1	Ised for Jumbling	
	<i>U</i> Total	No. of Printed Pages : 21
(DO NOT OPEN THIS QUE	ESTION BOOKLET BEFOR ARE ASKED TO DO SO) PG-EE-2022	E TIME OR UNTIL YOU
SUBJE	ECT : Forensic Scie	nce 10001
Time : 1¼ Hours Roll No. (in figures)	Max. Marks : 100 (in words)	Sr. No. Total Questions : 100
Name Mother's Name	Father's Name Date of Examination	
(Signature of the Candidate)		(Signature of the Invigilator)

# CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE

#### 1. All questions are compulsory,

- 2. The candidates *must return* the question booklet 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 & 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 Examinations 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 booklet itself. Answers *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 booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.

PG-EE-2022/(Forensic Science)-(SET-Y)/(A)

- 1. Mr. Ranil Wickerm Singhe from the United National Party of Sri Lanka occupied the position of :
  - (1) President

(2) Prime Minister

- 7. The difference between the times taken by two cars to travel a distance of 350 km
- (3) Finance Minister (4) All of the above (5) bas and 5
  - 2. Mr. Raghuvendra Tanwar was awarded Padma Shri in 2022 in the field of :
    - (1) Trade & Industry (2) Sports
    - (3) Science & Engineering (4) Literature & Education
  - WHO Global Centre for Traditional Medicine (WHOGCTM) will be established in 3. India?
    - (1) Dehradoon (2) Jamnagar
    - (3) Gangtok

## The US Census Bureau has projected the World Population to be : 4. A sum of money is to distributed among A. B. C and D in the proportion of S: 2 = 4 :

- (3) 8.0 billion

(2) 7.8 billion

to the sum of the areas of four walls, the volume of the fall isto

(4) Shillong

- (4) 8.8 billion
- 5. Pointing to a girl, Vijay said, "This girl is daughter of only child of my father". What is the relation of Vijay's wife to that girl ? 11. A two digit number is such that the product of the digit is 8. When 18 is added
  - (1) Daughter
  - (3) Mother

(4) Mother-in-law

number, then the digits are re reside (2) e number is

.O.T.9 2022/(Forensic Sci.)-(SET-Y)/(A)

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

- 6. Find the word which is different from others :
  - (1) Cap (2) Veil (3) Turban (4) Hat
- 7. The difference between the times taken by two cars to travel a distance of 350 km is 2 hr and 20 minutes. If the difference between their speed is 5 kmph, find slower speed in kmph :

(1) 35 (2) 20 (3) 25

**8.** A train covers a distance of 12 km in 10 minutes. If, it takes 6 seconds to pass a flag post, then the length of train is :

(4) 30

- (1) 120 m (2) 150 m (3) 200 m (4) 250 m
  - **9.** A hall is 15 m long and 12 m wide. If the sum of the areas of floor and ceiling is equal to the sum of the areas of four walls, the volume of the hall is :
    - (1) 720 (2) 900 (3) 1200 (4) 1800
- **10.** A sum of money is to distributed among A, B, C and D in the proportion of 5 : 2 : 4 : 3. If C gets Rs. 1,000 more than D, what is B's share ?
  - (1) Rs. 500 (2) Rs. 1,500
- (3) Rs. 2,000 (4) None of the above
  - 1. A two digit number is such that the product of the digit is 8. When 18 is added to the number, then the digits are reversed. The number is :

(1) 18 (2) 24 (3) 42 (4) 81 PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

12.	If $A = X\%$ of Y and $B = Y\%$ of X, then which of the following is <i>true</i> ?
	(1) A is greater than B $(1)$ (1)
	(2) Relationship between A and B can not be determined
	(3) If X is smaller than Y, then A is greater than B
	(4) None of the above
13.	A man travelled a distance of 61 km in nine hours. He travelled partly on foot @ 4
	km/hr and partly on horse @ 9 kmph. The distance covered on foot is :
	kint in and party on noise (c) > inspin one
	(1) 14 km (2) 15 km (3) 16 km (4) 17 km
14.	What will be in place of question mark (?) in the following series ?
	BZA, DYC, FXB, HWG, ? c good (S)
	(1) VJI (2) JWU (4) (3) JVI (4) VIJ (6)
	19. min cyber forensic, the digital ovidence exists in the form of :
15.	Sh. Jayant Kumar Magan Lal Vyas for his contribution in the field of Science &
	Engineering was awarded in the year 2022 :
	(3) Both (1) and (2) (4) Note of the abread of (1) (3) (4) Note of the abread of (1)
	(1) Padma Bhushan
	20. Sodium pentothal is a drug administered in he detection test and indk amba9 (2)
	(3) Padma Vibhushan V berevel (2) Lavered V of analysis (1)
	(4) None of the above (4) SDS test above (5)
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(A)

16.	Forensic Science is defined as	12. If $A = X\%$ of Y and $B = Y\%$ of X, then which of i
	(1) Application of scientific pr	inciples in the administration of justice
	(2) Application of scientific te	chniques in the administration of justice
	(3) Both (1) and (2)	range rayiols have density $f_{i}$ , $f_{i}$ , $f_{i}$ , $f_{i}$ , and the source constant $f_{i}$ , $f_{i$
	(4) None of the above	
17.	The origin of word forensic is	from :
	its. He travelled partly on foot	and a service of everyolice a distance of 61 km in mare hor
	(1) French anotheno betavoa	(2) German
	(3) Latin (4) (2) a	(4) None of the above
18.	The finger print patterns are ca	ategorized as :
	(1) Arch	(2) Loop
	(3) Whorl	(4) All of the above
19.	In cyber forensic, the digital ev	vidence exists in the form of :
	(1) Physical	(2) Binary a below we new gameonigation
	(3) Both (1) and (2)	(4) None of the above and ambed (1)
20.	Sodium pentothal is a drug add	ministered in lie detection test and that is named as :
	(1) Polygraph test	(2) Layered Voice Analysis test
	(3) Narco test	(4) SDS test ovods out to onold (4)
PG-F	E-2022/(Forensic Sci.)-(SET-Y	G.E.E2022//Ferensic Sci)-(SET-Y)/(A) (A)/C

21. Primary crime scene is defined : 10 16 glad of block bases at viulni bazioni nA .25

- (1) Where actual criminal activity occurred
- (3) Where weapon of offence was recovered
- (4) All of the above

A

- **22.** In scanning electron microscope, the electron interact with atoms in the sample and provide information about :
  - (1) The surface topography
  - (2) Composition of sample
  - (3) Both (1) & (2)
  - (4) None of the above conserved Emission Spectro view (5)
- **23.** Diatom test is used in cases of :
  - (1) Firearm injuries
  - (3) Drowning cases
- 24. The ABO blood-groups were discovered by :
  - (1) Budowle
  - (3) Mendel

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

(4) All of the above

(2) Soil analysis bonitob at yttomooleO .85

(4) None of the above a bas vote? (1)

(2) Landsteiner

(4) None of the above

.O.T.9 2022/(Forensic Sci.)-(SET-Y)/(A)

25.	An incised injury is caused with the help of :	241? Primary crime scene is defined :
	(1) Knife (2) V	Vooden stick
	(3) Steel rod (4) E	(2) Where body of victim weak
26.	Ganja is derived from the plant named :	(3) Where weapon of offence was
	(1) Solanum Nigrum (2) (	Cannabis Sativa
	the electronumleraot with atoms in the second	22. In scanning electron microscope,
	(3) Ulex Europeaus (4) 1	None of the above
	Classes formais avidence can be best analyse	d by :
27.	Glass on forensic evidence can be best analyse	(1) The surface topography o and
	(1) Density gradient method	(2) Composition of sample
	(2) Magnifying lens	(3) Both (1) & (2)
	(3) Inductively Coupled Plasma Optical Emis	sion Spectrometry (ICP-OES)
	(4) All of the above	23. Diatom test is used in cases of :
28.	. Osteometry is defined as :	(1) Firearm injuries
	(1) Study and measurement of human skeleto	(3) Drowning cases
	(2) Study and measurement of animal skeleto	24. The ABO blood-groups were disco
	(3) Both (1) & (2)	ayered Vanas and Slavobull (1)
	(4) None of the above and the second (4)	(3) Mendel
PG-E	EE-2022/(Forensic Sci.)-(SET-Y)/(A)	PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

A Single Barrel Break Loading (SBBL) firearm is where ? 29. (1) The user loads ammunition via the rear end of its barrel (2) The user loads ammunition via the front end of its barrel interior noise and the second s (3) Both (1) & (2) (4) None of the above The father of the science of questioned document examination is : (1) Dr. Alee Jaffrey (2) A S Curry (4) C H Goddard (3) A S Osborn 31. Atom is the smallest indivisible particle of matter was proposed in 1808 by : (3) High electronegative and high ionization potential (2) John Dalton (1) J J Thomson (4) Bohr (3) Rutherford The mass of neutron is of the order of : 32. (2)  $10^{-23}$  kg (1)  $10^{-24}$  kg 38. Nuclear fission was first discover (4)  $10^{-29}$  kg (3)  $10^{-27}$  kg The spectrum produced from an element is : 33. 39. Radioactive disintegration rate is affected by : (2) Atomic spectrum (1) Absorption spectrum (4) All of the above (3) Line spectrum PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

The angular momentum of an electron is zero. In which orbital it may be present? 34. (2) 4t (3) 2s (4) 2f (1) 2p35. (2) Affected by atomic weight (1) Different (4) Affected by neutrons (3) Same The first element of a group in many ways different from the other heavier members of 36. the group, which is due to? (1) Unavailability of d orbital (2) Small size (3) High electronegative and high ionization potential (4) All of the above Which oxide is amphoteric in nature? 37. (1)  $Na_2O$ (2) ZnO (3) BaO (4) CaO Nuclear fission was first discovered by : 38. (1) Soddy (2) Fajan (3) Russel (4) Otto Hahn 39. Radioactive disintegration rate is affected by : (2) Electric field (1) Pressure (4) None of the above (3) Temperature PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

40. The shape of molecule is distorted by :

(1) Inert pair of electrons

A

- (2) Ion pair of electron
- (3) Bond pair of electron
- (4) Both bond pair and inert pair of electrons

41. Buffer is a solution :

- (1) Which maintains its pH constent up on addition of small amount of acid or base
- (2) Mixture of weak acid
- (3) Mixture of weak base
- (4) Both (2) and (3)

42. Which one of the following is weak Lewis base?

- (1)  $H^+$  (2)  $OH^-$  (3)  $HCO_3^-$  (4)  $Cl^-$
- 43. The forces acting between nobel gas atoms are :
  - (1) Magnetic forces (2) Ion dipole forces
  - (3) Vander Waal's forces (4) London forces
- 44. The gas which is filled in tungsten lamp is :
  - (1) He (2)  $H_2$  (3) Ar (4)  $O_2$

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

P. T. O.

45. The gas responsible for Bhopal gas tragedy was :

- (1) Acid rain
- (2) Methyl isocyanate gas
- (3) Green house effect
- (4) None of the above

46. The gas which has strong affinity towards haemoglobin and produces toxis effect is :

- (1)  $NO_2$  (2) CO
- (3)  $SO_2$  (4) None of the above

47. The most acidic among the following is :

- (1) p-nitrophenol (2) p-chlorophenol
- (3) o-cresol (4) p-cresol
- **48.** A compound in which hydroxyl group is attached directly to the aromatic ring was discovered by :
  - (1) Runge (2) Rutherford
  - (3) Perkin (4) None of the above

49. When DDT passes into food chain, it concentration :

- (1) increases (2) decreases
- (3) remains same (4) All of the above

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

Which of the following compound has the most de-shielding protons ?

(1) CHeI (2)  $CH_4$ (3) CH<sub>3</sub>Cl (4)  $CH_3Br$ 

The solvent used in NMR spectroscopy is : 51.

> (1) TMS (2)  $CCl_4$

 $(3) CDl_3$ (4) None of the above

The value of electrode potential does not get affected by : 52.

- (1) nature of cell (2) temperature
- (3) nature of electrode

53. Raman spectra is observed in :

- (1) Visible region
- (3) UV region

(2) IR region

(4) Microwave region

(4) concentration of solution

54. The molecule which is IR inactive but Raman active is :

(1)  $SO_2$ (2)  $N_2$ (3) *HCl* (4) Protein

## 55. Pyrene is :

- (1) Carbonyl chloride
  - (3) Chloroform

- (2) Carbon tetrachloride
- (4) Sulphur monochloride

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

P. T. O.

56.	Plant cell wall is mainly composed of :	subself bookgening services and load
	(1) Starch	(2) Cellulose
	(3) Protein	(4) Lipid
57.	Chromosomes play important role in her	redity, it was suggested in 1900 by :
	(1) Messelson	(2) Joshua Ryan
	(3) Carl Correns	(4) McCarthy
58.	The main constituent of cell wall of diat	om is :
	(1) Pectin	(2) Mucilage
	(3) Silica	(4) Cellulose
59.	Which fungus is responsible for product	tion of citric acid ?
•	(1) Penicillium	
	(2) Aspergillus niger	
	(3) Fusarium moniliformae	
	(4) Puccinia graminis	
60.	Who coined the term taxonomy ?	Mina Triffer and Barananith Sort
	(1) de Candolle	(2) Bentham
	(3) Braun	(4) Thome
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(A)	A Lorence Second Stranger

Α

N.R.

The living element of Xylem is known as : \_\_\_\_\_ as hosein? \_\_\_\_\_ as hosein of M amon ad I \_\_\_\_ Xa 61 (1) Vessels (2) Xylem fiber (3) Tracheids (4) Xylem parenchyma The example of leafy Bryophyte is : 62. 68. Fruit in which pericarp is fused with the seed coat is known as (1) Riccia (2) Anthroceros (3) Porella (4) Marchantia **63.** The plant saffron is obtained from : 69. The formation of gametophyte directly from sporophyte tissue without spore formation (2) Petals (3) Stamens (4) Stigma & style tops 64. Mendel published his findings on the principle of inheritance in the year : (1) 1857 (2) 1753 (3) 1866 (4) 1900 Who gave phylogenetic classification of plant? Which scientist first discoverd bacteria? 65. (1) Louis Pasteur (2) Robert Koch (3) Av Leeuwenhoek (4) Robert Hooke 66. The following is the hotspot of biodiversity in India : (1) Amarkantak (2) The Western Ghat (3) Panchmarhi and a single and (4) (4) The Eastern Ghat PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A) .O.T.9 2022/(Forensic Sci.)-(SET-Y)/(A)

14		
67.	The name 'Molecular	Scissor' is given to the enzyme :
		red malex (2) Lipase
	(1) Hydrogenase	(3) Tracheids
	(3) Endonuclease	(4) Ligase
		73 var 1 ne example of leafy Bryophyte is :
68	Fruit in which perica	rp is fused with the seed coat is known as .
00.		2ignovran (2) Apthroceros
	(1) Berry	(2) Caryopsis
		(4) Cansule
	(3) Herperidium	63. The plant saffron is obtained from
		but a tissue without spore formation
60	The formation of g	ametophyte directly from sporophyte tissue white and
0.5		
	is called :	
	(1) Arecrony	(2) Apogamy
	(1) Apospory	
	(2) Hotorosporv	(4) Porogamy
	(3) Helelospory	(2) 1753 (3) 1866 (
J	Who gave phylog	genetic classification of plant?
-		(2) Engler and Prantl
	(1) Linnaeus	(1) Louis Pasteur (2) RobertsKoch-mon
	(3) Bentham	(4) Hooker (4) Koben Hooker
	71. Which of the fol	llowing immunoglobulins can pass through the placental barrier?
	(1) I <sub>0</sub> D	(1) Amarkantak $G_g I (2)$ (2) The Western Ghat
	(*) <u>-</u> B	(4) None of the above dependence (2)
	(3) I <sub>g</sub> E	General Charter and All (4) The Eastern Ghat
		-E.E2022(Forensic Sci.)-(SET-Y)/(A) (A)/(V.T32) (: 5
]	PG-EE-2022/(Forensi	c Sci.)-(SEI-I)/(1)

A. ......

AA

- 72. Hydra animal belongs to phylum :
  - (1) Helminthes
    - (3) Porifera

(4) None of the above (2)

(2) Coelentrata

- **73.** A lysosome present in a cell has the function of :
  - (1) Intracellular digestion
  - (2) Role in metamorphosis
  - (3) Role in fertilisation
  - (4) All of the above
- **74.** Phagocytosis is a term used for cellular process for ingesting and eliminating particles including :
  - (1) Microorganisms
  - (2) Apoptotic cells
  - (3) Both (1) & (2)
  - (4) None of the above
- 75. Lampbrush chromosomes are not found in :
  - (1) Amphibians
    - I) Stearic acid
  - (3) Birds

- (2) Mammals
  - Endothelial cells
- (4) Insects

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

.O.T. 9.2022 (Forensic Sci.)-(SET-Y)/(A)

10			
76.	Genetic is defined as the scienti	fic study of :	72. Hydra animal belongs to
	(1) Genes		(1) Helminthes
	(2) Genetic variation		(3) Porifera
	(3) Heredity in organisms		73. A lysosome present in a
	(4) All of the above		(1) Intracellular digestio
77	Aniculture is the name for :		(2) Role in melamorphos
11.	Apiculture is the name for .		
	(1) Bee rearing	(2) Earthworn	n rearing
	e formation of charge ophyte days		(4) All of the above
	(3) Both (1) & (2)	(4) None of th	ne above
		ed for cellular process to	74. Phagocytosis is a term us
78	. What is <i>true</i> about male mosq	uito ?	including :
	(1) Presence of two mandible	s	(1) Microorganisms
	(2) Presence of four mandible	es	(2) Apoptotic cells
	(3) Absence of mandibles		(3) Both (1) & (2)
	(4) None of the above		(4) None of the above
7	9. Prostocyclins are synthesized	l in : and in same	5. Lampbrushichromosomes-
	(1) Endothelial cells	(2) Platelets	(1) Amphibians
	(3) RBC	(4) Basophi	(3) Birds
		LANDY I	EE-2022//Forensic Sci 1/857

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

		17
8	Q. When blood flows from the arteries into capillaries, BP ?	
	(1) Decrease into a serie view (2) (2) Increase into a serie view (1)	
	(3) Both (1) and (2) do only (2) (4) None of the above a synd (8)	
8	Poikilothermal term is associated with : and all the second and a second bulled A	
ted	(1) Warm blooded (2) External Fertilisation	
	(3) Tadpole Larva (4) Cold blooded	
82	2. The yellow colour of urine is due to :	
	(1) Uric acid (2) Bite juice	
1.2	(3) Urea (4) Urochrome and an award and A	
83.	. Heterocrine is a composite gland and acts as :	
	(1) Exocrine (1) (2) Endocrine (1)	
piri	(3) Both (1) & (2) (4) None of the above	
84.	The cells which are responsible for colour vision in vertebrates are :	
	(1) Cone cells (2) Red cells (1) $(2)$ Red cells (1)	
	(3) Bipolar cells $(4)$ (4) All of the above $(4)$ (4) All of the above $(4)$	
5.	All are essential fatty acids except :	2
	(1) Stearic acid (2) Linolenic acid	
	(3) Arachidonic acid (4) Linoleic acid	
EE	E-2022/(Forensic Sci.)-(SET-Y)/(A) (A)(Y-132)-(132 a)(132	0.

- (2) always has a unit (1) never has a unit
- (3) may have a unit do and the above bas (1) doel (2)

- 87. A ball of mass m moves with the speed v and it strikes normally with a wall and reflected back normally. If its time of contact with wall is t, then find the force exerted by the ball on the wall :
  - (2) mvt (1)The yellow colour of urine is  $d_{vm2}$ mv (3)
- A man throws the bricks to height of 12 m, where they reach with a speed of 12 m/s. If 88. he throws the bricks such that they just reach this height, what %age of energy he will have :
  - (4) 57% 2023 (1) (2) 38% (3) 76% (1) 19%
- The initial velocity of a particle is u(at t = 0) and the acceleration f is given by, which 89. of the following relation is valid?

  - (1) v = u(2) v = u + at(3)  $v = u + \frac{1}{2}at^2$  produced to the (4)  $s = u + at^2$
- Torque applied on a particle is zero, then its angular momentum will be : 90.

PG-FER-2022/(Forensic Sci.)-(SET-Y)/(A)

- (1) Equal in magnitude (2) (2) Equal in direction
- (4) None of the above (3) Both (1) & (2)

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

91, Which one of the following substance possesses the heighest elasticity ?

(1) Steel

A

- (2) Rubber
- (3) Copper
- (4) Glass
- **92.** A piece of wood is floating in water, when the temperature rises, the apparent weight of wood will :
  - (1) Decrease
     (2) Increase

     (3) Remain same
     (4) None of the above
- **93.** Two wires of the same material but of different diameter carries the same current *i*. If the ratio of their diameter is 2 : 1, then corresponding ratio of their mean drift velocities will be :
  - (1) 1:4 (2) 2:1 (3) 1:1 (4) 4:1
- 94. A transformer is a device which ? 000 popport form yas more boot lamins aA .001
  - (1) Transforms frequency
    (2) Transform voltage
    (3) Transform energy
    (4) Generate emf
- **95.** Alternating current can not be measured by DC ammeter because :
  - (1) AC is virtual
  - 2) The problem has only one teasible point

.O.T. 9 2022/(Forensie Sci.)-(SET-Y)/A/

- (2) AC changes its direction(3) AC can not pass through DC ammeter
  - (4) Average value of complete cycle is zero

## PG-EE-2022/(Forensic Sci.)-(SET-Y)/(A)

96.	Focal length of plane mirror is :		91/ Which one of the foll
	(1) Infinite as a unit roddust (1)	(2) Zero	
	(3) Indefinite (4)	(4) Very less	
<b>97.</b> IdgibV	The number of solutions of the equation $(0, \pi)$ is :	n sin x + 2 sin 2x	$= 3 + \sin 3x$ in the interval
	(1) 1 (2) 3	(3) 0	(4) 2
98.	A die is thrown 100 times, getting a	n even number is	considered a success. The
	variance of the number of successes is :		
11 A in	(1) 25 (2) 12	ic material 01 (C)	(4) 18
99.	In case of linear programming problems	, feasible region is	always :
	(1) a concave set	(2) a bounded co	nvex set
	(3) a bounded concave set	(4) a convex set	
100.	An animal feed company must produce	e 200 kg of a mixt	ure consisting of ingredients
	$X_1$ and $X_2$ . The ingredients $X_1$ cost Rs.	3.0/kg and X <sub>2</sub> cos	ts Rs. 5.0/kg. Not more than
	80 kg of $X_1$ can be used and at least	60 kg of X <sub>2</sub> must	be used. Then which of the
	following is <i>not</i> correct?		
	(1) The number of decision variables as	re two	95. Alternating current cau
	(2) The number of constants are two		(1) AC is virtual
	(3) The problem has only one feasible	point	
	(4) The entired solution is to min 901	a of ingredients Y	and 120 kg of ingredient X <sub>2</sub>
	(4) The optimal solution is to mix 80 k	g of ingreatents A	und 120 kg of ingroutent 12
	to have a minimum cost of Rs. 840	/kg	
	(3) Both (1) Z.(2) or		
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(A)	SET-Y)/(A)	

A

	Used for Jumpling	
(DO NOT OPEN THIS O	Tota DUESTION BOOKLET BEFO ARE ASKED TO DO SO) PG-FF-2022	al No. of Printed Pages : 21 RE TIME OR UNTIL YOU SET-Y
SUE	BJECT : Forensic Sci	ence 10002 Sr. No.
Time : 1¼ Hours Roll No. (in figures)	Max. Marks : 100 (in words)	Total Questions : 100
Name Mother's Name	Father's Name Date of Examination_	
(Signature of the Candidate)		(Signature of the Invigilator)
CANDIDATES MUST READ	THE FOLLOWING INFORMATIC	N/INSTRUCTIONS REFORE

# STARTING THE OUESTION RAPER.

#### 1. All questions are compulsory.

- 2. The candidates *must return* the question booklet 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 & 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 Examinations 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 booklet itself. Answers **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 QMR Answer-Sheet.
- 8. Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.

PG-EE-2022/(Forensic Science)-(SET-Y)/(B)

1. Which of the following immunoglobulins can pass through the placental barrier ? (1)  $I_g D$ (2)  $I_gG$ (3) IgE (4) None of the above Hydra animal belongs to phylum : 2. (1) Helminthes (2) Coelentrata (4) None of the above (3) Porifera A lysosome present in a cell has the function of : 3. (1) Intracellular digestion (2) Role in metamorphosis (3) Role in fertilisation (4) All of the above Phagocytosis is a term used for cellular process for ingesting and eliminating particles 4. including : (1) Microorganisms (2) Apoptotic cells (3) Both (1) & (2) (4) None of the above PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B) P. T. O.

1

B

5.	Lampbrush chromosomes are not found	in :	Which of the following immunoglo
	(1) Amphibians	(2)	Mammals and the Gal (1)
	(3) Birds source above (4)	(4)	Insects $B_{g}I(\xi)$
6.	Genetic is defined as the scientific study	of:	Hydra animal belongs to phylum :
	(1) Genes (2)		
	(2) Genetic variation		
	(3) Heredity in organisms		A lysosome present in a cell has the
	(4) All of the above		
7.	Apiculture is the name for :		(2) Role in metamorphosis
	(1) Bee rearing	(2)	) Earthworm rearing $101 \text{ m}$ $105 \text{ ($)}$
	(3) Both (1) & (2)	(4)	) None of the above
8.	What is <i>true</i> about male mosquito ?		Phagocytosis is a term used for celluine
	(1) Presence of two mandibles		
	(2) Presence of four mandibles		
	(3) Absence of mandibles		(3) Both (1) & (2) has litentee from the
	(4) None of the above		
	E 2022/(Forensic Sci )-(SET-V)/(B)	•	Intrational Car Vert Willey

P

В

9.	Prostocyclins are synthesized in :		5. Pyrendisch chromos enes de note	
	(1) Endothelial cells	(2)	Platelets obiroldo (inodus) (1)	
	(3) RBC obholdoonom anglu? (4)	(4)	Basophils (2)	
10.	When blood flows from the arteries into	capi	llaries, BP?	
	(1) Decrease	(2)	Increase doub? (1)	
	(3) Both (1) and (2)	(4)	None of the above <b>mistor</b> (8)	
11.	The solvent used in NMR spectroscopy	is :	<ol> <li>Chromosomes play important role in testing and</li> </ol>	
	(1) Joshua Ryan (1)	(2)	CCl <sub>4</sub> (1)	
	(4) McCardiy (4)	(4)	None of the above approxime (8)	
12.	The value of electrode potential does no	t get	affected by :o moutitanoo nism od T	
	(1) nature of cell ogaliouM (2)	(2)	temperature (1)	
	(3) nature of electrode acould (4)	(4)	concentration of solution of (E)	
13.	Raman spectra is observed in :		<ul> <li>8. Which fungus is responsible for pro-</li> </ul>	11
	(1) Visible region	(2)	IR region	
	(3) UV region	(4)	Microwave region autograde (S)	
14.	The molecule which is IR inactive but R	Rama	n active is : $(\xi)$	
	(1) $SO_2$ (2) $N_2$	(3)	HCl (4) Protein	
PG-EI	E-2022/(Forensic Sci.)-(SET-Y)/(B)		R.4-2022/(Ferensic Sci.)+(SET-Y)/(E)	г. О.

15. Pyrene is :	9. Prostocyclins are synthesized in :
(1) Carbonyl chloride	(2) Carbon tetrachloride
(3) Chloroform	(4) Sulphur monochloride
<b>16.</b> Plant cell wall is mainly composed of :	10. When blood flows from the arteries info
(1) Starch (2)	(2) Cellulose essered (1)
(3) Protein (4) (4)	(4) Lipid (2) bas (1) dto8 (8)
<b>17.</b> Chromosomes play important role in her	redity, it was suggested in 1900 by :
(1) Messelson (2)	(2) Joshua Ryan
(3) Carl Correns and a and (4)	(4) McCarthy (8)
<b>18.</b> The main constituent of cell wall of diat	12. The value of electrode potential d: si mo
(1) Pectin (2)	(2) Mucilage
(4) concentration of solution (4)	(4) Cellulose obortoolo lo oration (8)
<b>19.</b> Which fungus is responsible for product	ion of citric acid ? ado a subaga asmall .Cl
(1) Penicillium norgen SI (S)	(1) Visible region
(2) Aspergillus niger	(3) UV region
(3) Fusarium moniliformae	14. The molecule which is IR inactive but Ra
(4) Puccinia graminis	
PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)	G-EE-2022/(Forensic Sel.)-(SET-V)/(B)

B

20.	Who coined the term taxonomy ?			26.
	(1) de Candolle dint a set evante (2)	(2)	Bentham tinu a sad roven (1)	
	(3) Braun	(4)	Thome (3) Thome	
21.	Poikilothermal term is associated with :			27.
	(1) Warm blooded	(2)	External Fertilisation	
	(3) Tadpole Larva	(4)	Cold blooded	
22.	The yellow colour of urine is due to :		(3) mv	
	(1) Uric acid	(2)	Bite juice	
	(3) Lines and with a spart with the	(4)	Urochrome	
	each this height, what % age of energy he	1.181	he throws the bricks such that they j	
23.	Heterocrine is a composite gland and act	s as	have : (4) (4)	
	(1) Exocrine (200) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	(2)	Endocrine (S)	
	(3) Both (1) & (2)	(4)	None of the above	29.
24.	The cells which are responsible for color	ur vi	sion in vertebrates are :	
	(1) Cone cells $(2)$	(2)	Red cells	
	(3) Bipolar cells (4)	(4)	All of the above $\int \frac{1}{2} + u = v$ (6)	
25.	All are essential fatty acids except :	nen	Torque applied on a particle is zero, t	
	(1) Stearic acid for the superior (2)	(2)	Linolenic acid an and a lauper (1)	
	(3) Arachidonic acid to anothe anothe (4)	(4)	Linoleic acid (2) & (1) doll (6)	
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(B)		12022/(Forensic Sci.)-(SET-Y)/(B)	. т. о.

26.	A dimensionl	ess quantity
-----	--------------	--------------

(1)	never has a unit	(2) (2) Bentham	always has a unit	

(3) may have a unit (4) None of the above

27. A ball of mass *m* moves with the speed *v* and it strikes normally with a wall an reflected back normally. If its time of contact with wall is *t*, then find the force exerte by the ball on the wall :

- (1)  $\frac{mv}{2t}$  (2) mvt(3)  $\frac{mv}{t}$  (4)  $\frac{2mv}{t}$
- **28.** A man throws the bricks to height of 12 m, where they reach with a speed of 12 m/s. I he throws the bricks such that they just reach this height, what %age of energy he wi have :

(1) 19% (2) 38% (3) 76% (4) 57%

- **29.** The initial velocity of a particle is u(at t = 0) and the acceleration f is given by, which of the following relation is valid?
  - (1) v = u(2) v = u + at(3)  $v = u + \frac{1}{2}at^{2}$ (4)  $s = u + at^{2}$

**30.** Torque applied on a particle is zero, then its angular momentum will be :

(1) Equal in magnitude a simplom I (S) (2) Equal in direction

(3) Both (1) & (2) bias about (4) (4) None of the above  $\frac{1}{2}$ 

EE-1022/(Forensic Sci.)-(SET-Y)/(B)

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

B

31. A two digit number is such that the product of the digit is 8. When 18 is added to the number, then the digits are reversed. The number is : (f)) Application of scientific principles in the administration of scientific (1) 18 (2) 24 (3) 42 (4) 81 (2) Application of scientific techniques in the administration of justice If A = X% of Y and B = Y% of X, then which of the following is *true*? 32. (1) A is greater than B (2) Relationship between A and B can not be determined (3) If X is smaller than Y, then A is greater than B (4) None of the above A man travelled a distance of 61 km in nine hours. He travelled partly on foot @ 4 33. km/hr and partly on horse @ 9 kmph. The distance covered on foot is : (3) 16 km (1) 14 km (2) 15 km (4) 17 km What will be in place of question mark (?) in the following series ? 34. BZA, DYC, FXB, HWG, ? (4) VIJ of todyo ni (2) JWU (3) JVI (1) VJI Sh. Jayant Kumar Magan Lal Vyas for his contribution in the field of Science & 35. Engineering was awarded in the year 2022 : (1) Padma Bhushan Sodium pentothal is a drug administered in lie detection test and that is named as (2) Padma Shri (3) Padma Vibhushan (4) None of the above O.T. 9. T. 9.022/(Forensic Sci.)-(SET-Y)/(B) PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

36. Forensic Science is defined as : The public of the local defined as the second sec (1) Application of scientific principles in the administration of justice (2) Application of scientific techniques in the administration of justice (3) Both (1) and (2) (4) None of the above The origin of word forensic is from : (3) If X is smaller than Y, then A is preater than I 37. (2) German (1) French (3) Latin (4) None of the above A man travelled a distance of The finger print patterns are categorized as : 38. (2) Loop (1) Arch (4) All of the above (3) Whorl In cyber forensic, the digital evidence exists in the form of : 39. (2) Binary (1) Physical t his contribution in the field (4) None of the above

(3) Both (1) and (2)

Sodium pentothal is a drug administered in lie detection test and that is named as : 40.

(1) Polygraph test

(3) Narco test

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

(2) Layered Voice Analysis test (3) Padma Vibhushan

-2022/(Forensie Sci.)-(SET-V)/(B)

(4) SDS test

P. T. O.

41. Which one of the following substance possesses the heighest elasticity ?

(1)	Steel	Grothala	(2) Rubber

- (3) Copper (4) Glass
- **42.** A piece of wood is floating in water, when the temperature rises, the apparent weight of wood will :
  - (1) Decrease (2) Increase
  - (3) Remain same (4) None of the above
- **43.** Two wires of the same material but of different diameter carries the same current *i*. If the ratio of their diameter is 2 : 1, then corresponding ratio of their mean drift velocities will be :
  - (1) 1:4 (2) 2:1 (3) 1:1 (4) 4:1
- 44. A transformer is a device which ?
  - (1) Transforms frequency (2) Transform voltage
  - (3) Transform energy (4) Generate emf
- 45. Alternating current can not be measured by DC ammeter because :
  - (1) AC is virtual
  - (2) AC changes its direction
  - (3) AC can not pass through DC ammeter

(4) Average value of complete cycle is zeroPG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

46. Focal length of plane mirror is :

- (1) Infinite (2) Zero
- (3) Indefinite (4) Very less
- 47. The number of solutions of the equation  $\sin x + 2 \sin 2x = 3 + \sin 3x$  in the intervation  $(0, \pi)$  is :
  - (1) 1 (2) 3 (3) 0 (4) 2
- **48.** A die is thrown 100 times, getting an even number is considered a success. Th variance of the number of successes is :

(1) 25 (2) 12 (3) 10 (4) 18

**49.** In case of linear programming problems, feasible region is always :

(1)	a concave set				(2)	a	bounded	convex	set
-----	---------------	--	--	--	-----	---	---------	--------	-----

- (3) a bounded concave set (4) a convex set
- 50. An animal feed company must produce 200 kg of a mixture consisting of ingredient X<sub>1</sub> and X<sub>2</sub>. The ingredients X<sub>1</sub> cost Rs. 3.0/kg and X<sub>2</sub> costs Rs. 5.0/kg. Not more that 80 kg of X<sub>1</sub> can be used and at least 60 kg of X<sub>2</sub> must be used. Then which of th following is *not* correct ?
  - (1) The number of decision variables are two
  - (2) The number of constants are two
  - (3) The problem has only one feasible point
  - (4) The optimal solution is to mix 80 kg of ingredients X<sub>1</sub> and 120 kg of ingredient X to have a minimum cost of Rs. 840/kg

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

The living element of Xylem is known as : 51. (1) Vessels (2) Xylem fiber (3) Tracheids (4) Xylem parenchyma The example of leafy Bryophyte is : 52. (1) Riccia (2) Anthroceros (3) Porella (4) Marchantia 53. The plant saffron is obtained from : (1) Sepals (2) Petals (3) Stamens (4) Stigma & style tops 54. Mendel published his findings on the principle of inheritance in the year : (1) 1857 (2) 1753 (3) 1866 (4) 1900 Which scientist first discoverd bacteria? 55. (1) Louis Pasteur (2) Robert Koch (3) Av Leeuwenhoek (4) Robert Hooke The following is the hotspot of biodiversity in India : 56. (1) Amarkantak (2) The Western Ghat (3) Panchmarhi (4) The Eastern Ghat PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

P. T. O.

57.	The name 'Molecular Scissor' is given to the enzyme :		
a 	(1) Hydrogenase	(2) Lipase	
	(3) Endonuclease	(4) Ligase	
58.	Fruit in which pericarp is fused with the	seed coat is known as :	
	(1) Berry	(2) Caryopsis	
	(3) Herperidium	(4) Capsule	
59.	The formation of gametophyte directly f	rom sporophyte tissue without spore formation	
	is called :		
1	(1) Apospory	(2) Apogamy	
	(3) Heterospory	(4) Porogamy	
60.	Who gave phylogenetic classification of	plant ?	
	(1) Linnaeus	(2) Engler and Prantl	
	(3) Bentham	(4) Hooker	
61.	Atom is the smallest indivisible particle	of matter was proposed in 1808 by :	
	(1) J J Thomson	(2) John Dalton	
	(3) Rutherford	(4) Bohr	
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(B)	CONTRACTOR & STATES & STATES	

62.	The mass of neutron is of the order of :	67. Which oxide is amphotoric in nature 2.1
	(1) $10^{-24}$ kg s (4) (4) (5)	(2) $10^{-23}$ kg (2) (2) (1)
	(3) $10^{-27}$ kg	(4) $10^{-29}$ kg and that any noise it real of $10^{-29}$ kg and the set of $10^{-29}$ kg and $10^{-$
63.	The spectrum produced from an element	t is : (2) Fain in color
	(1) Absorption spectrum	(2) Atomic spectrum
	(3) Line spectrum	(4) All of the above outpath (1)
64.	The angular momentum of an electron is	s zero. In which orbital it may be present?
	(1) 2p (2) 4t	(3) 2s anotato a al (4) 2f a agade an .07
65.	Ionisation potential for isotopes of an el	ement is : electrons : i theme
	(1) Different	(2) Affected by atomic weight
	(3) Same	(4) Affected by neutrons
66.	The first element of a group in many wa	ays different from the other heavier members of
	the group, which is due to ?	71. Builde is a soundherd has adolyoman a
	(1) Unavailability of d orbital	(1) Which maintains its pH constent up o
	(2) Small size	
	(3) High electronegative and high ioniz	ation potential association potential (E)
	(4) All of the above	(4) Both (2) and (3)
PG-EI	E-2022/(Forensic Sci.)-(SET-Y)/(B)	(4) - Cresci (3) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7
	f.	(a) ( * , rec) ( rec renoro d) ( rec)

67.	Which oxide is amphoteric in nature ?		
	(1) $Na_2O$ (2) $ZnO$ (3) $BaO$ (4) $CaO$		
68.	Nuclear fission was first discovered by :		
	(1) Soddy (2) Fajan (3) Russel (4) Otto Hahn		
69.	Radioactive disintegration rate is affected by :		
	(1) Pressure (2) Electric field		
	(3) Temperature (4) None of the above		
70	. The shape of molecule is distorted by :		
	(1) Inert pair of electrons		
	(2) Ion pair of electron		
	(3) Bond pair of electron		
aS. At	(4) Both bond pair and inert pair of electrons		
7	1. Buffer is a solution :		
	(1) Which maintains its pH constent up on addition of small amount of acid or base		
	(2) Mixture of weak acid		
	(3) Mixture of weak base		
	(4) Both (2) and (3)		
P	G-EE-2022/(Forensic Sci.)-(SET-Y)/(B)		
72.	Which one of the following is weak Lewis	base ? compound doint in bailognoo A	
------	---	--	----
	(1) $H^+$ (2) $OH^-$ (3)	B) $HCO_3^-$ (4) $Cl^-$ (4) $Cl^-$	
73.	The forces acting between nobel gas atoms	are : (3) Perkin	
	(1) Magnetic forces (2	2) Ion dipole forces	
	(3) Vander Waal's forces (2) (4	) London forces	
74.	The gas which is filled in tungsten lamp is :	(3) remains same prode seally one M (1	
	(1) $He$ (2) $H_2$ (3)	$(4) O_2 O_2$	
75.	The gas responsible for Bhopal gas tragedy	(1) <i>CHel</i> (2) <i>CH</i> . was :	
	(1) Acid rain		
	(2) Methyl isocyanate gas	(1) Where actual criminal activity occ	
	(3) Green house effect	(2) Where body of victim was found	
	(4) None of the above	<ul> <li>(3) Where weapon of offence was recommendation</li> <li>(4) All of the above</li> </ul>	
76.	The gas which has strong affinity towards h	aemoglobin and produces toxis effect is :	
	(1) $NO_2$ (2	82. In scanning electron microscope, the provide information about	
	(3) <i>SO</i> <sub>2</sub> (4	) None of the above softward (1)	
77.	The most acidic among the following is :	(2) Composition of sample	
	(1) p-nitrophenol (2	) p-chlorophenol	
	(3) o-cresol (4	) p-cresol	
G-EF	E-2022/(Forensic Sci.)-(SET-Y)/(B)	D.T. q2022/(Forensic Sci.)-(SET-Y)/(B)	Э.

F

B

78.	A compound in which hydroxyl group discovered by :	is attached directly to the aromatic ring was	
()- ()-	(1) Runge	(2) Rutherford	
8. ÷N	(3) Perkin	(4) None of the above and a solution and a solution of the solution and a solution of the solu	
79.	When DDT passes into food chain, it con	ncentration :	
	(1) increases approximation (1)	(2) decreases and allow to bus $V_{-}(\xi)$	
	(3) remains same	(4) All of the above	
80.	Which of the following compound has the	he most de-shielding protons ?	
	(1) <i>CHeI</i> (2) <i>CH</i> <sub>4</sub>	(3) $CH_3Cl$ (4) $CH_3Br$	
81.	Primary crime scene is defined :	(1) Acid rain	
	(1) Where actual criminal activity occu	(2) Methyl isocyanate gas	
	(2) Where body of victim was found		
	(3) Where weapon of offence was reco	(4) None of the above	
	(4) All of the above		
82.	In scanning electron microscope, the	electron interact with atoms in the sample and	d
	provide information about :	$(1) NO_2 $	
	(1) The surface topography	(3) SO2 and addition from the second	
	(2) Composition of sample	7. The most acidic among the following is :	
•	(3) Both (1) & (2)	(1) p-nitrophenol	
	(4) None of the above	(3) o-cresol	

83. Diatom test is used in cases of :	
(1) Firearm injuries	(2) Soil analysis
(3) Drowning cases	(4) None of the above the yours (2)
84. The ABO blood-groups were discovere	d by : (1) tho (2) & (1) tho (2)
(1) Budowle	(2) Landsteiner words state should (4)
(3) Mendel	(4) None of the above
85. An incised injury is caused with the help	(1) The user loads ammonition via the of
(1) Knife	(2) Wooden stick
(3) Steel rod	(4) Brick (3) 36 (1) dott (8)
<b>86.</b> Ganja is derived from the plant named :	
(1) Solanum Nigrum	(2) Cannabis Sativa
(3) Ulex Europeaus	(4) None of the above
<b>87.</b> Glass on forensic evidence can be best an	alysed by :
(1) Density gradient method	91. Mr. Ranil Wickerm Singhe from the
(2) Magnifying lens	
(3) Inductively Coupled Plasma Optical E	mission Spectrometry (ICP-OFS)
(4) All of the above	(3) Finance Minister
PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)	.O.T.9 -2022/(Forensic Sci.) (SET-Y)/(B)

88.	Osteometry is defined as :
	(1) Study and measurement of human skeleton
	(2) Study and measurement of animal skeleton
	(3) Both (1) & (2)
	(4) None of the above and the strength (1)
89.	A Single Barrel Break Loading (SBBL) firearm is where ?
	(1) The user loads ammunition via the rear end of its barrel
	(2) The user loads ammunition via the front end of its barrel
	(3) Both (1) & (2)
	(4) None of the above
90	The father of the science of questioned document examination is :
	(1) Dr. Alee Jaffrey (2) A S Curry (2)
	(3) A S Osborn (4) C H Goddard
9	1. Mr. Ranil Wickerm Singhe from the United National Party of Sri Lanka occupied the
	position of : (2) Magnifying lens
	(1) President (2) Prime Minister
	(3) Finance Minister (4) All of the above
PG	-EE-2022/(Forensic Sci.)-(SET-Y)/(B) (B)

92. Mr. Raghuvendra Tanwar was award	ded Padma Shri in 2022 in the field of
(1) Trade & Industry	(2) Sports
(3) Science & Engineering	(4) Literature & Education
<b>93.</b> WHO Global Centre for Traditional India ?	l Medicine (WHOGCTM) will be established in
(1) Dehradoon	(2) Jamnagar
(3) Gangtok	(4) Shillong
94. The US Census Bureau has projected t	he World Population to be :
(1) 7.0 billion (2)	(2) 7.8 billion
(3) 8.0 billion and and bas O. a. A	(4) 8.8 billion of a condition of a
<b>95.</b> Pointing to a girl, Vijay said, "This girl the relation of Vijay's wife to that girl ?	is daughter of only child of my father". What is
(1) Daughter (1)	(2) Sister
(3) Mother	(4) Mother-in-law
<b>96.</b> Find the word which is different from oth	hers :
(1) Cap	(2) Veil
(3) Turban	(4) Hat
PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)	(in) (in the state of the state

- The difference between the times taken by two cars to travel a distance of 350 km is
- 2 hr and 20 minutes. If the difference between their speed is 5 kmph, find slower speed in kmph :

(1) 35 (2) 20 (3) 25 (4) 30

- **98.** A train covers a distance of 12 km in 10 minutes. If, it takes 6 seconds to pass a flag post, then the length of train is :
  - (1) 120 m (2) 150 m (3) 200 m (4) 250 m
- **99.** A hall is 15 m long and 12 m wide. If the sum of the areas of floor and ceiling is equal to the sum of the areas of four walls, the volume of the hall is :
  - (1) 720 (2) 900 (3) 1200 (4) 1800

100. A sum of money is to distributed among A, B, C and D in the proportion of 5 : 2 : 4 : 3.If C gets Rs. 1,000 more than D, what is B's share ?

- (1) Rs. 500 (2) Rs. 1,500
- (3) Rs. 2,000

(4) None of the above

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(B)

"G-EE-2022/(Forensic Sci.)-(SET-Y)/(B

97.

(DO NOT OPEN THIS QU	Tot JESTION BOOKLET BEFO ARE ASKED TO DO SO) PG-EE-2022	al No. of Printed Pages : 21 RE TIME OR UNTIL YOU SET-Y
SUBJ	ECT : Forensic Sci	ence 10011 Sr. No.
Time : 1¼ Hours Roll No. (in figures)	Max. Marks : <b>100</b> (in words)	Total Questions : 100
Name Mother's Name	Father's Name Date of Examination_	
(Signature of the Candidate)		(Signature of the Invigilator)

## CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE

- 1. All questions are compulsory.
- 2. The candidates must return the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfairmeans / 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 & 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 Examinations 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 booklet itself. Answers **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 booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.

1. Buffer is a solution : bind bid big most abase of	
(1) Which maintains its pH constent up on ad	dition of small amount of acid or base
(2) Mixture of weak acid	
(3) Mixture of weak base	7. The most acidic among the follow
(4) Both (2) and (3) $(2)$	(1) p-nitrophenol
2. Which one of the following is weak Lewis bas	e?
(1) $H^+$ (2) $OH^-$ (3)	$HCO_3^-$ (4) $Cl^-$
group is attached directly to the aromatic ring was	8. A compound in which hydroxyl
3. The forces acting between nobel gas atoms ar	discovered by :
(1) Composition of sample	Le d'acte forman
(1) Magnetic forces $(2)$	Ion dipole forces
(3) Vander Waal's forces (4)	London forces (8)
4. The gas which is filled in tungsten lamp is :	9. When DDT passes into food chains
(1) $H_{e}$ (2) $H_{2}$ (3)	$Ar$ (4) $O_2$
(2) decreases	
5. The gas responsible for Bhopal gas tragedy w	/as : omse enismen (2)
(1) Acid rain	
(2) Methyl isocyanate gas	iu. Which of the following compound ]
(3) Green house effect	
(4) None of the above	(3) CH3Cl seeds so/lo sneet
PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C)	O.T. 9-2022/(Forensic Sci.)-(SET-Y)/(C)

- 6. The gas which has strong affinity towards haemoglobin and produces toxis effect is :
  - (1)  $NO_2$  o mount is maintained theory (2) CO of He an another maintained (1) as
    - (3)  $SO_2$  (4) None of the above

7. The most acidic among the following is :

(1) p-nitrophenol

(2) p-chlorophenol
 (3) p-cresol
 (4) p-cresol

(3) Mixture we weak base.

G-EE-2022/(Forensic Sci.)-(SET-Y)/(C)

(1) H? (2) OH

- (3) o-cresol
- 8. A compound in which hydroxyl group is attached directly to the aromatic ring was discovered by :
  - (1) Runge (2) Rutherford
  - (3) Perkin (4) None of the above

9. When DDT passes into food chain, it concentration :

- (1) increases (2) decreases
- (3) remains same (4) All of the above

10. Which of the following compound has the most de-shielding protons ?

- (1) *CHeI* (2) *CH*<sub>4</sub>
- (3)  $CH_3Cl$  (4)  $CH_3Br$

Primary crime scene is defined : 11/ (1) Where actual criminal activity occurred (2) Where body of victim was found (3) Where weapon of offence was recovered (4) All of the above In scanning electron microscope, the electron interact with atoms in the sample and 12. provide information about : 17. Glass on forensic evidence can be best analysed by: (1) The surface topography (2) Composition of sample (3) Both (1) & (2) (4) None of the above (4) All of the above 2002 of 2018 and and 14 (4) 13. Diatom test is used in cases of : (2) Soil analysis (1) Firearm injuries (3) Drowning cases (4) None of the above The ABO blood-groups were discovered by : 14. (1) Budowle (2) Landsteiner (4) None of the above (3) Mendel PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C) O.T. 9-2022/(Forensic Sci.)-(SET-Y)/(C)

C

		C
4		
15.	An incised injury is caused with	the help of :
	(1) Knife	(2) Wooden stick
	(3) Steel rod	(4) Brick within lowbod and W. (2)
16.	Ganja is derived from the plant	(3) Where frequen of offence was recovered :
	(1) Solanum Nigrum	(2) Cannabis Sativa
	(3) Ulex Europeaus	(4) None of the above
		provide information about :
17.	Glass on forensic evidence can	be best analysed by :
	(1) Density gradient method	(2) Confposition of sample
	(2) Magnifying lens	
	(3) Inductively Coupled Plasm	a Optical Emission Spectrometry (ICP-OES)
	(4) All of the above	13. Diatom test is used in cases of :
18.	Osteometry is defined as :	(1) Fircarm injuries (2) Soil
	(1) Study and measurement of	human skeleton
	(2) Study and measurement of	animal skeleton
	(3) Both (1) & (2)	(1) Budowie
	(4) None of the above of 10 a	
PG-E	E-2022/(Forensic Sci.)-(SET-Y	G-EF-2022/(Forensic Sch)-(SET-Y)/(C) (3)/(

C

19. A Single Barrel Break Loading (SBBL) firearm is where ?

(1) The user loads ammunition via the rear end of its barrel

- (2) The user loads ammunition via the front end of its barrel
- (3) Both (1) & (2)

25. Pointing to a girl. Vijay said, "This girl is daughter of only child of my father". What is (4) None of the above

The father of the science of questioned document examination is : 20.

(1) Dr. Alee Jaffrey

(2) A S Curry 26. Find the word which is different from others

(3) A S Osborn

(4) C H Goddard

- Mr. Ranil Wickerm Singhe from the United National Party of Sri Lanka occupied the 21. The difference between the times taken by two cars to travel a dist.
  - 2 hr and 20 minutes. If the difference between their speed is 5 kmph, find slowle (1) President

(2) Prime Minister

(3) Finance Minister

(4) All of the above

22. Mr. Raghuvendra Tanwar was awarded Padma Shri in 2022 in the field of : 28." A train covers a distance of 12 km in 10 minutes. If, it takes 6 seconds to pass

- (1) Trade & Industry
- (2) Sports
- (3) Science & Engineering
- (4) Literature & Education

23. WHO Global Centre for Traditional Medicine (WHOGCTM) will be established in 29. A hall is 15 m long and 12 m wide. If the sum of the areas of floor and cen India? to the sum of the areas of four walks, the volume of the hall is it and

(1) Dehradoon

(3) Gangtok

(2) Jamnagar

(4) Shillong

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C)

.O.T.9 022 (Forensic Sci.)-(SET-X)/(C)

0		0
24.	The US Census Bureau has projected the World Population to be :	
	(1) 7.0 billion letted at to be $(2)^{1}7.8$ billion to be a set of $(1)$	
	(3) 8.0 billion (4) 8.8 billion (4)	
25.	Pointing to a girl, Vijay said, "This girl is daughter of only child of my father". What	is
	the relation of Vijay's wife to that girl?	
	(1) Daughter (2) Sister (3) Mother (4) Mother-in-law	24 5
26.	Find the word which is different from others :	
	(3) A S Osborn (4) C H Goddard	
	(1) Cap (2) Veil (3) Turban (4) Hat	
	1. Mr. Ranil Wickerm Singhe from the United National Party of Sri Lanka occupied	
27.	The difference between the times taken by two cars to travel a distance of 350 km	is
	2 hr and 20 minutes. If the difference between their speed is 5 kmph, find slower spee in kmph :	d
	(1) 35 (2) 20 (3) 25 (4) 30	
	22. Mr. Raghuvendra Tanwar was awarded Padma Shri in 2022 in the field of [A (A)	
28.	A train covers a distance of 12 km in 10 minutes. If, it takes 6 seconds to pass a fla	g
	post, then the length of train is :	
	(1) 120 m (2) 150 m (3) 200 m (4) 250 m	
29.	A hall is 15 m long and 12 m wide. If the sum of the areas of floor and ceiling is equa	al
	to the sum of the areas of four walls, the volume of the hall is :	
	• (1) Dehradoon (2) Jamnagur	
	(1) $720$ (2) $900$ (3) $1200$ (4) $1800$ dot $1000$ (6)	
PG-EE	E-2022/(Forensic Sci.)-(SET-Y)/(C) (O)(V-TOP)-(ase present)(SUS-33-	3

20	ammeter because :		7
30.	A sum of money is to distributed a	among A, B, C and D in the proportion of $5:2:4$	35.
	If C gets Rs. 1,000 more than D, w	that is B's share ?	
	(1) Re 500		
	(1) 13. 500	(2) Rs. 1,500 upon 2200 100,000 OA (8)	
	(3) Rs. 2,000	(4) None of the above	
31.	Which one of the following substan	ice possesses the heighest elasticity ?	
	(1) Steel $(1) = 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2$	(2) Rubber	37
	(3) Copper	(4) Glass	
32.	A piece of wood is floating in wate	er, when the temperature rises the approach i	
	of wood will :	entry of a second	t
	(1) Decrease	(2) Increase	
(	(3) Remain same	(4) None of the above	
33.	Two wires of the same material but	of different diameters	
tionts	he ratio of their diameter is 2 · 1 the	of unferent diameter carries the same current $i$ . ]	lf
v v of the	vill be :	il corresponding ratio of their mean drift velocitie	S
(.	1) 1:4 (2) 2:1	(3) 1:1 (4) 4:1	
<b>34.</b> A	transformer is a device which ?	<ul> <li>(1) The number of decision variables are two;</li> <li>(2) all he number of constants are two;</li> </ul>	
(1	) Transforms frequency	(2) Transform voltage	
(3	) Transform energy	(4) Generate emf	
PG-EE-20	022/(Forensic Sci.)-(SET-Y)/(C)	O T. 92022/(Encensic Seid)-(SET-W)((S)	H

**35.** Alternating current can not be measured by DC ammeter because :

(1) AC is virtual

(2) AC changes its direction

(3) AC can not pass through DC ammeter

(4) Average value of complete cycle is zero

**36.** Focal length of plane mirror is :

(1) Infinite (2) Zero (3) Indefinite (4) Very less

- **37.** The number of solutions of the equation  $\sin x + 2 \sin 2x = 3 + \sin 3x$  in the interval  $(0, \pi)$  is :
  - (1) 1 (2) 3 (3) 0 (4) 2
- **38.** A die is thrown 100 times, getting an even number is considered a success. The variance of the number of successes is :
  - (1) 25 (2) 12 (3) 10 (4) 18

**39.** In case of linear programming problems, feasible region is always :

- (1) a concave set (2) a bounded convex set
- (3) a bounded concave set (4) a convex set
- 40. An animal feed company must produce 200 kg of a mixture consisting of ingredients X<sub>1</sub> and X<sub>2</sub>. The ingredients X<sub>1</sub> cost Rs. 3.0/kg and X<sub>2</sub> costs Rs. 5.0/kg. Not more than 80 kg of X<sub>1</sub> can be used and at least 60 kg of X<sub>2</sub> must be used. Then which of the following is *not* correct ?
  - (1) The number of decision variables are two
  - (2) The number of constants are two
  - (3) The problem has only one feasible point
  - (4) The optimal solution is to mix 80 kg of ingredients X<sub>1</sub> and 120 kg of ingredient X<sub>2</sub> to have a minimum cost of Rs. 840/kg

C

		the management of the analysis is	
41.	The living element of Xylem is known	as:	
	(1) Vessels	(2) Xylem fiber	
	(3) Tracheids	(4) Xylem parenchyma	
42.	The example of leafy Bryophyte is :		
	(1) Riccia	(2) Anthroceros	
	(3) Porella	(4) Marchantia	
43.	The plant saffron is obtained from :		
	(1) Sepals	(2) Petals	
	(3) Stamens	(4) Stigma & style tops	
44.	Mendel published his findings on the	principle of inheritance in the ye	ear :
	(1) 1857 (2) 1753	(3) 1866 (4) 190	0
45	Which exientiat first discoverd bacter	ia 2	
45.	which scientist first discoverd bacter	ια :	
	(1) Louis Pasteur	(2) Robert Koch	
	(3) Av Leeuwenhoek	(4) Robert Hooke	
46.	The following is the hotspot of biodiv	versity in India :	
	(1) Amarkantak	(2) The Western Ghat	
	(3) Panchmarhi	(4) The Eastern Ghat	
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(C)	COTO Y A TRACted Sterio	1

P. T. O.

47.	7. The name 'Molecular Scissor' is given to the enzyme :	
	(1) Hydrogenase	(2) Lipase
	(3) Endonuclease	(4) Ligase
48.	Fruit in which pericarp is fused with the	seed coat is known as :
	(1) Berry	(2) Caryopsis
	(3) Herperidium	(4) Capsule
49.	The formation of gametophyte directly	from sporophyte tissue without spore formation
	is called :	
	(1) Apospory	(2) Apogamy
	(3) Heterospory	(4) Porogamy
50.	Who gave phylogenetic classification o	f plant ?
V	(1) Linnaeus	(2) Engler and Prantl
	(3) Bentham	(4) Hooker
51	51/ Atom is the smallest indivisible particle of matter was proposed in 1808 by :	
	(1) J J Thomson	(2) John Dalton
	(3) Rutherford	(4) Bohr
PG-F	CE-2022/(Forensic Sci.)-(SET-Y)/(C)	The state of the state state state

52. The mass of neutron is of the order of :

C

- (1)  $10^{-24}$  kg (2)  $10^{-23}$  kg (3)  $10^{-27}$  kg (4)  $10^{-29}$  kg
- 53. The spectrum produced from an element is :
  - (1) Absorption spectrum (2) Atomic spectrum
  - (3) Line spectrum (4) All of the above
- 54. The angular momentum of an electron is zero. In which orbital it may be present?
  - (1) 2p (2) 4t (3) 2s (4) 2f
- 55. Ionisation potential for isotopes of an element is :
  - (1) Different (2) Affected by atomic weight

(3) Same (4) Affected by neutrons

**56.** The first element of a group in many ways different from the other heavier members of the group, which is due to ?

- (1) Unavailability of d orbital
- (2) Small size
- (3) High electronegative and high ionization potential
- (4) All of the above

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C)

P. T. O.

12		
57. Which oxide is amphoteric in nature ?	t and the set of a line for a line of the set of the se	onstrom in 2001 off
(1) $Na_2O$ (2) $ZnO$	(3) <i>BaO</i>	(4) <i>CaO</i>
58. Nuclear fission was first discovered by :	- Automa	miner is a fulle
(1) Soddy (2) Fajan	(3) Russel	(4) Otto Hahn
<b>59.</b> Radioactive disintegration rate is affected	d by :	Sed son the feature to support to the feature
(1) Pressure	(2) Electric field	
(3) Temperature	(4) None of the ab	oove
<b>60.</b> The shape of molecule is distorted by :		
(1) Inert pair of electrons		
(2) Ion pair of electron		
(3) Bond pair of electron		D D D Anne C
(4) Both bond pair and inert pair of ele	ectrons	
61. Which of the following immunoglobul	ins can pass through	the placental barrier
(1) I <sub>g</sub> D	(2) I <sub>g</sub> G	
(3) I <sub>g</sub> E	(4) None of the a	above
<b>62.</b> Hydra animal belongs to phylum :		rinterin and the state
(1) Helminthes	(2) Coelentrata	
(3) Porifera	(4) None of the	above
PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C)		

С

- (1) Intracellular digestion
- (2) Role in metamorphosis
- (3) Role in fertilisation
- (4) All of the above
- 64. Phagocytosis is a term used for cellular process for ingesting and eliminating particles including :

68. What is true about male mosquito (5)

(2) Apoptotic cells of a article and (4)

.O.T.92022/(Forensic Sci.)-(SET-Y)/(C)

(4) None of the above

- (1) Microorganisms
- (3) Both (1) & (2)
- 65. Lampbrush chromosomes are not found in :
  - (1) Amphibians

(2) Mammals

(4) Insects

- (3) Birds
- 66. Genetic is defined as the scientific study of :
  - (1) Genes
  - (2) Genetic variation
  - (3) Heredity in organisms
  - (4) All of the above

1				C
67.	Apiculture is the name for :		Alysosome present in a cell bas, the	.68
	(1) Bee rearing (2	2) 1	Earthworm rearing minileostal (1)	
	(3) Both (1) & (2) (4	4) ]	None of the above store in elos (2)	
68	What is <i>true</i> about male mosquito?			
00.	(1) Presence of two mandibles		(4) All of the above	
	<ul><li>(1) Presence of four mandibles</li></ul>		Phagodytosis is a term used for cell	
	<ul><li>(2) Tresence of mandibles</li></ul>		including : 115	
	(4) None of the above			
69.	Prostocyclins are synthesized in :			10
	(1) Endothelial cells (	(2)	Platelets	
	(2) Manmals (2) (3) RBC	(4)	Basophils	
70.	When blood flows from the arteries into c	api	llaries, BP ?	
~	(1) Decrease	(2)	Increase	
	(3) Both (1) and (2)	(4)	None of the above 2000 (1)	
71	Poikilothermal term is associated with :	00	(2) Gepetic variation, in the time of	
~	(1) Warm blooded	(2)	External Fertilisation	
	(3) Tadpole Larva	(4)	Cold blooded	
PG-I	EE-2022/(Forensic Sci.)-(SET-Y)/(C)		-2022/(Eptempio.Sci.)-(SET:X)/(S)	State

72.	The yellow colour of urine is due to :		A man throws the bricks
[]]\#	(1) Uric acid (2) Bite juice	(3) Urea	(4) Urochrome
73.	Heterocrine is a composite gland and ac	ts as :	(i) 19% 15 (i) (2)
	(1) Exocrine ecceleration (1) = (0)	(2) Endocrine	
	(3) Both (1) & (2)	(4) None of the	above animoliol and to
74.	The cells which are responsible for colou	r vision in verteb	rates are : $(1)$
	(1) Cone cells $(4)$	(2) Red cells	(3) $v = u + \frac{1}{2}at^2$
	(3) Bipolar cells	(4) All of the abo	ve the field of Science Torone soplied on a
75.	All are essential fatty acids except :		(1) Equal in magnitude
	(1) Stearic acid <sup>byods</sup> and <sup>byods</sup> (4)	(2) Linolenic aci	(3) Both (1) & (2) b
	(3) Arachidonic acid	(4) Linoleic acid	
76.	A dimensionless quantity :		number, then the digits
	(1) never has a unit	(2) always has a	2) 81 (1) unit
	(3) may have a unit	(4) None of the a	boves Y to avy - A to a

978.

C

77. A ball of mass m moves with the speed v and it strikes normally with a wall and reflected back normally. If its time of contact with wall is t, then find the force exerted by the ball on the wall :

(1)  $\frac{mv}{2t}$  (2) mvt (3)  $\frac{mv}{t}$  (4)  $\frac{2mv}{t}$ PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C) P. T. O. **78.** A man throws the bricks to height of 12 m, where they reach with a speed of 12 m/s. If he throws the bricks such that they just reach this height, what %age of energy he will have :

C

(1) 19% (2) 38% (3) 76% (4) 57%

**79.** The initial velocity of a particle is u(at t = 0) and the acceleration f is given by, which of the following relation is valid ?

- (1) v = u (2) v = u + at
- (3)  $v = u + \frac{1}{2}at^2$  (4)  $s = u + at^2$

80. Torque applied on a particle is zero, then its angular momentum will be :

- (1) Equal in magnitude (2) Equal in direction
- (3) Both (1) & (2) (4) None of the above

**81.** A two digit number is such that the product of the digit is 8. When 18 is added to the number, then the digits are reversed. The number is :

(1) 18 (2) 24 (3) 42 (4) 81

82. If A = X% of Y and B = Y% of X, then which of the following is *true*?

- (1) A is greater than B strike if bas y boogs out days several weater to list A ....
  - (2) Relationship between A and B can not be determined
  - (3) If X is smaller than Y, then A is greater than B
  - (4) None of the above

83. A man travelled a distance of 61 km in nine hours. He travelled partly on foot @ 4 km/hr and partly on horse @ 9 kmph. The distance covered on foot is :

(1) 14 km (2) 15 km (3) 16 km (4) 17 km

84. What will be in place of question mark (?) in the following series ?BZA, DYC, FXB, HWG, ?

(1) VJI (2) JWU (3) JVI (4) VIJ (6)

**85.** Sh. Jayant Kumar Magan Lal Vyas for his contribution in the field of Science & Engineering was awarded in the year 2022 :

- (1) Padma Bhushan
- (2) Padma Shri bus test noitosteb sil ni beretsinimbe gutb e et ledtomog muibo?
- (3) Padma Vibhushan
- (4) None of the above

86. Forensic Science is defined as :

- (1) Application of scientific principles in the administration of justice
- (2) Application of scientific techniques in the administration of justice

.O.T.9-2022/(Forensic Sci.)-(SET-Y)/(C)

- (3) Both (1) and (2)
- (4) None of the above (P)

87.	The origin of word forensic is from :	183 a A man travelled a distance of 61 km
	(1) French tool no borovoo sousteib ad	(2) German word no young bos advard
	(3) Latin (2) (2) (2)	(4) None of the above
88.	The finger print patterns are categorized	as: What will be in place of question mark
	(1) Arch	(2) Loop () OWH, BX7, OYG, AZE
	(3) Whorl (4)	(4) All of the above
89.	In cyber forensic, the digital evidence en	xists in the form of :
	(1) Physical	(2) Binary
	(3) Both (1) and (2)	(4) None of the above and ambed (1)
90.	Sodium pentothal is a drug administered	d in lie detection test and that is named as :
	(1) Polygraph test	(2) Layered Voice Analysis test
	(3) Narco test	(4) SDS test
91	The solvent used in NMR spectroscopy	se. Forensic Science is defined as
~	(1) TMS	(2) $CCl_4$
	(3) $CDl_3$	(4) None of the above
		17 (2) Application of scientific techniques in
92	. The value of electrode potential does r	not get affected by :
	(1) nature of cell	(2) temperature
	(3) nature of electrode	(4) concentration of solution

93.	. Raman spectra is observed in :	The main constitucht of cell wall of diato	
	(1) Visible region	(2) IR region	
	(3) UV region (4)	(4) Microwave region (3)	
94.	The molecule which is IR inactive but I	Raman active is :	88 .00
	(1) <i>SO</i> <sub>2</sub>	(2) $N_2$ multilium	
	(3) <i>HCl</i>	(2) Aspergillos niger mistor (2)	
95.	Pyrene is :	(3) Fusarium monififormac	
	(1) Carbonyl chloride		
	(2) Carbon tetrachloride	Who coined the term taxonomy ?	100,
	(3) Chloroform	(1) de Candolle	05
	(4) Sulphur monochloride		
96.	Plant cell wall is mainly composed of :		
	(1) Starch	(2) Cellulose	
	(3) Protein	(4) Lipid	
97.	Chromosomes play important role in he	redity, it was suggested in 1900 by :	
	(1) Messelson	(2) Joshua Ryan	
	(3) Carl Correns	(4) McCarthy	
PG-EH	E-2022/(Forensic Sci.)-(SET-Y)/(C)	COMOS TRADELERS MARINE MARCENC P	T.C

98.	The main constituent of cell wall of diat	om is : ini bevrezdo i	Raman spectra is	
	(1) Pectin avigat 31 (2)	(2) Mucilage		
	(3) Silica moight availation (4)	(4) Cellulose		
99.	Which fungus is responsible for product	tion of citric acid?	The molecule wi	
	(1) Penicillium			
	(2) Aspergillus niger			
	(3) Fusarium moniliformae			
	(4) Puccinia graminis		(1) Carbonyl chi	
100.	Who coined the term taxonomy ?			
	(1) de Candolle	(2) Bentham		
	(3) Braun	(4) Thome		
		namly composed of		
			(1) Starch	
	dity, if was suggested in 1900 by :	pairies and to annot (14) y important role in here	Chromosomes pla	.79

С

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(C)

(DO NOT OPEN THIS C	Used for jumbling Total DUESTION BOOKLET BEFOR ARE ASKED TO DO SO) PG-EE-2022 BJECT : Forensic Scie	Al No. of Printed Pages : 21 RE TIME OR UNTIL YOU SET-Y Ence 10004 Sr. No.
Time : 1¼ Hours Roll No. (in figures) Name Mother's Name	Max. Marks : 100 (in words) Father's Name Date of Examination_	Total Questions : 100
(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 booklet 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 & 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 Examinations 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 booklet itself. Answers *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 booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.

A two digit number is such that the product of the digit is 8. When 18 is added to the number, then the digits are reversed. The number is : (1) Application of scientific principles in the administration (1) 18 (3) 42 (4) 81 (2) 24 (2) Application of scientific techniques in the administration of just 2. If A = X% of Y and B = Y% of X, then which of the following is true ? (1) A is greater than B (2) Relationship between A and B can not be determined (3) If X is smaller than Y, then A is greater than B (4) None of the above 3. A man travelled a distance of 61 km in nine hours. He travelled partly on foot @ 4 km/hr and partly on horse @ 9 kmph. The distance covered on foot is : The finger print (4) 17 km (2) 15 km (3) 16 km (1) 14 km 4. What will be in place of question mark (?) in the following series ? BZA, DYC, FXB, HWG, ? (4) VIJ (2) JWU (3) JVI (1) VJI Sh. Jayant Kumar Magan Lal Vyas for his contribution in the field of Science & 5. Engineering was awarded in the year 2022 : (1) Padma Bhushan sodium pentothal is a drug administered in lie detection test and that is na (2) Padma Shri (3) Padma Vibhushan (4) None of the above O.T. 9 022/(Forensic Sel.)-(SET-Y)/(D) PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

D

6.	Forensic Science is defined as :		two digit number is such that the	1/1
	(1) Application of scientific principles in	the	administration of justice	
	(2) Application of scientific techniques i	n the	e administration of justice	
	(3) Both (1) and (2)		A = X% of Y and P Y A X A	
	(4) None of the above		A is greater than B Relationality between A and B co	
7.	The origin of word forensic is from :		If $X$ is smaller than $Y$ , then $A$ is	(8)
	(1) French	(2)	German synda on the snow	(4)
	(3) Latin	(4)	None of the above	
8.	The finger print patterns are categorized	as :	ht and partly on horse @ 9 kunplt.	
	(1) Arch	(2)	Loop	
	(3) Whorl	(4)	All of the above	
9.	In cyber forensic, the digital evidence ex	kists	in the form of :	
	(1) Physical	(2)	Binary Binary manual meyel	
	(3) Both (1) and (2)	(4)	) None of the above	
10.	Sodium pentothal is a drug administered	d in l	lie detection test and that is name	1 as :
	(1) Polygraph test	(2)	) Layered Voice Analysis test	(3) 1
	(3) Narco test	(4)	) SDS test	
	E 2022//Earrania Sai) (SET V)/(D)		WE monito Set & CEPT WINE	

which one of the following substance possesses the heighest elasticity ? 11. (2) Rubber (1) Steel cest view (4) (4) Glass (3) Copper 12. A piece of wood is floating in water, when the temperature rises, the apparent weight of wood will : (1) Decrease (2) Increase (3) Remain same (4) None of the above 13. Two wires of the same material but of different diameter carries the same current *i*. If the ratio of their diameter is 2 : 1, then corresponding ratio of their mean drift velocities will be : (4) 4:1 (2) 2:1 (3) 1:1 (1) 1:4**14.** A transformer is a device which ? (1) Transforms frequency (2) Transform voltage X1 and X3. The ingredients X1 cost Rs. 3 (0/kg and X2 co (3) Transform energy (4) Generate emf following is not correct? 15. Alternating current can not be measured by DC ammeter because : (1) The number of decision variables are two (1) AC is virtual (2) AC changes its direction (3) AC can not pass through DC ammeter (4) The optimal solution is to mix 80 kg of ingredien (4) Average value of complete cycle is zero PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D) (I) (Y-T.H2)-(.io2 planeto H) (SC P.T.O.

- 16. Focal length of plane mirror is : \_\_\_\_\_\_ of the state of the state
  - (1) Infinite (2) Zero (2) Zero
  - (3) Indefinite (4) Very less
- 17. The number of solutions of the equation  $\sin x + 2 \sin 2x = 3 + \sin 3x$  in the interval  $(0, \pi)$  is :
  - (1) 1 (2) 3 (3) 0 (4)  $2^{-n}$
- **18.** A die is thrown 100 times, getting an even number is considered a success. The variance of the number of successes is :
- (1) 25 (2) 12 (3) 10 (4) 18 (4) 18
- **19.** In case of linear programming problems, feasible region is always :
  - (1) a concave set (2) a bounded convex set

(3) a bounded concave set (4) a convex set

An animal feed company must produce 200 kg of a mixture consisting of ingredients X<sub>1</sub> and X<sub>2</sub>. The ingredients X<sub>1</sub> cost Rs. 3.0/kg and X<sub>2</sub> costs Rs. 5.0/kg. Not more than 80 kg of X<sub>1</sub> can be used and at least 60 kg of X<sub>2</sub> must be used. Then which of the following is *not* correct?

14. A transformer is a device wh

- (1) The number of decision variables are two
- (2) The number of constants are two
- (3) The problem has only one feasible point
- (4) The optimal solution is to mix 80 kg of ingredients X<sub>1</sub> and 120 kg of ingredient X<sub>2</sub> to have a minimum cost of Rs. 840/kg

21	Which of the following immunoglobu	ulins can pass through the placental barrier?	25.
	(1) Mammals (1)	(2) (2) $I_gG$ and a statistical (1)	
	(3) IgE	(4) None of the above (2)	
22.	Hydra animal belongs to phylum :	Genetic is defined as the scientific study of	26.
-	(1) Helminthes	(2) Coelentrata	
	(3) Porifera	(4) None of the above	
23.	A lysosome present in a cell has the fi	function of : emaining on a viboroH (8)	
	(1) Intracellular digestion		
	(2) Role in metamorphosis		27.
	(3) Role in fertilisation	(1) Bee rearing . (2	
	(4) All of the above	(3) Both (1) & (2) (4) (4)	
24.	Phagocytosis is a term used for cellul	lar process for ingesting and eliminating part	icles
	including :	What is <i>true</i> about male mosquito '	
	(1) Microorganisms	(1) Presence of two mandibles	
	(2) Apoptotic cells	(2) Presence of four mandables	
	(3) Both (1) & (2)	Raman active is :	
DC	(4) None of the above		
PG-EI	2-2022/(Forensic Sci.)-(SET-Y)/(D)	.9 2022/(Forensic Sci.)-(SET-Y)/(D)	Т. О.

6				8
25.	Lampbrush chromosomes are not found i	n :dolgonunusi g	Which of the followin	is )
	(1) Amphibians	(2) Mammals	(1) I <sub>2</sub> D methods (1)	
	(3) Birds groups out to provid (4)	(4) Insects	(3) I <sub>g</sub> E	
26.	Genetic is defined as the scientific study	of: stated of	notei adi ni xC nia Hydra animal belongs	
	(1) Genes		(1) Helminthes (1)	
	(2) Genetic variation		(3) Porifersorobience	
	(3) Heredity in organisms		A lysosome present in	
	(4) All of the above			
27.	Apiculture is the name for :		(2) Role in metamorph	
	(1) Bee rearing	(2) Earthworm	rearing	
	(3) Both (1) & (2)	(4) None of the	above	
licles	What is true about male mosquite ?	too <sub>c</sub> X bra skel used for cellular	t promito ( sg/0.6 kg/ cl. Phagocytosis is a term to holdwinnit .poss sh	11971 24. 210
28.	what is <i>true</i> about male mosquito ?		including ;	
	(1) Presence of two mandibles		(1) Microorganisms	
	(2) Presence of four mandibles		(2) Apoptotic cells	
	(3) Absence of mandibles		(3), Both (1) & (2)	
	(4) None of the above		(4) None of the above	
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(D)	ET-Y)/(Ф)	E-2022/(Forensic Sci.)-(S	

29.	Prostocyclins are synthesized in :		
	(1) Endothelial cells	(2) Platelets	
	(3) Sulphur monochloride (4)	(4) Basophils	
30.	When blood flows from the arteries into	capillaries, BP ?	
/	(2) Cellulose osolullo3 (2)	(2) Increase	
	(3) Both (1) and (2)	(4) None of the above	
31.	The solvent used in NMR spectroscopy i	7. Chromosomes play important role in hei	
V	(2) Joshua Ryan SMT (1)	(2) CCl <sub>4</sub> (1)	
	(3) <i>CDl</i> <sub>3</sub> (4)	(4) None of the above (8)	
32.	The value of electrode potential does not	ot get affected by :	E
	(1) nature of cell (2)	(2) temperature	
	(3) nature of electrode (4)	(4) concentration of solution <sup>solid2</sup> (8)	
33.	Raman spectra is observed in :	9.º Which fungus is responsible for production	
	(1) Visible region	(2) IR region	
	(3) UV region	(4) Microwave region	
34.	The molecule which is IR inactive but R	Raman active is $\cdot$	
	(1) $SO_2$ (2) $N_2$	(3) <i>HCl</i> (4) Protein	
PG-EH	E-2022/(Forensic Sci.)-(SET-Y)/(D)	C.9 2022/(Forensic Scl.)-(SRT-Y)/(D)	г. о.

35. Pyrene is :	29. Prostocyclins are synthesized in .
(1) Carbonyl chloride	(2) Carbon tetrachloride
(3) Chloroform	(4) Sulphur monochloride
<b>36.</b> Plant cell wall is mainly composed of	30. When blood flows from the arteries into e
(1) Starch	(2) Cellulose (1)
(3) Protein	(4) Lipid (2) bas (1) doß (8)
<b>37.</b> Chromosomes play important role in	heredity, it was suggested in 1900 by :
(1) Messelson	(2) Joshua Ryan (1)
(3) Carl Correns	(4) McCarthy $(20)$ (8)
<b>38.</b> The main constituent of cell wall of o	32. The value of electrode potential d.; si motail
(1) Pectin	(2) Mucilage (1)
(3) Silica nonnection non-strangenco	(4) Cellulose
<b>39.</b> Which fungus is responsible for pro-	duction of citric acid ?
(1) Penicillium	(1) Visible region (2)
(2) Aspergillus niger	(3). UV region
(3) Fusarium moniliformae	34. The molecule which is IR inactive but Raman
(4) Puccinia graminis	
PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D	G-EE-2022/(Forensic Sci.)-(SET-Y)/(D)
D Who coined the term taxonomy? 40. (1) de Candolle (2) Bentham (4) Thome (3) Braun Atom is the smallest indivisible particle of matter was proposed in 1808 by : 41. (2) John Dalton (1) J J Thomson (3) Rutherford (4) Bohr The mass of neutron is of the order of : 42. (1)  $10^{-24}$  kg (2)  $10^{-23}$  kg (4)  $10^{-29}$  kg (3)  $10^{-27}$  kg The spectrum produced from an element is : 43. (1) Absorption spectrum (2) Atomic spectrum (3) Line spectrum (4) All of the above The angular momentum of an electron is zero. In which orbital it may be present? 44. (3)' 2s(1) 2p (2) 4t (4) 2fIonisation potential for isotopes of an element is : 45. (1) Different (2) Affected by atomic weight (4) Affected by neutrons (3) Same P. T. O. PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

- **46.** The first element of a group in many ways different from the other heavier members of the group, which is due to ?
  - (1) Unavailability of d orbital
  - (2) Small size
  - (3) High electronegative and high ionization potential
  - (4) All of the above
- 47. Which oxide is amphoteric in nature?
  - (1)  $Na_2O$  (2) ZnO (3) BaO (4) CaO
- 48. Nuclear fission was first discovered by :
  - (1) Soddy (2) Fajan (3) Russel (4) Otto Hahn

49. Radioactive disintegration rate is affected by :

- (1) Pressure (2) Electric field
- (3) Temperature (4) None of the above

50. The shape of molecule is distorted by :

(1) Inert pair of electrons

(2) Ion pair of electron

(3) Bond pair of electron

(4) Both bond pair and inert pair of electrons

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

D

- (1) Where actual criminal activity occurred
- (2) Where body of victim was found
- (3) Where weapon of offence was recovered
- (4) All of the above
- **52.** In scanning electron microscope, the electron interact with atoms in the sample and provide information about :
  - (1) The surface topography
  - (2) Composition of sample
  - (3) Both (1) & (2)
  - (4) None of the above
- 53. Diatom test is used in cases of :
  - (1) Firearm injuries (2) Soil analysis
  - (3) Drowning cases (4) None of the above
- 54. The ABO blood-groups were discovered by :
  - (1) Budowle
  - (3) Mendel

- (2) Landsteiner
- (4) None of the above
- PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

P. T. O.

55. An incised injury is caused with the help of :

(1) Knife (2) Wooden stick

D

(3) Steel rod (4) Brick

56. Ganja is derived from the plant named :

- (1) Solanum Nigrum (2) Cannabis Sativa
- (3) Ulex Europeaus (4) None of the above

57. Glass on forensic evidence can be best analysed by :

- (1) Density gradient method
- (2) Magnifying lens

(3) Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)

(4) All of the above

**58.** Osteometry is defined as :

- (1) Study and measurement of human skeleton
- (2) Study and measurement of animal skeleton
- (3) Both (1) & (2)
- (4) None of the above

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

D

59. A Single Barrel Break Loading (SBBL) firearm is where ?

- (1) The user loads ammunition via the rear end of its barrel
- (2) The user loads ammunition via the front end of its barrel
- (3) Both (1) & (2)
- (4) None of the above

60. The father of the science of questioned document examination is :

(1) Dr. Alee Jaffrey

(2) A S Curry

(3) A S Osborn

(4) C H Goddard

67. The most acidic among the following is :

61. Buffer is a solution :

(1) Which maintains its pH constent up on addition of small amount of acid or base

(2) Mixture of weak acid

(3) Mixture of weak base

- (4) Both (2) and (3)
- 62. Which one of the following is weak Lewis base ?

(1)  $H^+$  (2)  $OH^-$  (3)  $HCO_3^-$  (4)  $Cl^-$ 

63. The forces acting between nobel gas atoms are :

(1) Magnetic forces (2) Ion dipole forces (1)

(3) Vander Waal's forces (4) London forces

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D) P. T. O.

64.	The gas which is filled in t	ungsten lamp is	Loading (SBE	, 79. A Single Barrel Break	
	(1) <i>He</i> (2) <i>H</i>	2 10 000 100 (.	3) Ar nothann	(1) The $use_0$ (4) and	
65.	The gas responsible for Bh	opal gas tragedy	was :	(2) The user loads am	
	(1) Acid rain			(3) Both (1) & (2)	
		ally the second and		(4) None of the above	
	(2) Methyl isocyanate gas			$\sim$	
	(3) Green house effect		ce of questione	60 The father of the scien	r
	(4) None of the above			(1) Dr. Alec Jaffreyvo	
66.	The gas which has strong a	ffinity towards h	aemoglobin an	d produces toxis effect is :	
	(1) <i>NO</i> <sub>2</sub>	(2	) <i>CO</i>	61. Butter is a solution :	
	(3) <i>SO</i> <sub>2</sub>	(4	) None of the	above	
67.	The most acidic among the	following is :			
	(1) p-nitrophenol	(2	) p-chlorophen	(4) Both (2) and (3) los	
	(3) o-cresol	Coasd alw(4	) p-cresol	62. Which one of the follo	
68.	A compound in which hy	droxyl group is	attached direct	tly to the aromatic ring was	
	discovered by :	anus ora smot		63. The forces acting betw	
	(1) Runge	2) (2) fon dipe	) Rutherford		
	(3) Perkin	4) (4) London	) None of the a	above	
PG-EE	C-2022/(Forensic Sci.)-(SET		(SET-Y)(D)	PG-EE-2022//Forensie Sci.)-	

69.	When DDT passes into food chain, it co	ncen	tration :	Which scientist th	
	(1) increases doo X modo X (2)	(2)	decreases	(1) Louis Pasteur	
	(3) remains same about hodos. (4)	(4)	All of the above		
70,	Which of the following compound has the	he mo	ost de-shielding pr	rotons?	
V	(2) The Western Ghat IsHO (1)	(2)	CH <sub>4</sub>	quooo axha 1 na (1) Amarkantak	
	(4) The Eastern Ghat $I3_{E}H3$ (5)	(4)	CH <sub>3</sub> Br		
71.	The living element of Xylem is known a	s: 19		The name Molecu	77.
	(1) Vessels	(2)	Xylem fiber		
	(3) Tracheids (4)	(4)	Xylem parenchyr	a (3) Endonuclease	
72.	The example of leafy Bryophyte is :				
	(1) Riccia	(2)	Anthroceros		
	(2) Carvopsis	(4)	Marchantia		
73.	The plant saffron is obtained from :				
	(1) Sepals	(2)	Petals	The formation of	79.
	(3) Stamens	(4)	Stigma & style to	is called : sq	
74.	Mendel published his findings on the prin	nciple	e of inheritance in	the year :	
	(1) 1857 (2) 1753	(3)	1866 (4	4) 1900	
PG-EE	2-2022/(Forensic Sci.)-(SET-Y)/(D)		ci.)-(SET-Y)/(D)	2022/(Forensic S	P. T. O.

75.	Which scientist first discoverd bacteria?			9. When DDT pa	a,
	(1) Louis Pasteur	(2) Robert	Koch	(1) increases	
	(3) Av Leeuwenhoek	(4) Robert	Hooke	(3) remains sa	
76.	The following is the hotspot of biodivers	ity in India :	ollowing con	Which of the fi	71
	(1) Amarkantak	(2) The W	estern Ghat	(l) CHeI	~
	(3) Panchmarhi	(4) The Ea	stern Ghat	$(3) CH_3 CI$	
77.	The name 'Molecular Scissor' is given to	the enzyme	ent of Xyle:	The living elen	71
	(1) Hydrogenase	(2) Lipase		(J) Yessels J	-
	(3) Endonuclease	(4) Ligase		(3) Tracheids	
78.	Fruit in which pericarp is fused with the	seed coat is	known as :	. The example of	
	(2) Authromese remains allel and			(1) Riccia	
	(1) Berry	(2) Caryoj	psis	(3) Porella	
	(3) Herperidium	(4) Capsu	le bonistdo el n	The plant saffro	73.
79.	The formation of gametophyte directly	from sporop	hyte tissue w	vithout spore forma	ation
	is called :			(3) Stamens	
	(1) Apospory	(2) Apoga	amy	Mendel publishe	74.
	(3) Heterospory	(4) Porog	amy	(1) 1857	
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(D)		Sci.)-(SET-)	E-2022/(Forensic	

P. T. O.

80. Who gave phylogenetic classification of plant?

(1) Linnaeus

(2) Engler and Prantl

(3) Bentham

(4) Hooker

81. Mr. Ranil Wickerm Singhe from the United National Party of Sri Lanka occupied the position of :

President
Prime Minister
Finance Minister
All of the above

82. Mr. Raghuvendra Tanwar was awarded Padma Shri in 2022 in the field of :

(1) Trade & Industry (2) Sports

(3) Science & Engineering (4) Literature & Education

83. WHO Global Centre for Traditional Medicine (WHOGCTM) will be established in India ?

- (1) Dehradoon (2) Jamnagar
- (3) Gangtok<sup>(4)</sup> (4) Shillong

84. The US Census Bureau has projected the World Population to be :

- (1) 7.0 billion (2) 7.8 billion
- (3) 8.0 billion and a state and (4) (4) 8.8 billion

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

D

18			D
85.	Pointing to a girl, Vijay said, "This girl i	is daughter of only c	hild of my father". What is
	the relation of Vijay's wife to that girl ?	(ii) Robert Koch	
	(1) Daughter	(2) Sister	
	(3) Mother	(4) Mother-in-law	(3) Bentham
86.	Find the word which is different from ot	hers :	81, Mr. Ranil Wickerm
	(1) Cap (2) Veil	(3) Turban	(4) Hat
87.	The difference between the times taken	by two cars to trav	rel a distance of 350 km is
	2 hr and 20 minutes. If the difference be	etween their speed is	5 kmph, find slower speed
	in kmph :		82. Mr. Raghuvendra Tai
	(1) 35 (2) 20	(3) 25	(4) 30
88.	A train covers a distance of 12 km in 1	0 minutes. If, it tak	es 6 seconds to pass a flag
	post, then the length of train is :		
	(1) 120 m (2) 150 m	(3) 200 m	(4) 250 m
89.	A hall is 15 m long and 12 m wide. If the	he sum of the areas of	of floor and ceiling is equal
	to the sum of the areas of four walls, the	e volume of the hall i	(1) Dehradoon : a
	(1) 720 (2) 900	(3) 1200	(4) 1800
90.	A sum of money is to distributed among	g A, B, C and D in th	the proportion of $5:2:4:3$ .
	If C gets Rs. 1,000 more than D, what is	s B's share ?	
	(1) Rs. 500	(2) Rs. 1,500	nound 0.1 (1)
	(3) Rs. 2,000 moillid 8.8 (4	(4) None of the ab	oove golltid 0.8 (E)
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(D)	(SET-Y)/(D)	G-EE-2022/(Forensic Sei.)-

D

91.	Poikilothermal term is associated with :	1	A ball of mass m moves with the	
	(1) Warm blooded	(2)	External Fertilisation	
	(3) Tadpole Larva	(4)	Cold blooded (1)	
92.	The yellow colour of urine is due to :			
	(1) Uric acid	(2)	Bite juice	
	(3) Urea de a dive deser vedi etedw. n	(4)	Urochrome and and awould near A	
liw	cach this height, what % age of energy he		he throws the pricks such that they ju	11
93.	Heterocrine is a composite gland and ac	ts as	- Hart of the statistic data	
	(1) Exocrine (1)	(2)	Endocrine (1)	
	(3) Both (1) & (2)	(4)	None of the above	
94.	The cells which are responsible for cold	our v	ision in vertebrates are :	
	(1) Cone cells $(2)$	(2)	) Red cells	
	(3) Bipolar cells	(4)	) All of the above	
95.	All are essential fatty acids except :		Torque applied on a particle is zero, th	001 -
	(1) Stearic acid notice in the start (1)	(2	) Linolenic acid mingam ni Isupel (1)	
	(3) Arachidonic acid	(4	) Linoleic acid (2) $\&$ (1) $dot acid$ (2)	
96.	A dimensionless quantity :			•
	(1) never has a unit	(2	) always has a unit	
	(3) may have a unit	(4	) None of the above	
PG-E	E-2022/(Forensic Sci.)-(SET-Y)/(D)		PO22/(Forewild Sei.)-(SET-Y)/(D)	. т. о.

- A ball of mass m moves with the speed v and it strikes normally with a wall and 97. reflected back normally. If its time of contact with wall is t, then find the force exerted by the ball on the wall :
  - (1)  $\frac{mv}{2t}$ (2) mvt (4)  $\frac{2mv}{t}$ (3)  $\frac{mv}{t}$
- A man throws the bricks to height of 12 m, where they reach with a speed of 12 m/s. If 98. he throws the bricks such that they just reach this height, what %age of energy he will have :
  - (4) 57% (2) 38% (3) 76% (1) 19%
- The initial velocity of a particle is u(at t = 0) and the acceleration f is given by, which 99. of the following relation is valid ?

G-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

- (1) v = u(3)  $v = u + \frac{1}{2}at^{2}$ (4)  $s = u + at^{2}$

Torque applied on a particle is zero, then its angular momentum will be : 100

- (1) Equal in magnitude (2) Equal in direction
- bioscielond (4) None of the above (3) Both (1) & (2)

PG-EE-2022/(Forensic Sci.)-(SET-Y)/(D)

D

	Answer key	M.Sc. (Forensi	c Science ) session	2022-23
Q. No.	A	B	C	D
1	4	2	1	2
2	4	2	3	4
3	2	4	3	3
4	4	3	3	3
5	3	2	2	2
6	2	4	2	3
7	3	1	1	3
8	1	3	1	4
9	3	1	1	2
10	3	1	3	3
11	2	2	1	1
12	4	1	3	3
13	3	1	3	1
14	3	2	2	2
15	2	1	1	4
16	3	2	2	1
17	3	4	3	3
18	4	3	3	1
19	2	2	1	4
20	3	1	3	2
20	1	4	<u>з</u>	2
21	3	4		2
22	3			Δ
2.5	2	1	Δ	4
24	1	1	2	2
25		1	2	2
20	2	1	2	4
2/	3		3	1
28		2		3
29	1	3	3	
30	3	2	3	1
31	2	2	1	2
32	3	4	3	1
33	4	3	1	1
34	3	3	2	2
35	3	2	4	1
36	2	3	1	2
37	2	3	3	4
38	4	4	1	3
39	3	2	4	2
40	2	3	2	1
41	1	1	4	2
42	3	3	3	3
43	3	1	4	4
44	3	2	3	3
45	2	4	3	3
46	2	1	2	2
47	1	3	3	2
48	1	1	2	4
49	1	4	1	3
50	3	2	2	2
				-

Nulun 8 22 as

22 A23 81

Q. No.	A	В	С	D
51	2	4	2	1
52	1	3	3	3
53	1	4	4	3
54	2	3	3	2
55	1	3	3	1
56	2	2	2	2
57	4	3	2	3
58	3	2	4	3
59	2	1	3	1
60	1	2	2	3
61	4	2	2	1
62	3	3	2	3
63	4	4	4	3
64	3	3	3	3
65	3	3	2	2
66	2	2	4	2
67	3	2	1	0 <u>1</u> at
68	2	4	3	1
69	1	3	1	1
70	2	2	1	3
71	2	1	4	4
72	2	3	4	3
73	4	3	3	1
74	3	3	1	
75	2	2	1	2
75	2 A	2	1	2
70		1		2
78		1		2
70	1	1	2	1
80	1	2	2	2
00 	1	1	2	4
82	4	2	2	4
83		2	4	2
8/	1	3		2
25	1	1		
86	1	2	2	5
07	1	2	2	2
00	4	2	5	3
00	2	3	4	
00	3 1	<u>Т</u>	2	3
90	2	3	3	3
91	<u>1</u>	4	2	4
92	3	4	1	4
93	1	2	1	3
94	2	4	2	1
95	4	3	1	1
96	1	2	2	1
97	3	3	4	4
98	1	1	3	2
99	4	3	2	3
100	2	3	1	2