	(2) hold the circuit stable at V _{in}
	(3) ensure proper gain is achieved
	(4) hold the circuit stable at designed Q-point
45	An ion with a charge of +3.2×10 ⁻¹⁰ C is in a region where a uniform electric
	field of 5×10 ⁴ V/m is perpendicular to a uniform magnetic field of 0.8T. I its acceleration is zero then its speed must be:
	(0) 4.0 × 104 m/g
	(1) 1.6 × 10 m/s
	(3) $6.3 \times 10^4 \mathrm{m/s}$ (4) 0

nestion No.	Questions
46.	A triangle with vertices $(4, 0), (-1, -1), (3, 5)$ is:
	(1) Isosceles and right angled
	(2) Isosceles but not right angled
	(3) Right angled but not isosceles
	(4) Neither right angled nor isosceles
47.	Which of the following is true?
	(1) Mode = 2Median – Mean
	(2) Mode = 3Median + 2Mean
	(3) Mode = 3Median – 2Mean
	(4) None of these
48.	Which of the following can not be determined graphically:
	(1) Mean (2) Median
	(3) Mode (4) Standard deviation
49.	From a group of 3 men and 2 women, two persons are selected at randon Find the probability that at least one woman is selected.
	(1) $\frac{1}{5}$ (2) $\frac{7}{10}$
• 1	(3) $\frac{2}{5}$ (4) None of these

PG-EE-JUNE,2023(Forensic Science) Code-D
(12)

Question No.	Questions
50.	If the roots of the quadratic equation $x^2 + px + q = 0$ are tan 300 and tan 150, then the value of $2 + q - p$ is
	(1) 1 (2) 2
Fr. 12	(3) 3 (4) 0
51.	Sex organs in Funaria develop :
	(1) In the protonema
	(2) Inside the capsule
	(3) In the axils of leaves
en a un constitu	(4) At the tip of gametophore
52.	Nitrogen fixers in Azolla are:
	(1) Nostoc (2) Anabaena
	(3) Aulosira (4) Azospirillum
53.	The cell wall of Spirogyra is made up of:
	(1) Cellulose (2) Pectin
3	(3) Lignin (4) Chitin

Question No.	Questions			
54.	A group of fungi with septate mycelium in which sexual reproduction is either unknown or lacking is classified under:			
	(1) Phycomycetes (2) Deuteromycetes			
	(3) Ascomycetes (4) Basidiomycetes			
55.	The fungus without mycelium is:			
	(1) Puccinia (2) Phylophihora			
	(3) Rhizopus (4) Saccharomyces			
56.	The nucleic acid in Tobacco Mosaic Virus is			
	(1) Single stranded DNA (2) Single stranded RNA			
	(3) Double stranded DNA (4) Double stranded RNA			
57.	Pneumatophores occur in			
	(1) Halophytes (2) Free-floating hydrophytes			
	(3) Carnivorous plants (4) Submerged hydrophytes			
58.	Double fertilization is			
	(1) Fusion of two male gametes of a pollen tube with two different eggs			
	(2) Fusion of one male gemete with two polar nuclei			
	(3) Fusion of two male gametes with one egg			
	(4) Syngamy and triple fusion			
	HINE 2023 (Forensic Science) Code-D			

PG-EE-JUNE, 2023 (Forensic Science) Code-D (14)

Question No.	Questions	
59.	Which of the following elements is responsible for maintaining turgor in cells?	
	(1) Magnesium (2) Potassium	
	(3) Sodium (4) Calcium	
60.	The vascular cambium normally gives rise to:	
	(1) Primary phloem (2) Secondary xylem	
	(3) Periderm (4) Phelloderm	
61.	Sensory epithelial cells are modified	
	(1) Nerve cells	
	(2) Columnar cells	
	(3) Glandular cells	
	(4) None of these	
62.	Which of the following hormones can play a significant role in osteoporosis	
	(1) Aldosterone and Prolactin	
	(2) Progesterone and Aldosterone	
	(3) Estrogen and Parathyroid hormone	
	(4) Parathyroid hormone and Prolactin	
	(4) Parathyroid hormone and Prolactin	

PG-EE-JUNE, 2023 (Forensic Science) Code-D (15)

Question No.	Questions		
63.			
	(1) Amphibia (2) Aves		
	(3) Reptilia (4) Osteichthyes		
64.	The hepatic portal vein drains blood to liver from:		
	(1) Stomach (2) Kidneys		
	(3) Intestine (4) Heart		
65.	A disease caused by an autosomal primary non-disjunction is:		
	(1) Klinefelter's Syndrome		
	(2) Turner's Syndrome		
	(3) Sickel Cell Anemia		
N. A. A.	(4) Down's Syndrome		
66.	y-component of velocity is 20 and x-component of velocity is 10. The direction of motion of the body with the horizontal at this instant is		
	(1) tan ⁻¹ (2) (2) 45°		
	(3) tan ⁻¹ (1/2) (4) 0°		
in the second	WIND COOKE		

PG-EE-JUNE,2023(Forensic Science) Code-D
(16)

Question No.		Questions		
67.	A bullet is fired horizon	tally towards North with	n a velocity 500m/s at a	
74	place where angle of latitude is 30°. Its displacement when bullet strikes			
	the tangent placed at a	distance of 250 m. If the	mass of bullet is 100gm,	
	then the coriolis force ac	cting on the bullet is		
	(1) $1 \times 10^{-2} \text{ N}$	(S) 4.4 v 10-3 N	S. Lavid (L.)	
	(1) 1 × 10 11	(2) $4.4 \times 10^{-3} \text{ N}$	Journ Box 180	
	(3) $3.64 \times 10^{-3} \text{ N}$	(4) $5 \times 10^{-2} \mathrm{N}$	4.1	
68.	If the radioactive decay constant of radium is 4.28×10^{-4} per year, its half			
a second	life period is approxima	tely		
1.50 (40	(1) 2000 yr	(2) 2260 yr	(0) - XoP (1)	
	(3) 1620 yr	(4) 1240 yr	ogganggeducto .	
		0	a Des leas pon 191	
69.		00 Å is incident on two m		
	4.2 eV and B of work fur	nction 1.19 eV. The photo	pelectrons will be emitted	
	by		. (1) comy jes comport	
	(1) Metal A			
	(2) Both metal A and I	B	nghungad i platoad W	
	(3) Metal B	Cyronical (CS)	The familiar radius (1),	
3 14 .				
	(4) Neither metal A no	or metal B	1no(5 (6)	

lucstion No.	Questions		
70.	A string 1m long is drawn by a 300Hz vibrator attached to its end. The string vibrates in three segments. The speed of transverse waves in the string is equal to:		
	(1) 100 ms^{-1} (2) 200 ms^{-1}		
	(3) 300 ms^{-1} (4) 400 ms^{-1}		
71.	Which of the following compounds cannot be stored in glass vessels?		
1-15	(1) XeF_6 (2) XeO_3		
	(3) XeF_2 (4) XeF_4		
72	Clathrates are		
	(1) normal salts		
	(2) interstitial compounds		
	(3) complex compounds		
	(4) non-stoichiometric compounds		
73.	Which is thermodynamically most stable form of carbon?		
	(1) Graphite (2) Diamond		
	(3) Coal (4) Coke (4) Coke		

Question No.	Questions	erdin veryi - n k
74.	What is oil dag? (1) Silicone oil (2) Suspension of graphite in oil (3) Distillation products of paraffin oil (4) Colloidal solution of graphite	
75.	The alkane that gives only one mono-chloro product on chlor Cl_2 in the presence of diffused sunlight is: (1) 2, 2-dimethylbutane (2) n-pentane (3) neopentane (4) Isopentane	ination with
76.	The element used in high temperature thermometers is (1) Na (2) Ga (3) Tl (4) Hg	
77.	Which of the following is not a Lewis acid? $(1) AlCl_3 \qquad \qquad (2) Al(OH)_3$ $(3) BF_3 \qquad \qquad (4) B(OH)_3$	2.8
78.	What is 'X' in the following reaction? $MgCl_2 + 2H_2O \rightarrow X + 2HCl + H_2O$ (1) MgO (2) Mg (3) $Mg(OH)_2$ (4) $Mg(OH)Cl$	

PG-EE-JUNE, 2023 (Forensic Science) Gode-D
(19)

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Question No.	Questions				
79.	A compound 'X' upon reaction with H ₂ O produces a colorless gas 'Y' with rotten fish smell. Gas 'Y' is absorbed in a solution of CuSO ₄ to give Cu ₃ I as one of the products. Predict the compound 'X'				
	(1) Ca_3P_2 (2) NH_4Cl				
	(3) As_2O_3 (4) $Ca_3(PO_4)_2$				
80.	When neutral or faintly alkaline KMnO ₄ is treated with potassium iodide iodide ion is converted into 'X'. 'X' is				
	(1) I_2 (2) IO_4^-				
	(3) IO_3^- (4) IO^-				
81.	Charred document is stabilized by				
	(1) Poly vinyl acetate (2) Super Glue				
	(3) EDTA (4) Starch Solution				
82.	Vitreous humor is particularly examined for checking				
	(1) Poisoning cases (2) Metabolic				
	(3) Alcohol level (4) Exhumed				
83.	'Stass-Otto' process is used for				
	(1) Extraction of poisons (2) Extraction of DNA				
	(3) Extraction of antigens (4) Isolation of compliments				

	Code-D
Question No.	Questions
84.	Amatol contains
	(1) TNT and RDX (2) TNT and Tetryl
	(3) TNT and PETN (4) TNT and Ammonium Nitrate
85.	The Algorithm associated with the speed determination of vehicle is
	(1) Optical flow Algorithm
	(2) Dijkstra's Algorithm
	(3) Floyd Warshall Algorithm
	(4) Kruskal's Algorithm
86.	After bomb scene debris has been examined microscopically, the next step
	is to
ELD RICH	(1) Examine explosive using AAS
	(2) Identify the detonating material with SEM-EDX
	(3) Rinse the recovered debris with acetone to separate the debris from explosive material
	(4) Utilize H1-NMR to fingerprint the explosive residue
87.	The analysis of variance can be considered as an extension of
	(1) T-test (2) F-test
	(3) One-tailed test (4) Z-test

PG-EE-JUNE,2023(Forensic Science) Code-D
(21)

Question No.	Questions				
88.	Hampi denomination is present in which Indian currency:				
	(1) 2000 (2) 200				
	(3) 10 (4) 50				
89.	The melting point of Vicara fiber is:				
	(1) 245-260°C (2) 265-275°C				
	(3) 192-210°C (4) 288-300°C				
90.	The database designed for collection, restoration and comparing of tool images is				
	(1) AFTE (2) TRAX				
by in set	(3) NBTRD (4) NIST				
91.	A tent is in the form of a cylinder of diameter 8 m and height 2 m, surmounted by a cone of equal base and height 3 m. The canvas used for making the tent is equal to (1) $36 \pi m^2$ (2) $28 \pi m^2$ (3) $24 \pi m^2$ (4) $32 \pi m^2$				
92.	HTML stands for (1) Hyper Text Makeup Lineage (2) Hyper Text Makeup Language (3) Hyper Text Markup Language (4) Hyper Text Markup Lineage				

PG-EE-JUNE, 2023 (Forensic Science) Code-D (22)

		Code-D
Question No.	Questions	in disease
93.	Select the option in which the numbers are related in the numbers of the following set:	
	(7, 63, 79)	(piaeipa)
	(1) (5, 35, 47) (2) (6, 30, 44)	ខុតចមច្ចេចប្រើ ។ (()
	(3) (7, 34, 48) (4) (8, 72, 96)	artidos anna est
94.	Four number-pairs have been given, out of which thr manner and one is different. Select the number-pair	
	(1) 11:119 (2) 12:135	orally landing or
	(3) 21:440 (4) 15:228	padday dan dan
95.	5 years ago, my friend's age was 5 times of my age, no What is my friend's present age (in years)?	
	(1) 30 (2) 25	described 1
	(3) 20 (4) 15 miles	tijes arrilli (5
96.	Select the correct combination of mathematical signs replace the signs balance the given equations 65 * 5	that can sequentially * 45 * 2 * 30 * 73
	$(1) \div, \times, +, -, = \qquad (2) +, \div, \times, =, -$	
	$(1) \div, \times, +, -, = \\ (2) +, \div, \times, =, - \\ (3) \div, +, \times, =, - \\ (4) \div, +, \times, -, =$	
		e distribution and are an



uestion No.	Questions				
97.	Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different. (1) Obstacle (2) Interference				
	(1) Obstacle (2) Interference (3) Progress (4) Hindrance				
98.	Maximum diffraction in a given system happen for				
90	(1) Visible rays (2) UV rays				
	(3) IR rays (4) Radio wave				
99.	Study of life in outer space is known as				
	(1) Endobiology (2) Exobiology				
	(3) Enterobiology (4) Neobiology				
100.	Platelets initiate blood clotting by releasing a substance is called:				
	(1) Prothrombin (2) Thrombin				
	(3) Thromboplastin (4) Fibrinogen				

		IC SCIENCE PG COL	C	D
Q. NO.	A	В		
1	1	2	3	3
2	3	4	4	4
3	1	3	1	2
4	2	1	2	4
5	1	4	3	1
6	4	3	2	1
7	3	3	2	3
8	4	4	1	2
9	2	1	1	1
10	3	4	3	2
11	2	1	1	3
12	4	3	3	1
13	3	1	1	4
14	1	4	4	1
15	4	3	1	2
16	3	1	3	3
17	3	3	2	2
18	4	1	4	3
19	1	2	2	. 1
20	4	3	2	3
21	1	3	1	2
22	3	4	3	4
23	1	2	1	2
24	4	4	2	2
25	1	1	1	1
26	3	1	4	1
27	2	3	3	3
28	4	2	4	1
29	2	1	2	2
30	2	2	3	1
31	2	3	1	2
32	4	1	3	4
33	2	4	1	3
34	2	1 4	4	1
35	1	2	3	4
36	1	3	1	3
37	3	2	3	3
38	1	3	1	4
39	2	1	2	1
40	1	3	3	4
41	3	2	4	1
42	4	4	2	3
43	1	2	1	1
44	2	2	2	4
		1	4	3
45	3			
46	2	1	2	1
47	2	3	1	3
48	1 1	2	2	2
49				

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AIVSVVI	R KEYS OF FORENS	IC SCIENCE PG COU	IRSE FOR SESSION	
Q. NO.	A	В	С	'D
51	3	1	2	4
52	1	3	4	2
53	4	1	2	1
54	1	4	2	2
55	2	1	1	4
56	3	3	1	2
57	2	2	3	1
58	3	4	1	4
59	1	2	2	2
60	3	2	1	2
61	4	3	3	2
62	2	4	4	3
63		1	2	2
	1			3
64	2	2	4	
65	4	3	1	4
66	2	2	1	1
67	1	2	3	3
68	4	1	2	3
69	2	1	1	1
70	2	3	2	2
71	3	4	2	3
72	4	2	3	4
73	2	1	2	1
74	4	2	3	2
75	1	4	4	3
76	1	2	1	2
77	3	1	3	2
78	2	4	3	1
79	1	2	1	1
80	2	2	2	3
81	2	1	2	1
82	3	3	4	3
83	2	1	3	1
84	3	2	1	4
85	4	1	4	1
86	1	4	3	3
			3	2
87	3	3		
88	3	4	4	4
89	1	2	1	2
90	2	3	4	2
91	1	2	3	1
92	3	3	1	3
93	1	2	4	1
94	4	3	1	2
95	3	4	2	1
96	1	1	3	4
97	3	3	2	3
98	1	3	3	4
99	2	1	1	2
100	3	2	3	3

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Page

26/06/2×23