SET–"Y" (Total No. of printed pages : 21)

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

UG-4 Year-EE-June, 2026

(Public Health Sciences)

Sr. No. 10085

Code A

Time : 1¼ Hours **Total Questions : 130** **Max. Marks : 100**

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

Name : _____ Date of Birth : _____

Father's Name : _____ Mother's Name : _____

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Question No.	Questions
	Section-A
1.	What is the normal BMI of a normal person? (1) Below 18.5 kg/m^2 (2) 18.5-24.9 kg/m^2 (3) 25-29.9 kg/m^2 (4) 30-34.9 kg/m^2
2.	Which of the following is a protein deficiency disease? (1) Kwashiorkor (2) Marasmus (3) Rickets (4) Scurvy
3.	Identify the vitamins which is deficient in alcoholics : (1) Vitamin B1 (2) Vitamin B2 (3) Vitamin B3 (4) Vitamin B12
4.	Which of the following vitamin is responsible for the maturation of RBCs? (1) Vitamin B6 (2) Vitamin B5 (3) Vitamin B3 (4) Vitamin B12
5.	Polycystic Ovary Syndrome (PCOS) has been officially renamed : (1) Polycystic Ovary Disease (PCOD) (2) Poly Ovary with Cystic Disease (POCD) (3) Polyendocrine Metabolic Ovarian Syndrome (PMOS) (4) None of the above
6.	Which of the following is mainly prevalent in pregnant women? (1) Anemia (2) Typhoid (3) Depression (4) Hypertension

Question No.	Questions
7.	Color Blind patients are not able to differentiate mainly : (1) White and Black (2) Black and Blue (3) Blue and Green (4) Red and Green
8.	Personalized medicines are also known as : (1) Orphan medicine (2) Precision medicine (3) Rare medicines (4) None of the above
9.	If a female experiences early menarche, this will increase the risk of : (1) Lung Cancer (2) Oral Cancer (3) Breast Cancer (4) Cervical Cancer
10.	The feeling of hopelessness, helplessness, suicide and poor sleep are the symptoms of : (1) Anxiety (2) Tension (3) Hypertension (4) Depression
11.	An object at rest or motion naturally maintain their state and resists any changes in their state unless acted upon by an external force due to the : (1) Gravity (2) Inertia (3) Force (4) Momentum
12.	An empty cart accelerates quickly with a small push, while a heavily loaded one requires much more force to achieve the same acceleration. This is explained on the basis of which law of gravitation? (1) Ist Law (2) IInd Law (3) IIIrd Law (4) None of the above

Question No.	Questions
13.	Suppose a bike with a rider on it having a total mass of 63 kg brakes and reduces its velocity from 8.5 m/s to 0 m/s in 3.0 seconds. What is the magnitude of the braking force? (1) 180 N (2) 178.5 N (3) 195 N (4) 189 N
14.	Calculate the net force required to give an automobile of mass 1600 kg an acceleration of 4.5 m/s^2. (1) 7200 N (2) 7800 N (3) 8000 N (4) None of the above
15.	The light energy emitted by a star is due to : (1) Joining of nuclei (2) Burning of nuclei (3) Breaking of nuclei (4) Reflection of solar light
16.	Frictional forces are acting on a body travelling in the forward direction, the work produced due to the frictional force are : (1) Positive (2) Negative (3) More (4) None of the above
17.	What will be the work done when the frictional forces are acting on a body travelling in the forward direction? (1) 1 (2) −1 (3) 0 (4) None of the above
18.	What is the SI unit of force? (1) Joule (2) Newton (3) Newton/m^2 (4) All of the above

Question No.	Questions
19.	What is the SI unit of pressure? (1) Joule (2) Newton (3) Newton/m^2 (4) All of the above
20.	Which of the following is the formula for Power? (1) Voltage × Current (2) Current squared × Resistance (3) Current squared / Resistance (4) All of the above
21.	How quickly the work is done is known as : (1) Energy (2) Frequency (3) Power (4) All of the above
22.	Which is the type of collision in which both the linear momentum and the Kinetic energy of the system remain conserved? (1) Inelastic Collision (2) Elastic Collision (3) Destructive Collision (4) None of the options
23.	Force per unit length necessary to deform this interfacial surface is called : (1) Shear stress (2) Viscosity (3) Surface tension (4) All of the above
24.	The viscosity of most of the fluids we encounter in everyday life is : (1) Dependent on the applied external force. (2) Independent of the applied external force. (3) Proportional to the applied external force. (4) No relation with these forces

Question No.	Questions
25.	The pressure at a point in a fluid will not be same in all directions when the fluid is _____. (1) Moving (2) Viscous (3) Viscous and static (4) Viscous and Moving
26.	The pressure at which a liquid is converted into vapours are known as : (1) Atmospheric pressure (2) Pressure (3) Vapour pressure (4) Gas pressure
27.	A fluid is defined as one which : (1) Cannot withstand shear (2) Can withstand shear (3) Deforms continuously when subjected to shear stress (4) Is solid like when there is no motion
28.	Due to which forces the liquid surfaces to shrink in minimum surface area? (1) Shear stress (2) Viscosity (3) Surface tension (4) All of the above
29.	Name the mirror that can give an erect and enlarged image of an object : (1) Convexo Concave Mirror (2) Biconcave Mirror (3) Convex Mirror (4) Concave Mirror
30.	Why do we prefer a convex mirror as a rear-view mirror in vehicles? (1) Due to larger view (2) Due to clear view (3) Due to lesser view (4) Due to wider view

Question No.	Questions
31.	The refractive index of diamond is 2.42. What is the meaning of this statement? (1) The speed of light will be reduced by 2.42 as compared to its speed in the air. (2) The speed of light will be increased by 2.42 as compared to its speed in the air. (3) Both of the above (4) None of the above
32.	A person is not able to see the distant object clearly, for the correction of his vision which type of lenses will be used? (1) Concave (2) Biconcave (3) Convex (4) Cylindrical
33.	In a compound microscope, which types of lenses are present in the eyepiece and objective? (1) Both Concave (2) Both Convex (3) Convex – concave (4) Concave – convex
34.	What bonds are present in a semiconductor? (1) Ionic (2) Coordinate (3) Trivalent (4) Covalent
35.	In Rutherford's alpha-particle scattering experiment, the significant result deduced was that : (1) The whole of the positive charge is concentrated at the center of an atom. (2) There are neutrons inside the nucleus. (3) The mass of the atom is uniformly distributed. (4) Alpha particles are just helium nuclei.

Question No.	Questions
36.	A radioactive nucleus emits a beta particle, then the parent and daughter nuclei are : (1) Isotones (2) Isotopes (3) Isomers (4) Isobars
37.	In nuclear reactions, there is a conservation of : (1) Energy (2) Mass (3) Momentum (4) All of the above
38.	From where are the gamma rays originated? (1) The innermost shell of the nucleus (2) The outermost shell of the nucleus (3) Nucleus (4) The outermost shell of the atom
39.	A nucleus undergoes gamma decay due to : (1) Excess of neutrons (2) Excess of protons (3) Its excited state (4) Large mass
40.	Which of the following are not emitted by radioactive substances? (1) Protons (2) Electrons (3) Gamma Rays (4) Helium Nuclei
41.	Which of the following elements has the lowest first ionization enthalpy? (1) Nitrogen (2) Oxygen (3) Carbon (4) Boron
42.	As you move from top to bottom in a group, which of the following properties generally decreases? (1) Atomic radius (2) Metallic character (3) Electronegativity (4) Electropositive character

Question No.	Questions
43.	In the modern periodic table, the number of period of the element is the same as : (1) Principal quantum number (2) Atomic number (3) Azimuthal quantum number (4) Atomic mass
44.	The correct order of electronegativity is : (1) $Cl > F > O > Br$ (2) $F > O > Cl > Br$ (3) $F > Cl > Br > O$ (4) $O > F > Cl > Br$
45.	Which one is the most acidic among these? (1) MgO (2) CaO (3) Al_2O_3 (4) Na_2O
46.	The bond angle around atom which uses sp^2 hybridization is _____ (1) 120° (2) 180° (3) 107° (4) $109^\circ . 28'$
47.	Which one of them is the weakest? (1) Ionic bond (2) Covalent bond (3) Metallic bond (4) van der Waals force
48.	Which of the following substances has a dipole moment more than zero? (1) Water (2) Methane (3) Carbon dioxide (4) Nitrogen
49.	Which of the following molecules have trigonal planar geometry? (1) BF_3 (2) NH_3 (3) PCl_3 (4) IF_3
50.	As an electroplated protective covering, what metal is used? (1) Plutonium (2) Chromium (3) Nickel (4) Iron

Question No.	Questions
51.	_____ possesses the properties of both alkali metals and halogens. (1) Helium (2) Hydrogen (3) Sodium (4) Chlorine
52.	Which of the following is not a lanthanide property? (1) They are soft metals with a white silvery colour. (2) They tarnish rapidly by air. (3) The hardness increases with increase in the atomic number . (4) The melting point of the metal ranges from 500-1000K.
53.	Choose the process by which liquid hydrocarbons can be converted to gaseous hydrocarbons : (1) Hydrolysis (2) Oxidation (3) Cracking (4) Distillation
54.	Which one of the following halide can be used in the Friedel-Crafts reaction? (1) Isopropyl chloride (2) Bromobenzene (3) Chlorobenzene (4) Chloroethene
55.	Which one of the following compound forms salt on reaction with $NaNH_2$? (1) C_2H_2 (2) C_2H_6 (3) C_6H_6 (4) C_2H_4
56.	C_6H_5CHO is formed when C_6H_6 is treated with CO and HCl in the presence of anhydrous $AlCl_3$. Name of the reaction is : (1) Friedel Crafts Reaction (2) Gattermann Koch Reaction (3) Rosenmund Reaction (4) Stephen Reaction
57.	A compound having a bond angle 180° is : (1) Alkyne (2) Alkane (3) Alkene (4) Cycloalkane

Question No.	Questions
58.	Acetamide can be converted to methenamine by which of the following reactions? (1) Stephen's reaction (2) Hoffmann bromamide reaction (3) Carbylamine reaction (4) Gabriel phthalimide synthesis
59.	An aldehyde on reaction with primary amine forms : (1) Ketone (2) Schiff's base (3) Aromatic acid (4) Carboxylic acid
60.	Benzene-diazonium chloride on reaction with phenol in weakly basic medium gives : (1) Diphenyl ether (2) p-hydroxyazobenzene (3) Chlorobenzene (4) Benzene
61.	Which one of the following does not contain the-COOH group? (1) Picric acid (2) Aspirin (3) Benzoic acid (4) Ethanoic acid
62.	Which of the following is not a thermoplastic example? (1) Polyvinyl chloride (2) Epoxy (3) Polyesters (4) Nylon
63.	Which of the following criteria does not apply to polymers? (1) Source (2) Structure (3) Method of preparation (4) Number of monomers
64.	What are the conditions for gas like Carbon monoxide to obey the ideal gas laws? (1) Low temperature and low pressure (2) Low temperature and high pressure (3) High temperature and low pressure (4) High temperature and high pressure

Question No.	Questions
65.	If the temperature is doubled, the average velocity of a gaseous molecule increases by : (1) 4 (2) 1.4 (3) 2 (4) 2.8
66.	At the same temperature, the average molar kinetic energy of N_2 and CO is : (1) $KE_1 > KE_2$ (2) $KE_1 < KE_2$ (3) $KE_1 = KE_2$ (4) Insufficient information given
67.	Find the pH of a solution when 0.01 M HCl and 0.1 M NaOH are mixed in equal volumes : (1) 12.65 (2) 1.04 (3) 7.0 (4) 2.0
68.	Which of the following aqueous solution will be the best conductor of electricity? (1) NH_3 (2) NH_3COOH (3) HCl (4) $C_6H_{12}O_6$
69.	Highest pH will be recorded for which of the following solutions if they are equimolar : (1) $AlCl_3$ (2) $BaCl_2$ (3) $BeCl_2$ (4) LiCl
70.	What effect does temperature have on the half-life of a first-order reaction? (1) It increases (2) It decreases (3) It remains the same (4) Both increases as well as decrease

Question No.	Questions
	Section-B (Mathematics)
71.	If A is a square matrix such that $A^2 = A$, then $(I-A)^3 + A$ is equal to : (1) I (2) 0 (3) I – A (4) I + A
72.	Total number of possible matrices of order 3 × 3 with each entry 2 or 0 is : (1) 9 (2) 27 (3) 81 (4) 512
73.	If A and B are two matrices of the order 3 × m and 3 × n, respectively, and m = n, then the order of matrix (5A–2B) is : (1) m × 3 (2) 3 × 3 (3) m × n (4) 3 × n
74.	For any two matrices A and B, we have : (1) AB = BA (2) AB ≠ BA (3) AB = O (4) None of the above
75.	If A and B are symmetric matrices of the same order, then (AB′ – BA′) is a : (1) Skew symmetric matrix (2) Null matrix (3) Symmetric matrix (4) None of these
76.	If A is a skew-symmetric matrix, then A^2 is a : (1) Skew symmetric matrix (2) Symmetric matrix (3) Null matrix (4) Cannot be determined
77.	If A is a square matrix of order 3 and $\|A\| = 5$, then the value of $\|2A'\|$ is : (1) –10 (2) 10 (3) –40 (4) 40

Question No.	Questions
78.	The area of triangle with vertices $(-3, 0)$, $(3, 0)$ and $(0, k)$ is 9 sq. units. The value of k will be : (1) 9 (2) 3 (3) -9 (4) 6
79.	Which of the following is correct? (1) Determinant is a square matrix. (2) Determinant is a number associated with a matrix. (3) Determinant is a number associated with a square matrix. (4) None of these
80.	The roots of $100x^2 - 20x + 1 = 0$ is : (1) 1/20 and 1/20 (2) 1/10 and 1/20 (3) 1/10 and 1/10 (4) None of the above
81.	The sum of two numbers is 27 and product is 182. The numbers are : (1) 12 and 13 (2) 13 and 14 (3) 12 and 15 (4) 13 and 24
82.	$\sin[\pi/3 - \sin^{-1}(-1/2)]$ is equal to : (1) $1/2$ (2) $1/3$ (3) -1 (4) 1
83.	The domain of $\sin^{-1}(2x)$ is : (1) $[0, 1]$ (2) $[-1, 1]$ (3) $[-1/2, 1/2]$ (4) $[-2, 2]$
84.	Which of the following is the principal value branch of $\cos^{-1}x$? (1) $[-\pi/2, \pi/2]$ (2) $(0, \pi)$ (3) $[0, \pi]$ (4) $(0,\pi) - \{\pi/2\}$
85.	The value of the expression $\sin[\cot^{-1}(\cos(\tan^{-1}1))]$ is : (1) 0 (2) 1 (3) $1/\sqrt{3}$ (4) $\sqrt{(2/3)}$

Question No.	Questions
86.	If $\alpha \leq 2\sin^{-1}x + \cos^{-1}x \leq \beta$, then : (1) $\alpha = -\pi/2, \beta = \pi/2$ (2) $\alpha = 0, \beta = \pi$ (3) $\alpha = -\pi/2, \beta = 3\pi/2$ (4) $\alpha = 0, \beta = 2\pi$
87.	The value of $\sin(2\tan^{-1}(.75))$ is equal to : (1) .75 (2) 1.5 (3) .96 (4) sin 1.5
88.	Two lines are said to be perpendicular if the product of their slope equal to : (1) -1 (2) 0 (3) 1 (4) $^1/_2$
89.	What is the distance of (5, 12) from the origin? (1) 5 units (2) 8 units (3) 12 units (4) 13 units
90.	Two lines are said to be parallel if the difference of their slope is : (1) -1 (2) 0 (3) 1 (4) None of these
91.	The equation of a straight line that passes through the point (3, 4) an perpendicular to the line $3x + 2y + 5 = 0$ is : (1) $2x - 3y + 6 = 0$ (2) $2x + 3y + 6 = 0$ (3) $2x - 3y - 6 = 0$ (4) $2x + 3y - 6 = 0$
92.	The slope of a line $ax + by + c = 0$ is : (1) a/b (2) $-a/b$ (3) c/b (4) $-c/b$
93.	A circle has a number of tangents equal to : (1) 0 (2) 1 (3) 2 (4) Infinite

Question No.	Questions
94.	A tangent intersects the circle at : (1) One point (2) Two distinct point (3) At the circle (4) None of the above
95.	If the angle between two radii of a circle is 110°, then the angle between the tangents at the ends of the radii is : (1) 90° (2) 50° (3) 70° (4) 40°
96.	The value of $P(n, n-1)$ is : (1) n (2) $n!$ (3) $2n$ (4) $2n!$
97.	The number of ways in which 8 students can be seated in a line is : (1) 5040 (2) 50400 (3) 40230 (4) 40320
98.	If ${}^{n}P_5 = 60\ {}^{n-1}P_3$, the value of n is : (1) 6 (2) 10 (3) 12 (4) 16
99.	The number of squares that can be formed on a chessboard is : (1) 64 (2) 160 (3) 204 (4) 224
100.	The number of ways 4 boys and 3 girls can be seated in a row so that they are alternate is : (1) 12 (2) 104 (3) 144 (4) 256

Question No.	Questions
	Section-C (Biology & Biotechnology)
101.	The force that initiates evolution is _____. (1) Variation (2) Mutation (3) Extinction (4) Adaptation
102.	_____ is a vestigial organ. (1) Intestinal Villi (2) Papillae (3) Vermiform appendix (4) None of the above
103.	The earliest geological time period among the following is _____. (1) Cambrian (2) Permian (3) Jurassic (4) Quaternary
104.	The experiment that simulated conditions thought to be present on the early earth : (1) Hershey-Chase experiment (2) Geiger-Marsden experiment (3) Miller-Urey experiment (4) Schiehallion experiment
105.	The only connective tissue without fibroblasts is : (1) Areolar connective tissue (2) Bone (3) Cartilage (4) Blood
106.	In these tissue cells, Lacunae are enclosed : (1) Cartilage (2) Bone tissue (3) Both (1) and (2) (4) Muscular tissue
107.	Mast cells are linked to : (1) Neural tissue (2) Areolar connective tissue (3) Endocrine glands (4) Exocrine glands

Question No.	Questions
108.	These are brain macrophages : (1) Astrocytes (2) Microglial cells (3) Ependymal cells (4) Oligodendrocytes
109.	This is not a function of neuroglia : (1) Phagocytosis (2) Isolation of neurons (3) Secretion of cerebrospinal fluid (4) Information processing
110.	This plasma protein is responsible for blood coagulation : (1) Fibrinogen (2) Globulin (3) Serum amylase (4) Albumin
111.	Which of the following hormones stimulates the production of pancreatic juice and bicarbonate? (1) Insulin and glucagon (2) Cholecystokinin and secretin (3) Gastrin and insulin (4) Angiotensin and epinephrine
112.	The absorption of fructose by intestinal mucosa is : (1) Co-transport mechanism (2) Simple diffusion (3) Facilitated transport (4) Active transport
113.	The cranial nerve that regulates the heartbeat : (1) VII (2) VIII (3) IX (4) X

Question No.	Questions
114.	Which of the following is another name for the third ventricle of the brain? (1) Diocoel (2) Paracoel (3) Rhinocoel (4) Metacoel
115.	Nissl's granules present in the neurons are made up of : (1) Protein (2) Ribosome (3) RNA (4) DNA
116.	Humans have _____ joint between sternum and ribs. (1) Gliding (2) Angular (3) Cartilaginous (4) Fibrous
117.	The joint in our elbow is an example of : (1) Hinge joint (2) Ball and socket joint (3) Pivot joint (4) gliding joint
118.	Composition of bone marrow is _____. (1) Adipose tissue (2) Adipose, areolar tissue and blood (3) Adipose and areolar tissue (4) Adipose tissue and fibroblasts
119.	The formation of erythrocytes in foetus takes place in _____. (1) Red bone marrow (2) Sarcoplasm (3) Liver and spleen (4) Blood
120.	Nasal septum gets damaged. Its recovery requires cartilage known as _____. (1) Elastic cartilage (2) Fibrous cartilage (3) Calcified cartilage (4) Hyaline cartilage

Question No.	Questions
121.	The walls of the ventricles possess thick muscular projections, they are known as : (1) Conus arteriosus (2) Truncus arteriosus (3) Chordae tendineae (4) Columnae carneae
122.	The condensation of chromosomes is observed in _____. (1) Prophase 1 (2) Anaphase 1 (3) Metaphase 1 (4) None of the above
123.	Nuclear DNA replicates in the _____ phase. (1) G2 phase (2) M phase (3) S phase (4) None of the above
124.	The stage which serves as connecting link between meiosis 1 and meiosis 2 : (1) Interphase 2 (2) Interphase 1 (3) Interkineses (4) None of the above
125.	The 10% energy transfer law of food chain was given by : (1) Tansley (2) Stanley (3) Weismann (4) Lindemann
126.	The mass of living material at a trophic level at a particular time is called : (1) Standing rate (2) Gross primary productivity (3) Standing crop (4) Net primary productivity
127.	Which of the following is the most stable ecosystem? (1) Desert (2) Ocean (3) Forest (4) Mountain

Question No.	Questions
128.	The production of secondary metabolites requires the use of _____. (1) Meristem (2) Protoplast (3) Axillary buds (4) Cell suspension
129.	The pair of hormones required for a callus to differentiate are _____. (1) Ethylene and Auxin (2) Auxin and Cytokinin (3) Auxin and Abscisic acid (4) Cytokinin and Gibberellin
130.	The formation of embryoids from the pollen grains in the tissue culture medium is due to _____. (1) Organogenesis (2) Test tube culture (3) Double Fertilization (4) Cellular totipotency

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9.	Highest pH will be recorded for which of the following solutions if they are equimolar : (1) $AlCl_3$ (2) $BaCl_2$ (3) $BeCl_2$ (4) LiCl
10.	What effect does temperature have on the half-life of a first-order reaction? (1) It increases (2) It decreases (3) It remains the same (4) Both increases as well as decrease
11.	How quickly the work is done is known as : (1) Energy (2) Frequency (3) Power (4) All of the above
12.	Which is the type of collision in which both the linear momentum and the Kinetic energy of the system remain conserved? (1) Inelastic Collision (2) Elastic Collision (3) Destructive Collision (4) None of the options

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13.	Force per unit length necessary to deform this interfacial surface is called : (1) Shear stress (2) Viscosity (3) Surface tension (4) All of the above
14.	The viscosity of most of the fluids we encounter in everyday life is : (1) Dependent on the applied external force. (2) Independent of the applied external force. (3) Proportional to the applied external force. (4) No relation with these forces
15.	The pressure at a point in a fluid will not be same in all directions when the fluid is _____. (1) Moving (2) Viscous (3) Viscous and static (4) Viscous and Moving
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19.	Name the mirror that can give an erect and enlarged image of an object : (1) Convexo Concave Mirror (2) Biconcave Mirror (3) Convex Mirror (4) Concave Mirror
20.	Why do we prefer a convex mirror as a rear-view mirror in vehicles? (1) Due to larger view (2) Due to clear view (3) Due to lesser view (4) Due to wider view
21.	The refractive index of diamond is 2.42. What is the meaning of this statement? (1) The speed of light will be reduced by 2.42 as compared to its speed in the air. (2) The speed of light will be increased by 2.42 as compared to its speed in the air. (3) Both of the above (4) None of the above
22.	A person is not able to see the distant object clearly, for the correction of his vision which type of lenses will be used? (1) Concave (2) Biconcave (3) Convex (4) Cylindrical
23.	In a compound microscope, which types of lenses are present in the eyepiece and objective? (1) Both Concave (2) Both Convex (3) Convex – concave (4) Concave – convex
24.	What bonds are present in a semiconductor? (1) Ionic (2) Coordinate (3) Trivalent (4) Covalent

Question No.	Questions
25.	In Rutherford's alpha-particle scattering experiment, the significant result deduced was that : (1) The whole of the positive charge is concentrated at the center of an atom. (2) There are neutrons inside the nucleus. (3) The mass of the atom is uniformly distributed. (4) Alpha particles are just helium nuclei.
26.	A radioactive nucleus emits a beta particle, then the parent and daughter nuclei are : (1) Isotones (2) Isotopes (3) Isomers (4) Isobars
27.	In nuclear reactions, there is a conservation of : (1) Energy (2) Mass (3) Momentum (4) All of the above
28.	From where are the gamma rays originated? (1) The innermost shell of the nucleus (2) The outermost shell of the nucleus (3) Nucleus (4) The outermost shell of the atom
29.	A nucleus undergoes gamma decay due to : (1) Excess of neutrons (2) Excess of protons (3) Its excited state (4) Large mass
30.	Which of the following are not emitted by radioactive substances? (1) Protons (2) Electrons (3) Gamma Rays (4) Helium Nuclei

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31.	Which of the following elements has the lowest first ionization enthalpy? (1) Nitrogen (2) Oxygen (3) Carbon (4) Boron
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41.	_____ possesses the properties of both alkali metals and halogens. (1) Helium (2) Hydrogen (3) Sodium (4) Chlorine
42.	Which of the following is not a lanthanide property? (1) They are soft metals with a white silvery colour. (2) They tarnish rapidly by air. (3) The hardness increases with increase in the atomic number . (4) The melting point of the metal ranges from 500-1000K.
43.	Choose the process by which liquid hydrocarbons can be converted to gaseous hydrocarbons : (1) Hydrolysis (2) Oxidation (3) Cracking (4) Distillation
44.	Which one of the following halide can be used in the Friedel-Crafts reaction? (1) Isopropyl chloride (2) Bromobenzene (3) Chlorobenzene (4) Chloroethene

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45.	Which one of the following compound forms salt on reaction with $NaNH_2$? (1) C_2H_2 (2) C_2H_6 (3) C_6H_6 (4) C_2H_4
46.	C_6H_5CHO is formed when C_6H_6 is treated with CO and HCl in the presence of anhydrous $AlCl_3$. Name of the reaction is : (1) Friedel Crafts Reaction (2) Gattermann Koch Reaction (3) Rosenmund Reaction (4) Stephen Reaction
47.	A compound having a bond angle 180° is : (1) Alkyne (2) Alkane (3) Alkene (4) Cycloalkane
48.	Acetamide can be converted to methenamine by which of the following reactions? (1) Stephen's reaction (2) Hoffmann bromamide reaction (3) Carbylamine reaction (4) Gabriel phthalimide synthesis
49.	An aldehyde on reaction with primary amine forms : (1) Ketone (2) Schiff's base (3) Aromatic acid (4) Carboxylic acid
50.	Benzene-diazonium chloride on reaction with phenol in weakly basic medium gives : (1) Diphenyl ether (2) p-hydroxyazobenzene (3) Chlorobenzene (4) Benzene

Question No.	Questions
51.	An object at rest or motion naturally maintain their state and resists any changes in their state unless acted upon by an external force due to the : (1) Gravity (2) Inertia (3) Force (4) Momentum
52.	An empty cart accelerates quickly with a small push, while a heavily loaded one requires much more force to achieve the same acceleration. This is explained on the basis of which law of gravitation? (1) Ist Law (2) IInd Law (3) IIIrd Law (4) None of the above
53.	Suppose a bike with a rider on it having a total mass of 63 kg brakes and reduces its velocity from 8.5 m/s to 0 m/s in 3.0 seconds. What is the magnitude of the braking force? (1) 180 N (2) 178.5 N (3) 195 N (4) 189 N
54.	Calculate the net force required to give an automobile of mass 1600 kg an acceleration of 4.5 m/s^2. (1) 7200 N (2) 7800 N (3) 8000 N (4) None of the above
55.	The light energy emitted by a star is due to : (1) Joining of nuclei (2) Burning of nuclei (3) Breaking of nuclei (4) Reflection of solar light
56.	Frictional forces are acting on a body travelling in the forward direction, the work produced due to the frictional force are : (1) Positive (2) Negative (3) More (4) None of the above

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57.	What will be the work done when the frictional forces are acting on a body travelling in the forward direction? (1) 1 (2) −1 (3) 0 (4) None of the above
58.	What is the SI unit of force? (1) Joule (2) Newton (3) Newton/m^2 (4) All of the above
59.	What is the SI unit of pressure? (1) Joule (2) Newton (3) Newton/m^2 (4) All of the above
60.	Which of the following is the formula for Power? (1) Voltage × Current (2) Current squared × Resistance (3) Current squared / Resistance (4) All of the above
61.	What is the normal BMI of a normal person? (1) Below 18.5 kg/m^2 (2) 18.5-24.9 kg/m^2 (3) 25-29.9 kg/m^2 (4) 30-34.9 kg/m^2
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	Section-B (Mathematics)
71.	The equation of a straight line that passes through the point (3, 4) and perpendicular to the line $3x + 2y + 5 = 0$ is : (1) $2x - 3y + 6 = 0$ (2) $2x + 3y + 6 = 0$ (3) $2x - 3y - 6 = 0$ (4) $2x + 3y - 6 = 0$
72.	The slope of a line $ax + by + c = 0$ is : (1) a/b (2) $-a/b$ (3) c/b (4) $-c/b$
73.	A circle has a number of tangents equal to : (1) 0 (2) 1 (3) 2 (4) Infinite
74.	A tangent intersects the circle at : (1) One point (2) Two distinct point (3) At the circle (4) None of the above
75.	If the angle between two radii of a circle is 110°, then the angle between the tangents at the ends of the radii is : (1) 90° (2) 50° (3) 70° (4) 40°
76.	The value of $P(n, n-1)$ is : (1) n (2) $n!$ (3) $2n$ (4) $2n!$
77.	The number of ways in which 8 students can be seated in a line is : (1) 5040 (2) 50400 (3) 40230 (4) 40320
78.	If ${}^{n}P_5 = 60\ {}^{n-1}P_3$, the value of n is : (1) 6 (2) 10 (3) 12 (4) 16

Question No.	Questions
79.	The number of squares that can be formed on a chessboard is : (1) 64 (2) 160 (3) 204 (4) 224
80.	The number of ways 4 boys and 3 girls can be seated in a row so that they are alternate is : (1) 12 (2) 104 (3) 144 (4) 256
81.	If A is a square matrix such that $A^2 = A$, then $(I-A)^3 + A$ is equal to : (1) I (2) 0 (3) I – A (4) I + A
82.	Total number of possible matrices of order 3 × 3 with each entry 2 or 0 is : (1) 9 (2) 27 (3) 81 (4) 512
83.	If A and B are two matrices of the order 3 × m and 3 × n, respectively, and m = n, then the order of matrix (5A–2B) is : (1) m × 3 (2) 3 × 3 (3) m × n (4) 3 × n
84.	For any two matrices A and B, we have : (1) AB = BA (2) AB ≠ BA (3) AB = O (4) None of the above
85.	If A and B are symmetric matrices of the same order, then $(AB' - BA')$ is a : (1) Skew symmetric matrix (2) Null matrix (3) Symmetric matrix (4) None of these

Question No.	Questions
86.	If A is a skew-symmetric matrix, then A^2 is a : (1) Skew symmetric matrix (2) Symmetric matrix (3) Null matrix (4) Cannot be determined
87.	If A is a square matrix of order 3 and $\|A\| = 5$, then the value of $\|2A'\|$ is (1) -10 (2) 10 (3) -40 (4) 40
88.	The area of triangle with vertices $(-3, 0)$, $(3, 0)$ and $(0, k)$ is 9 sq. units The value of k will be : (1) 9 (2) 3 (3) -9 (4) 6
89.	Which of the following is correct? (1) Determinant is a square matrix. (2) Determinant is a number associated with a matrix. (3) Determinant is a number associated with a square matrix. (4) None of these
90.	The roots of $100x^2 - 20x + 1 = 0$ is : (1) 1/20 and 1/20 (2) 1/10 and 1/20 (3) 1/10 and 1/10 (4) None of the above
91.	The sum of two numbers is 27 and product is 182. The numbers are : (1) 12 and 13 (2) 13 and 14 (3) 12 and 15 (4) 13 and 24
92.	$\sin[\pi/3 - \sin^{-1}(-1/2)]$ is equal to : (1) $1/2$ (2) $1/3$ (3) -1 (4) 1

Question No.	Questions
93.	The domain of $\sin^{-1}(2x)$ is : (1) $[0, 1]$ (2) $[-1, 1]$ (3) $[-1/2, 1/2]$ (4) $[-2, 2]$
94.	Which of the following is the principal value branch of $\cos^{-1}x$? (1) $[-\pi/2, \pi/2]$ (2) $(0, \pi)$ (3) $[0, \pi]$ (4) $(0,\pi) - \{\pi/2\}$
95.	The value of the expression $\sin[\cot^{-1}(\cos(\tan^{-1}1))]$ is : (1) 0 (2) 1 (3) $1/\sqrt{3}$ (4) $\sqrt{(2/3)}$
96.	If $\alpha \leq 2\sin^{-1}x + \cos^{-1}x \leq \beta$, then : (1) $\alpha = -\pi/2, \beta = \pi/2$ (2) $\alpha = 0, \beta = \pi$ (3) $\alpha = -\pi/2, \beta = 3\pi/2$ (4) $\alpha = 0, \beta = 2\pi$
97.	The value of $\sin(2\tan^{-1}(.75))$ is equal to : (1) .75 (2) 1.5 (3) .96 (4) sin 1.5
98.	Two lines are said to be perpendicular if the product of their slope is equal to : (1) -1 (2) 0 (3) 1 (4) $1/2$
99.	What is the distance of (5, 12) from the origin? (1) 5 units (2) 8 units (3) 12 units (4) 13 units
100.	Two lines are said to be parallel if the difference of their slope is : (1) -1 (2) 0 (3) 1 (4) None of these

Question No.	Questions
	Section-C (Biology & Biotechnology)
101.	The walls of the ventricles possess thick muscular projections, they are known as : (1) Conus arteriosus (2) Truncus arteriosus (3) Chordae tendineae (4) Columnae carneae
102.	The condensation of chromosomes is observed in _____. (1) Prophase 1 (2) Anaphase 1 (3) Metaphase 1 (4) None of the above
103.	Nuclear DNA replicates in the _____ phase. (1) G2 phase (2) M phase (3) S phase (4) None of the above
104.	The stage which serves as connecting link between meiosis 1 and meiosis 2 : (1) Interphase 2 (2) Interphase 1 (3) Interkineses (4) None of the above
105.	The 10% energy transfer law of food chain was given by : (1) Tansley (2) Stanley (3) Weismann (4) Lindemann
106.	The mass of living material at a trophic level at a particular time is called : (1) Standing rate (2) Gross primary productivity (3) Standing crop (4) Net primary productivity
107.	Which of the following is the most stable ecosystem? (1) Desert (2) Ocean (3) Forest (4) Mountain

Question No.	Questions
108.	The production of secondary metabolites requires the use of _____. (1) Meristem (2) Protoplast (3) Axillary buds (4) Cell suspension
109.	The pair of hormones required for a callus to differentiate are _____. (1) Ethylene and Auxin (2) Auxin and Cytokinin (3) Auxin and Abscisic acid (4) Cytokinin and Gibberellin
110.	The formation of embryoids from the pollen grains in the tissue culture medium is due to _____. (1) Organogenesis (2) Test tube culture (3) Double Fertilization (4) Cellular totipotency
111.	The force that initiates evolution is _____. (1) Variation (2) Mutation (3) Extinction (4) Adaptation
112.	_____ is a vestigial organ. (1) Intestinal Villi (2) Papillae (3) Vermiform appendix (4) None of the above
113.	The earliest geological time period among the following is _____. (1) Cambrian (2) Permian (3) Jurassic (4) Quaternary
114.	The experiment that simulated conditions thought to be present on the early earth : (1) Hershey-Chase experiment (2) Geiger-Marsden experiment (3) Miller-Urey experiment (4) Schiehallion experiment

Question No.	Questions
115.	The only connective tissue without fibroblasts is : (1) Areolar connective tissue (2) Bone (3) Cartilage (4) Blood
116.	In these tissue cells, Lacunae are enclosed : (1) Cartilage (2) Bone tissue (3) Both (1) and (2) (4) Muscular tissue
117.	Mast cells are linked to : (1) Neural tissue (2) Areolar connective tissue (3) Endocrine glands (4) Exocrine glands
118.	These are brain macrophages : (1) Astrocytes (2) Microglial cells (3) Ependymal cells (4) Oligodendrocytes
119.	This is not a function of neuroglia : (1) Phagocytosis (2) Isolation of neurons (3) Secretion of cerebrospinal fluid (4) Information processing
120.	This plasma protein is responsible for blood coagulation : (1) Fibrinogen (2) Globulin (3) Serum amylase (4) Albumin
121.	Which of the following hormones stimulates the production o pancreatic juice and bicarbonate? (1) Insulin and glucagon (2) Cholecystokinin and secretin (3) Gastrin and insulin (4) Angiotensin and epinephrine

Question No.	Questions
122.	The absorption of fructose by intestinal mucosa is : (1) Co-transport mechanism (2) Simple diffusion (3) Facilitated transport (4) Active transport
123.	The cranial nerve that regulates the heartbeat : (1) VII (2) VIII (3) IX (4) X
124.	Which of the following is another name for the third ventricle of the brain? (1) Diocoel (2) Paracoel (3) Rhinocoel (4) Metacoel
125.	Nissl's granules present in the neurons are made up of : (1) Protein (2) Ribosome (3) RNA (4) DNA
126.	Humans have _____ joint between sternum and ribs. (1) Gliding (2) Angular (3) Cartilaginous (4) Fibrous
127.	The joint in our elbow is an example of : (1) Hinge joint (2) Ball and socket joint (3) Pivot joint (4) gliding joint
128.	Composition of bone marrow is _____. (1) Adipose tissue (2) Adipose, areolar tissue and blood (3) Adipose and areolar tissue (4) Adipose tissue and fibroblasts

Question No.	Questions
129.	The formation of erythrocytes in foetus takes place in _____. (1) Red bone marrow (2) Sarcoplasm (3) Liver and spleen (4) Blood
130.	Nasal septum gets damaged. Its recovery requires cartilage known as _____. (1) Elastic cartilage (2) Fibrous cartilage (3) Calcified cartilage (4) Hyaline cartilage

SET–"Y" (Total No. of printed pages : 21)

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

UG-4 Year-EE-June, 2026

(Public Health Sciences)

Code **C**

Sr. No. 10087

Time : 1¼ Hours **Total Questions : 130** **Max. Marks : 100**

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

Name : _____ Date of Birth : _____

Father's Name : _____ Mother's Name : _____

Date of Examination : _____

(Signature of the candidate) (Signature of the Invigilator)

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

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

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33.	Choose the process by which liquid hydrocarbons can be converted to gaseous hydrocarbons : (1) Hydrolysis (2) Oxidation (3) Cracking (4) Distillation
34.	Which one of the following halide can be used in the Friedel-Crafts reaction? (1) Isopropyl chloride (2) Bromobenzene (3) Chlorobenzene (4) Chloroethene

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35.	Which one of the following compound forms salt on reaction with $NaNH_2$? (1) C_2H_2 (2) C_2H_6 (3) C_6H_6 (4) C_2H_4
36.	C_6H_5CHO is formed when C_6H_6 is treated with CO and HCl in the presence of anhydrous $AlCl_3$. Name of the reaction is : (1) Friedel Crafts Reaction (2) Gattermann Koch Reaction (3) Rosenmund Reaction (4) Stephen Reaction
37.	A compound having a bond angle 180° is : (1) Alkyne (2) Alkane (3) Alkene (4) Cycloalkane
38.	Acetamide can be converted to methenamine by which of the following reactions? (1) Stephen's reaction (2) Hoffmann bromamide reaction (3) Carbylamine reaction (4) Gabriel phthalimide synthesis
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40.	Benzene-diazonium chloride on reaction with phenol in weakly basic medium gives : (1) Diphenyl ether (2) p-hydroxyazobenzene (3) Chlorobenzene (4) Benzene

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42.	An empty cart accelerates quickly with a small push, while a heavily loaded one requires much more force to achieve the same acceleration. This is explained on the basis of which law of gravitation? (1) Ist Law (2) IInd Law (3) IIIrd Law (4) None of the above
43.	Suppose a bike with a rider on it having a total mass of 63 kg brakes and reduces its velocity from 8.5 m/s to 0 m/s in 3.0 seconds. What is the magnitude of the braking force? (1) 180 N (2) 178.5 N (3) 195 N (4) 189 N
44.	Calculate the net force required to give an automobile of mass 1600 kg an acceleration of 4.5 m/s^2. (1) 7200 N (2) 7800 N (3) 8000 N (4) None of the above
45.	The light energy emitted by a star is due to : (1) Joining of nuclei (2) Burning of nuclei (3) Breaking of nuclei (4) Reflection of solar light

Question No.	Questions
46.	Frictional forces are acting on a body travelling in the forward direction, the work produced due to the frictional force are : (1) Positive (2) Negative (3) More (4) None of the above
47.	What will be the work done when the frictional forces are acting on a body travelling in the forward direction? (1) 1 (2) −1 (3) 0 (4) None of the above
48.	What is the SI unit of force? (1) Joule (2) Newton (3) Newton/m^2 (4) All of the above
49.	What is the SI unit of pressure? (1) Joule (2) Newton (3) Newton/m^2 (4) All of the above
50.	Which of the following is the formula for Power? (1) Voltage × Current (2) Current squared × Resistance (3) Current squared / Resistance (4) All of the above
51.	Which one of the following does not contain the-COOH group? (1) Picric acid (2) Aspirin (3) Benzoic acid (4) Ethanoic acid
52.	Which of the following is not a thermoplastic example? (1) Polyvinyl chloride (2) Epoxy (3) Polyesters (4) Nylon

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53.	Which of the following criteria does not apply to polymers? (1) Source (2) Structure (3) Method of preparation (4) Number of monomers
54.	What are the conditions for gas like Carbon monoxide to obey the ideal gas laws? (1) Low temperature and low pressure (2) Low temperature and high pressure (3) High temperature and low pressure (4) High temperature and high pressure
55.	If the temperature is doubled, the average velocity of a gaseous molecule increases by : (1) 4 (2) 1.4 (3) 2 (4) 2.8
56.	At the same temperature, the average molar kinetic energy of N_2 and CO is : (1) $KE_1 > KE_2$ (2) $KE_1 < KE_2$ (3) $KE_1 = KE_2$ (4) Insufficient information given
57.	Find the pH of a solution when 0.01 M HCl and 0.1 M NaOH are mixed in equal volumes : (1) 12.65 (2) 1.04 (3) 7.0 (4) 2.0
58.	Which of the following aqueous solution will be the best conductor of electricity? (1) NH_3 (2) NH_3COOH (3) HCl (4) $C_6H_{12}O_6$

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59.	Highest pH will be recorded for which of the following solutions if they are equimolar : (1) $AlCl_3$ (2) $BaCl_2$ (3) $BeCl_2$ (4) $LiCl$
60.	What effect does temperature have on the half-life of a first-order reaction? (1) It increases (2) It decreases (3) It remains the same (4) Both increases as well as decrease
61.	The refractive index of diamond is 2.42. What is the meaning of this statement? (1) The speed of light will be reduced by 2.42 as compared to its speed in the air. (2) The speed of light will be increased by 2.42 as compared to its speed in the air. (3) Both of the above (4) None of the above
62.	A person is not able to see the distant object clearly, for the correction of his vision which type of lenses will be used? (1) Concave (2) Biconcave (3) Convex (4) Cylindrical
63.	In a compound microscope, which types of lenses are present in the eyepiece and objective? (1) Both Concave (2) Both Convex (3) Convex – concave (4) Concave – convex
64.	What bonds are present in a semiconductor? (1) Ionic (2) Coordinate (3) Trivalent (4) Covalent

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65.	In Rutherford's alpha-particle scattering experiment, the significant result deduced was that : (1) The whole of the positive charge is concentrated at the center of an atom. (2) There are neutrons inside the nucleus. (3) The mass of the atom is uniformly distributed. (4) Alpha particles are just helium nuclei.
66.	A radioactive nucleus emits a beta particle, then the parent and daughter nuclei are : (1) Isotones (2) Isotopes (3) Isomers (4) Isobars
67.	In nuclear reactions, there is a conservation of : (1) Energy (2) Mass (3) Momentum (4) All of the above
68.	From where are the gamma rays originated? (1) The innermost shell of the nucleus (2) The outermost shell of the nucleus (3) Nucleus (4) The outermost shell of the atom
69.	A nucleus undergoes gamma decay due to : (1) Excess of neutrons (2) Excess of protons (3) Its excited state (4) Large mass
70.	Which of the following are not emitted by radioactive substances? (1) Protons (2) Electrons (3) Gamma Rays (4) Helium Nuclei

Question No.	Questions
	Section-B (Mathematics)
71.	If $\alpha \leq 2\sin^{-1}x + \cos^{-1}x \leq \beta$, then : (1) $\alpha = -\pi/2, \beta = \pi/2$ (2) $\alpha = 0, \beta = \pi$ (3) $\alpha = -\pi/2, \beta = 3\pi/2$ (4) $\alpha = 0, \beta = 2\pi$
72.	The value of $\sin(2\tan^{-1}(.75))$ is equal to : (1) .75 (2) 1.5 (3) .96 (4) sin 1.5
73.	Two lines are said to be perpendicular if the product of their slope is equal to : (1) -1 (2) 0 (3) 1 (4) $^1/_2$
74.	What is the distance of (5, 12) from the origin? (1) 5 units (2) 8 units (3) 12 units (4) 13 units
75.	Two lines are said to be parallel if the difference of their slope is : (1) -1 (2) 0 (3) 1 (4) None of these
76.	The sum of two numbers is 27 and product is 182. The numbers are : (1) 12 and 13 (2) 13 and 14 (3) 12 and 15 (4) 13 and 24
77.	$\sin[\pi/3 - \sin^{-1}(^{-1}/_2)]$ is equal to : (1) $^1/_2$ (2) $^1/_3$ (3) -1 (4) 1
78.	The domain of $\sin^{-1}(2x)$ is : (1) [0, 1] (2) [−1, 1] (3) [−1/2, 1/2] (4) [−2, 2]

Question No.	Questions
79.	Which of the following is the principal value branch of $\cos^{-1}x$? (1) $[-\pi/2, \pi/2]$ (2) $(0, \pi)$ (3) $[0, \pi]$ (4) $(0,\pi) - \{\pi/2\}$
80.	The value of the expression $\sin[\cot^{-1}(\cos(\tan^{-1}1))]$ is : (1) 0 (2) 1 (3) $1/\sqrt{3}$ (4) $\sqrt{(2/3)}$
81.	The equation of a straight line that passes through the point (3, 4) and perpendicular to the line $3x + 2y + 5 = 0$ is : (1) $2x - 3y + 6 = 0$ (2) $2x + 3y + 6 = 0$ (3) $2x - 3y - 6 = 0$ (4) $2x + 3y - 6 = 0$
82.	The slope of a line $ax + by + c = 0$ is : (1) a/b (2) $-a/b$ (3) c/b (4) $-c/b$
83.	A circle has a number of tangents equal to : (1) 0 (2) 1 (3) 2 (4) Infinite
84.	A tangent intersects the circle at : (1) One point (2) Two distinct point (3) At the circle (4) None of the above
85.	If the angle between two radii of a circle is 110°, then the angle between the tangents at the ends of the radii is : (1) 90° (2) 50° (3) 70° (4) 40°
86.	The value of $P(n, n-1)$ is : (1) n (2) $n!$ (3) $2n$ (4) $2n!$

Question No.	Questions
87.	The number of ways in which 8 students can be seated in a line is : (1) 5040 (2) 50400 (3) 40230 (4) 40320
88.	If ${}^{n}P_{5} = 60\ {}^{n-1}P_{3}$, the value of n is : (1) 6 (2) 10 (3) 12 (4) 16
89.	The number of squares that can be formed on a chessboard is : (1) 64 (2) 160 (3) 204 (4) 224
90.	The number of ways 4 boys and 3 girls can be seated in a row so that they are alternate is : (1) 12 (2) 104 (3) 144 (4) 256
91.	If A is a square matrix such that $A^2 = A$, then $(I-A)^3 + A$ is equal to : (1) I (2) 0 (3) I – A (4) I + A
92.	Total number of possible matrices of order 3×3 with each entry 2 or 0 is : (1) 9 (2) 27 (3) 81 (4) 512
93.	If A and B are two matrices of the order $3 \times m$ and $3 \times n$, respectively, and $m = n$, then the order of matrix $(5A-2B)$ is : (1) $m \times 3$ (2) 3×3 (3) $m \times n$ (4) $3 \times n$

Question No.	Questions
94.	For any two matrices A and B, we have : (1) $AB = BA$ (2) $AB \neq BA$ (3) $AB = O$ (4) None of the above
95.	If A and B are symmetric matrices of the same order, then $(AB' - BA')$ is a : (1) Skew symmetric matrix (2) Null matrix (3) Symmetric matrix (4) None of these
96.	If A is a skew-symmetric matrix, then A^2 is a : (1) Skew symmetric matrix (2) Symmetric matrix (3) Null matrix (4) Cannot be determined
97.	If A is a square matrix of order 3 and $\|A\| = 5$, then the value of $\|2A'\|$ is : (1) -10 (2) 10 (3) -40 (4) 40
98.	The area of triangle with vertices $(-3, 0)$, $(3, 0)$ and $(0, k)$ is 9 sq. units. The value of k will be : (1) 9 (2) 3 (3) -9 (4) 6
99.	Which of the following is correct? (1) Determinant is a square matrix. (2) Determinant is a number associated with a matrix. (3) Determinant is a number associated with a square matrix. (4) None of these
100.	The roots of $100x^2 - 20x + 1 = 0$ is : (1) 1/20 and 1/20 (2) 1/10 and 1/20 (3) 1/10 and 1/10 (4) None of the above

Question No.	Questions
	Section-C (Biology & Biotechnology)
101.	Humans have _____ joint between sternum and ribs. (1) Gliding (2) Angular (3) Cartilaginous (4) Fibrous
102.	The joint in our elbow is an example of : (1) Hinge joint (2) Ball and socket joint (3) Pivot joint (4) gliding joint
103.	Composition of bone marrow is _____. (1) Adipose tissue (2) Adipose, areolar tissue and blood (3) Adipose and areolar tissue (4) Adipose tissue and fibroblasts
104.	The formation of erythrocytes in foetus takes place in _____. (1) Red bone marrow (2) Sarcoplasm (3) Liver and spleen (4) Blood
105.	Nasal septum gets damaged. Its recovery requires cartilage known as _____. (1) Elastic cartilage (2) Fibrous cartilage (3) Calcified cartilage (4) Hyaline cartilage
106.	Which of the following hormones stimulates the production of pancreatic juice and bicarbonate? (1) Insulin and glucagon (2) Cholecystokinin and secretin (3) Gastrin and insulin (4) Angiotensin and epinephrine

Question No.	Questions
107.	The absorption of fructose by intestinal mucosa is : (1) Co-transport mechanism (2) Simple diffusion (3) Facilitated transport (4) Active transport
108.	The cranial nerve that regulates the heartbeat : (1) VII (2) VIII (3) IX (4) X
109.	Which of the following is another name for the third ventricle of the brain? (1) Diocoel (2) Paracoel (3) Rhinocoel (4) Metacoel
110.	Nissl's granules present in the neurons are made up of : (1) Protein (2) Ribosome (3) RNA (4) DNA
111.	The walls of the ventricles possess thick muscular projections, they are known as : (1) Conus arteriosus (2) Truncus arteriosus (3) Chordae tendineae (4) Columnae carneae
112.	The condensation of chromosomes is observed in _____. (1) Prophase 1 (2) Anaphase 1 (3) Metaphase 1 (4) None of the above
113.	Nuclear DNA replicates in the _____ phase. (1) G2 phase (2) M phase (3) S phase (4) None of the above

Question No.	Questions
114.	The stage which serves as connecting link between meiosis 1 and meiosis 2 : (1) Interphase 2 (2) Interphase 1 (3) Interkineses (4) None of the above
115.	The 10% energy transfer law of food chain was given by : (1) Tansley (2) Stanley (3) Weismann (4) Lindemann
116.	The mass of living material at a trophic level at a particular time is called : (1) Standing rate (2) Gross primary productivity (3) Standing crop (4) Net primary productivity
117.	Which of the following is the most stable ecosystem? (1) Desert (2) Ocean (3) Forest (4) Mountain
118.	The production of secondary metabolites requires the use of _____. (1) Meristem (2) Protoplast (3) Axillary buds (4) Cell suspension
119.	The pair of hormones required for a callus to differentiate are _____. (1) Ethylene and Auxin (2) Auxin and Cytokinin (3) Auxin and Abscisic acid (4) Cytokinin and Gibberellin
120.	The formation of embryoids from the pollen grains in the tissue culture medium is due to _____. (1) Organogenesis (2) Test tube culture (3) Double Fertilization (4) Cellular totipotency

Question No.	Questions
121.	The force that initiates evolution is _____. (1) Variation (2) Mutation (3) Extinction (4) Adaptation
122.	_____ is a vestigial organ. (1) Intestinal Villi (2) Papillae (3) Vermiform appendix (4) None of the above
123.	The earliest geological time period among the following is _____. (1) Cambrian (2) Permian (3) Jurassic (4) Quaternary
124.	The experiment that simulated conditions thought to be present on the early earth : (1) Hershey-Chase experiment (2) Geiger-Marsden experiment (3) Miller-Urey experiment (4) Schiehallion experiment
125.	The only connective tissue without fibroblasts is : (1) Areolar connective tissue (2) Bone (3) Cartilage (4) Blood
126.	In these tissue cells, Lacunae are enclosed : (1) Cartilage (2) Bone tissue (3) Both (1) and (2) (4) Muscular tissue
127.	Mast cells are linked to : (1) Neural tissue (2) Areolar connective tissue (3) Endocrine glands (4) Exocrine glands

Question No.	Questions
128.	These are brain macrophages : (1) Astrocytes (2) Microglial cells (3) Ependymal cells (4) Oligodendrocytes
129.	This is not a function of neuroglia : (1) Phagocytosis (2) Isolation of neurons (3) Secretion of cerebrospinal fluid (4) Information processing
130.	This plasma protein is responsible for blood coagulation : (1) Fibrinogen (2) Globulin (3) Serum amylase (4) Albumin

SET–"Y" (Total No. of printed pages : 21)

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

UG-4 Year-EE-June, 2026

(Public Health Sciences)

Sr. No. 10088

Code D

Time : 1¼ Hours **Total Questions : 130** **Max. Marks : 100**

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

Name : _____ Date of Birth : _____

Father's Name : _____ Mother's Name : _____

Date of Examination : _____

(Signature of the candidate) (Signature of the Invigilator)

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

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

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21.	_____ possesses the properties of both alkali metals and halogens. (1) Helium (2) Hydrogen (3) Sodium (4) Chlorine
22.	Which of the following is not a lanthanide property? (1) They are soft metals with a white silvery colour. (2) They tarnish rapidly by air. (3) The hardness increases with increase in the atomic number . (4) The melting point of the metal ranges from 500-1000K.
23.	Choose the process by which liquid hydrocarbons can be converted to gaseous hydrocarbons : (1) Hydrolysis (2) Oxidation (3) Cracking (4) Distillation
24.	Which one of the following halide can be used in the Friedel-Crafts reaction? (1) Isopropyl chloride (2) Bromobenzene (3) Chlorobenzene (4) Chloroethene

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29.	An aldehyde on reaction with primary amine forms : (1) Ketone (2) Schiff's base (3) Aromatic acid (4) Carboxylic acid
30.	Benzene-diazonium chloride on reaction with phenol in weakly basic medium gives : (1) Diphenyl ether (2) p-hydroxyazobenzene (3) Chlorobenzene (4) Benzene
31.	How quickly the work is done is known as : (1) Energy (2) Frequency (3) Power (4) All of the above

Question No.	Questions
32.	Which is the type of collision in which both the linear momentum and the Kinetic energy of the system remain conserved? (1) Inelastic` Collision (2) Elastic Collision (3) Destructive Collision (4) None of the options
33.	Force per unit length necessary to deform this interfacial surface is called : (1) Shear stress (2) Viscosity (3) Surface tension (4) All of the above
34.	The viscosity of most of the fluids we encounter in everyday life is : (1) Dependent on the applied external force. (2) Independent of the applied external force. (3) Proportional to the applied external force. (4) No relation with these forces
35.	The pressure at a point in a fluid will not be same in all directions when the fluid is _____. (1) Moving (2) Viscous (3) Viscous and static (4) Viscous and Moving
36.	The pressure at which a liquid is converted into vapours are known as : (1) Atmospheric pressure (2) Pressure (3) Vapour pressure (4) Gas pressure
37.	A fluid is defined as one which : (1) Cannot withstand shear (2) Can withstand shear (3) Deforms continuously when subjected to shear stress (4) Is solid like when there is no motion

Question No.	Questions
38.	Due to which forces the liquid surfaces to shrink in minimum surface area? (1) Shear stress (2) Viscosity (3) Surface tension (4) All of the above
39.	Name the mirror that can give an erect and enlarged image of an object : (1) Convexo Concave Mirror (2) Biconcave Mirror (3) Convex Mirror (4) Concave Mirror
40.	Why do we prefer a convex mirror as a rear-view mirror in vehicles? (1) Due to larger view (2) Due to clear view (3) Due to lesser view (4) Due to wider view
41.	The refractive index of diamond is 2.42. What is the meaning of this statement? (1) The speed of light will be reduced by 2.42 as compared to its speed in the air. (2) The speed of light will be increased by 2.42 as compared to its speed in the air. (3) Both of the above (4) None of the above
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48.	From where are the gamma rays originated? (1) The innermost shell of the nucleus (2) The outermost shell of the nucleus (3) Nucleus (4) The outermost shell of the atom

Question No.	Questions
49.	A nucleus undergoes gamma decay due to : (1) Excess of neutrons (2) Excess of protons (3) Its excited state (4) Large mass
50.	Which of the following are not emitted by radioactive substances? (1) Protons (2) Electrons (3) Gamma Rays (4) Helium Nuclei
51.	What is the normal BMI of a normal person? (1) Below 18.5 kg/m^2 (2) 18.5-24.9 kg/m^2 (3) 25-29.9 kg/m^2 (4) 30-34.9 kg/m^2
52.	Which of the following is a protein deficiency disease? (1) Kwashiorkor (2) Marasmus (3) Rickets (4) Scurvy
53.	Identify the vitamins which is deficient in alcoholics : (1) Vitamin B1 (2) Vitamin B2 (3) Vitamin B3 (4) Vitamin B12
54.	Which of the following vitamin is responsible for the maturation of RBCs? (1) Vitamin B6 (2) Vitamin B5 (3) Vitamin B3 (4) Vitamin B12
55.	Polycystic Ovary Syndrome (PCOS) has been officially renamed : (1) Polycystic Ovary Disease (PCOD) (2) Poly Ovary with Cystic Disease (POCD) (3) Polyendocrine Metabolic Ovarian Syndrome (PMOS) (4) None of the above

Question No.	Questions
56.	Which of the following is mainly prevalent in pregnant women? (1) Anemia (2) Typhoid (3) Depression (4) Hypertension
57.	Color Blind patients are not able to differentiate mainly : (1) White and Black (2) Black and Blue (3) Blue and Green (4) Red and Green
58.	Personalized medicines are also known as : (1) Orphan medicine (2) Precision medicine (3) Rare medicines (4) None of the above
59.	If a female experiences early menarche, this will increase the risk of : (1) Lung Cancer (2) Oral Cancer (3) Breast Cancer (4) Cervical Cancer
60.	The feeling of hopelessness, helplessness, suicide and poor sleep are the symptoms of : (1) Anxiety (2) Tension (3) Hypertension (4) Depression
61.	Which of the following elements has the lowest first ionization enthalpy? (1) Nitrogen (2) Oxygen (3) Carbon (4) Boron
62.	As you move from top to bottom in a group, which of the following properties generally decreases? (1) Atomic radius (2) Metallic character (3) Electronegativity (4) Electropositive character

Question No.	Questions
63.	In the modern periodic table, the number of period of the element is the same as : (1) Principal quantum number (2) Atomic number (3) Azimuthal quantum number (4) Atomic mass
64.	The correct order of electronegativity is : (1) $Cl > F > O > Br$ (2) $F > O > Cl > Br$ (3) $F > Cl > Br > O$ (4) $O > F > Cl > Br$
65.	Which one is the most acidic among these? (1) MgO (2) CaO (3) Al_2O_3 (4) Na_2O
66.	The bond angle around atom which uses sp^2 hybridization is _____ (1) 120° (2) 180° (3) 107° (4) $109^\circ . 28'$
67.	Which one of them is the weakest? (1) Ionic bond (2) Covalent bond (3) Metallic bond (4) van der Waals force
68.	Which of the following substances has a dipole moment more than zero? (1) Water (2) Methane (3) Carbon dioxide (4) Nitrogen
69.	Which of the following molecules have trigonal planar geometry? (1) BF_3 (2) NH_3 (3) PCl_3 (4) IF_3
70.	As an electroplated protective covering, what metal is used? (1) Plutonium (2) Chromium (3) Nickel (4) Iron

Question No.	Questions
	Section-B (Mathematics)
71.	The value of $P(n, n-1)$ is : (1) n (2) $n!$ (3) $2n$ (4) $2n!$
72.	The number of ways in which 8 students can be seated in a line is : (1) 5040 (2) 50400 (3) 40230 (4) 40320
73.	If ${}^{n}P_5 = 60\,{}^{n-1}P_3$, the value of n is : (1) 6 (2) 10 (3) 12 (4) 16
74.	The number of squares that can be formed on a chessboard is : (1) 64 (2) 160 (3) 204 (4) 224
75.	The number of ways 4 boys and 3 girls can be seated in a row so that they are alternate is : (1) 12 (2) 104 (3) 144 (4) 256
76.	The equation of a straight line that passes through the point (3, 4) and perpendicular to the line $3x + 2y + 5 = 0$ is : (1) $2x - 3y + 6 = 0$ (2) $2x + 3y + 6 = 0$ (3) $2x - 3y - 6 = 0$ (4) $2x + 3y - 6 = 0$
77.	The slope of a line $ax + by + c = 0$ is : (1) a/b (2) $-a/b$ (3) c/b (4) $-c/b$

Question No.	Questions
78.	A circle has a number of tangents equal to : (1) 0 (2) 1 (3) 2 (4) Infinite
79.	A tangent intersects the circle at : (1) One point (2) Two distinct point (3) At the circle (4) None of the above
80.	If the angle between two radii of a circle is 110°, then the angle between the tangents at the ends of the radii is : (1) 90° (2) 50° (3) 70° (4) 40°
81.	If $\alpha \leq 2\sin^{-1}x + \cos^{-1}x \leq \beta$, then : (1) $\alpha = -\pi/2, \beta = \pi/2$ (2) $\alpha = 0, \beta = \pi$ (3) $\alpha = -\pi/2, \beta = 3\pi/2$ (4) $\alpha = 0, \beta = 2\pi$
82.	The value of $\sin(2\tan^{-1}(.75))$ is equal to : (1) .75 (2) 1.5 (3) .96 (4) sin 1.5
83.	Two lines are said to be perpendicular if the product of their slope is equal to : (1) −1 (2) 0 (3) 1 (4) $^1/_2$
84.	What is the distance of (5, 12) from the origin? (1) 5 units (2) 8 units (3) 12 units (4) 13 units
85.	Two lines are said to be parallel if the difference of their slope is : (1) −1 (2) 0 (3) 1 (4) None of these

Question No.	Questions
86.	If A is a square matrix such that $A^2 = A$, then $(I-A)^3 + A$ is equal to : (1) I (2) 0 (3) I – A (4) I + A
87.	Total number of possible matrices of order 3 × 3 with each entry 2 or 0 is : (1) 9 (2) 27 (3) 81 (4) 512
88.	If A and B are two matrices of the order 3 × m and 3 × n, respectively, and m = n, then the order of matrix (5A–2B) is : (1) m × 3 (2) 3 × 3 (3) m × n (4) 3 × n
89.	For any two matrices A and B, we have : (1) AB = BA (2) AB ≠ BA (3) AB = O (4) None of the above
90.	If A and B are symmetric matrices of the same order, then (AB′ – BA′) is a : (1) Skew symmetric matrix (2) Null matrix (3) Symmetric matrix (4) None of these
91.	If A is a skew-symmetric matrix, then A^2 is a : (1) Skew symmetric matrix (2) Symmetric matrix (3) Null matrix (4) Cannot be determined
92.	If A is a square matrix of order 3 and $\|A\| = 5$, then the value of $\|2A'\|$ is : (1) –10 (2) 10 (3) –40 (4) 40

Question No.	Questions
93.	The area of triangle with vertices $(-3, 0)$, $(3, 0)$ and $(0, k)$ is 9 sq. units. The value of k will be : (1) 9 (2) 3 (3) -9 (4) 6
94.	Which of the following is correct? (1) Determinant is a square matrix. (2) Determinant is a number associated with a matrix. (3) Determinant is a number associated with a square matrix. (4) None of these
95.	The roots of $100x^2 - 20x + 1 = 0$ is : (1) 1/20 and 1/20 (2) 1/10 and 1/20 (3) 1/10 and 1/10 (4) None of the above
96.	The sum of two numbers is 27 and product is 182. The numbers are : (1) 12 and 13 (2) 13 and 14 (3) 12 and 15 (4) 13 and 24
97.	$\sin[\pi/3 - \sin^{-1}(-1/2)]$ is equal to : (1) $1/2$ (2) $1/3$ (3) -1 (4) 1
98.	The domain of $\sin^{-1}(2x)$ is : (1) $[0, 1]$ (2) $[-1, 1]$ (3) $[-1/2, 1/2]$ (4) $[-2, 2]$
99.	Which of the following is the principal value branch of $\cos^{-1}x$? (1) $[-\pi/2, \pi/2]$ (2) $(0, \pi)$ (3) $[0, \pi]$ (4) $(0,\pi) - \{\pi/2\}$
100.	The value of the expression $\sin[\cot^{-1}(\cos(\tan^{-1}1))]$ is : (1) 0 (2) 1 (3) $1/\sqrt{3}$ (4) $\sqrt{(2/3)}$

Question No.	Questions
	Section-C (Biology & Biotechnology)
101.	The mass of living material at a trophic level at a particular time is called : (1) Standing rate (2) Gross primary productivity (3) Standing crop (4) Net primary productivity
102.	Which of the following is the most stable ecosystem? (1) Desert (2) Ocean (3) Forest (4) Mountain
103.	The production of secondary metabolites requires the use of _____. (1) Meristem (2) Protoplast (3) Axillary buds (4) Cell suspension
104.	The pair of hormones required for a callus to differentiate are _____. (1) Ethylene and Auxin (2) Auxin and Cytokinin (3) Auxin and Abscisic acid (4) Cytokinin and Gibberellin
105.	The formation of embryoids from the pollen grains in the tissue culture medium is due to _____. (1) Organogenesis (2) Test tube culture (3) Double Fertilization (4) Cellular totipotency
106.	The walls of the ventricles possess thick muscular projections, they are known as : (1) Conus arteriosus (2) Truncus arteriosus (3) Chordae tendineae (4) Columnae carneae
107.	The condensation of chromosomes is observed in _____. (1) Prophase 1 (2) Anaphase 1 (3) Metaphase 1 (4) None of the above

Question No.	Questions
108.	Nuclear DNA replicates in the _____ phase. (1) G2 phase (2) M phase (3) S phase (4) None of the above
109.	The stage which serves as connecting link between meiosis 1 and meiosis 2 : (1) Interphase 2 (2) Interphase 1 (3) Interkineses (4) None of the above
110.	The 10% energy transfer law of food chain was given by : (1) Tansley (2) Stanley (3) Weismann (4) Lindemann
111.	Humans have _____ joint between sternum and ribs. (1) Gliding (2) Angular (3) Cartilaginous (4) Fibrous
112.	The joint in our elbow is an example of : (1) Hinge joint (2) Ball and socket joint (3) Pivot joint (4) gliding joint
113.	Composition of bone marrow is _____. (1) Adipose tissue (2) Adipose, areolar tissue and blood (3) Adipose and areolar tissue (4) Adipose tissue and fibroblasts
114.	The formation of erythrocytes in foetus takes place in _____. (1) Red bone marrow (2) Sarcoplasm (3) Liver and spleen (4) Blood

Question No.	Questions
115.	Nasal septum gets damaged. Its recovery requires cartilage known as _____. (1) Elastic cartilage (2) Fibrous cartilage (3) Calcified cartilage (4) Hyaline cartilage
116.	The force that initiates evolution is _____. (1) Variation (2) Mutation (3) Extinction (4) Adaptation
117.	_____ is a vestigial organ. (1) Intestinal Villi (2) Papillae (3) Vermiform appendix (4) None of the above
118.	The earliest geological time period among the following is _____. (1) Cambrian (2) Permian (3) Jurassic (4) Quaternary
119.	The experiment that simulated conditions thought to be present on the early earth : (1) Hershey-Chase experiment (2) Geiger-Marsden experiment (3) Miller-Urey experiment (4) Schiehallion experiment
120.	The only connective tissue without fibroblasts is : (1) Areolar connective tissue (2) Bone (3) Cartilage (4) Blood
121.	In these tissue cells, Lacunae are enclosed : (1) Cartilage (2) Bone tissue (3) Both (1) and (2) (4) Muscular tissue

Question No.	Questions
122.	Mast cells are linked to : (1) Neural tissue (2) Areolar connective tissue (3) Endocrine glands (4) Exocrine glands
123.	These are brain macrophages : (1) Astrocytes (2) Microglial cells (3) Ependymal cells (4) Oligodendrocytes
124.	This is not a function of neuroglia : (1) Phagocytosis (2) Isolation of neurons (3) Secretion of cerebrospinal fluid (4) Information processing
125.	This plasma protein is responsible for blood coagulation : (1) Fibrinogen (2) Globulin (3) Serum amylase (4) Albumin
126.	Which of the following hormones stimulates the production of pancreatic juice and bicarbonate? (1) Insulin and glucagon (2) Cholecystokinin and secretin (3) Gastrin and insulin (4) Angiotensin and epinephrine
127.	The absorption of fructose by intestinal mucosa is : (1) Co-transport mechanism (2) Simple diffusion (3) Facilitated transport (4) Active transport

Question No.	Questions
128.	The cranial nerve that regulates the heartbeat : (1) VII (2) VIII (3) IX (4) X
129.	Which of the following is another name for the third ventricle of the brain? (1) Diocoel (2) Paracoel (3) Rhinocoel (4) Metacoel
130.	Nissl's granules present in the neurons are made up of : (1) Protein (2) Ribosome (3) RNA (4) DNA

Answer keys of Bachelor of Public Health Sciences entrance test dated 10.06.2026				
Q. No.	A	B	C	D
1	2	1	3	2
2	1	2	2	2
3	1	4	3	2
4	4	3	2	1
5	3	1	4	1
6	1	3	3	2
7	4	1	3	2
8	2	3	3	2
9	3	2	4	3
10	4	2	4	4
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45	3	1	1	1
46	1	2	2	1
47	4	1	2	3
48	1	2	2	3
49	1	2	3	3
50	2	2	4	1

Deepak 10/6/26

10/6/26

Answer keys of Bachelor of Public Health Sciences entrance test dated 10.06.2026				
Q. No.	A	B	C	D
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53	3	2	4	1
54	1	1	3	4
55	1	1	1	3
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57	1	2	1	4
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96	2	2	2	2
97	4	3	4	4
98	2	1	2	3
99	2	4	3	3
100	3	2	3	4

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10/6/26

10/6/26

Answer keys of Bachelor of Public Health Sciences entrance test dated 10.06.2026				
Q. No.	A	B	C	D
101	1	4	3	3
102	3	1	1	2
103	1	3	2	4
104	3	3	3	2
105	4	4	4	4
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125	4	2	4	1
126	3	3	3	2
127	2	1	2	3
128	4	2	2	4
129	2	3	4	1
130	4	4	1	2

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10/6/26

10/6/26