09/7/19

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(NOT TO BE OPENED BEFORE TIME OR TILL ASKED TO DO SO)

(BPH–EE–2019)

10159

Code C

Sr. No._____

SET–"Z"

Time : 1¼ Hours (75 minutes) Total Questions : 130 Max. Marks : 100

Candidate's Name : _____ Date of Birth : _____

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

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

Date of Examination : _____

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

CANDIDATES MUST READ THE FOLLOWING INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER & FOLLOW THEM.

1. **All questions under Part–A and Part–B are compulsory. Part–C is optional. The candidates may attempt either Optional Part–C (i) OR Option Part–C(ii). All questions carry equal marks i.e. one mark each.**
2. The candidate MUST return this question book-let and the OMR Answer-She to the Invigilator concerned before leaving the Examination Hall, failing which a cas of use of unfair-means / misbehaviour will be registered against him / her, in addition t lodging of an FIR with the police. Further the answer-sheet of such candidate will nc be evaluated.
3. 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.
4. 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.
5. Question Booklet along-with answer key of all the A,B,C and D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint 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.
6. **Use only Blue or Black <u>BALL POINT PEN</u> of good quality in the OMR Answer-Sheet.**
7. **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.**
8. BEFORE ANSWERING THE QUESTIONS, THE CANDIDATES SHOULD ENSURE THAT THEY HAVE BEEN SUPPLIED CORRECT AND COMPLETE QUESTION BOOK-LETS. COMPLAINTS, IF ANY, REGARDING MISPRINTING ETC. WILL NOT BE ENTERTAINED 30 MINUTES AFTER THE START OF EXAMINATION.

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Question No.	Questions
	Part–A (Physics)
1.	Lenz's law in electromagnetic induction follows law of conservation of (1) Charge (2) Energy (3) Linear momentum (4) Angular momentum
2.	Resistance offered by a Capacitor to D.C. is (1) zero (2) negative (3) positive (4) infinite
3.	Mechanical analogue of inductance is (1) Displacement (2) Velocity (3) Energy (4) Mass
4.	The classification of Electromagnetic spectrum is roughly based upon (1) How the waves are produced (2) How the waves are detected (3) Both (1) and (2) (4) Wavelength of waves
5.	If the atmosphere of earth suddenly disappears then duration of day will (1) Increase by 4 minutes (2) Decrease by 4 minutes (3) No change (4) Can't be predicted

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Question No.	Questions
6.	Two iron spheres, A (a solid sphere) and B (a hollow sphere), are charged to same potential. Which of the two hold more energy ? (1) A (2) B (3) Both have same (4) Can't be predicted
7.	Two bulbs A and B of 25 watt and 100 watt, respectively, rated at 220 V, are connected in series with a supply of 440 V. Which bulb will fuse ? (1) A (2) B (3) Both will fuse (4) None will fuse
8.	When a charge particle moves through a magnetic field, it may suffer a change in (1) Energy (2) Mass (3) Speed (4) Velocity
9.	Two electrons are moving parallel to each other in free space, then the force between them will be (1) Attractive (2) Repulsive (3) No force (4) Can't say anything
10.	Current used for electrolysis is (1) D.C. (2) A.C. (3) Both of these (4) None of these

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Question No.	Questions
11.	A sample of oxygen and a sample of hydrogen have same mass, volume and pressure. The ratio of their absolute temperature is (1) 1/16 (2) 1/4 (3) 4 (4) 16
12.	The internal energy of a gas will increase when it (1) Expands adiabatically (2) Is compressed adiabatically (3) Expands isothermally (4) Is compressed isothermally
13.	If the absolute temperature of a perfect black body be doubled, then the quantity of heat radiated per second increases by (1) Two times (2) Four times (3) Eight times (4) Sixteen times
14.	The time period of a particle undergoing S.H.M. is 16 s. It starts its motion from mean position. After 2 s, its velocity is 0.4 ms^{-1}, the amplitude is (1) 2.88 m (2) 1.44 m (3) 0.72 m (4) 0.36 m
15.	The speed of wave represented by $y = A \sin(\omega - kx)$ is (1) k/ω (2) ω/k (3) ωk (4) $1/\omega k$

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Question No.	Questions
16.	A small insect enters the eye of person riding a bike, the person then applies sudden brakes to his bike without rubbing his eye and he found that the small insect got out of his eye. By which law of physics the small insect got out of eye (1) Newton's third law of motion (2) Newton's second law of motion (3) Newton's first law of motion (4) Newton's law of Gravitation
17.	Two bodies with masses m_1 and m_2 ($m_1 > m_2$) are joined by a massless string passing over fixed pulley. The centres of gravity of the two masses are initially at same height. Assume the pulley to be weightless. Then the downward acceleration of mass m_1 is (1) $\frac{m_1}{m_1+m_2}g$ (2) $\frac{m_2}{m_1+m_2}g$ (3) $\frac{m_1-m_2}{m_1+m_2}g$ (4) $\left[\frac{m_1-m_2}{m_1+m_2}\right]^2 g$
18.	A block of mass 1 kg lies on a horizontal surface in a truck. The coefficient of static friction between the block and the surface is 0.6. If the acceleration of truck is 5 ms^{-2}, the frictional force acting on the block is (1) 4 N (2) 5 N (3) 6 N (4) 10 N
19.	Two balls of different mass have same kinetic energy. The ball having greater momentum will be (1) Heavier one (2) Lighter one (3) Both have same (4) Can't say
20.	The moment of inertia of a ring of mass M and radius R about an axis through the diameter in its plane will be (1) $0.5\,MR^2$ (2) MR^2 (3) $1.5\,MR^2$ (4) $2\,MR^2$

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Question No.	Questions
21.	The strength of Weak nuclear force relative to Electromagnetic force is of the order of (1) 10^{-13} (2) 10^{-11} (3) 10^{13} (4) 10^{11}
22.	*Parsec* is unit of (1) Mass (2) Length (3) Time (4) Frequency
23.	If radius of earth contracts by 2% of its actual value and mass of earth remains same then the acceleration due to gravity will (1) Decrease by 2% (2) Decrease by 4% (3) Increase by 2% (4) Increase by 4%
24.	The position of an object moving along X-axis is given by $x = A + Bt^2$, where A = 10 m, B = 2.5 ms^{-2}, and t is measured in seconds. The average velocity of this object between t = 1 s and t = 3 s is (1) 10 ms^{-1} (2) 15 ms^{-1} (3) 20 ms^{-1} (4) 25 ms^{-1}
25.	A ball is thrown at a speed 28 ms^{-1} in a direction 30° above the horizontal. The maximum height attained by the ball will be (1) 25 m (2) 20 m (3) 10 m (4) 5 m

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Question No.	Questions
26.	The blue colour of sky is due to (1) Reflection of light (2) Refraction of light (3) Scattering of light (4) Diffraction of light
27.	If two coherent sources of intensity ratio 25:1 interfere, then the ratio of intensity of maxima and minima in the interference pattern will be (1) 3:2 (2) 9:4 (3) 5:1 (4) 25:1
28.	Nuclear force between two nucleons depends on their (1) Mass (2) Charge (3) Spin (4) Both (2) and (3)
29.	Charge on a n-type semiconductor is (1) Zero (2) Negative (3) Positive (4) 10^{-6} coulomb
30.	If a zener diode has 9.1 V break down voltage with a maximum power dissipation of 273 mW, then maximum current that can pass through zener diode is (1) 40 mA (2) 30 mA (3) 20 mA (4) 10 mA

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Question No.	Questions
31.	A thin uniform circular discuss rolling down an inclined plane of inclination 30° without slipping. Its linear acceleration along the plane is (1) g/4 (2) g/3 (3) g/2 (4) 2g/3
32.	A projectile, fired vertically upwards with a speed v escapes from the earth. If it is to be fired at 45° to the horizontal, what should be its speed so that it escapes from the earth ? (1) v (2) $v/\sqrt{2}$ (3) $\sqrt{2}\,v$ (4) 2v
33.	Which of the following substances has negligible elastic fatigue ? (1) glass (2) copper (3) quartz (4) silver
34.	The modulus of rigidity of water is (1) zero (2) 1 (3) 81 (4) infinite
35.	The surface tension does not depend upon (1) Nature of liquid (2) Temperature (3) Presence of impurity (4) Atmospheric Pressure

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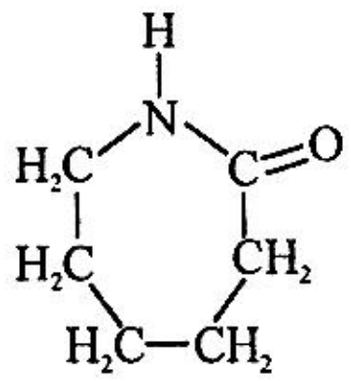
Question No.	Questions
	Part–B (Chemistry)
36.	Electrolytic reduction of nitrobenzene in weakly acidic medium gives : (1) Aniline (2) Nitosobenzene (3) N-phenylhydroxylamine (4) p-hydroxyaniline
37.	The efficiency of fuel cell is given by (1) $\frac{\Delta G}{\Delta S}$ (2) $\frac{\Delta G}{\Delta H}$ (3) $\frac{\Delta S}{\Delta G}$ (4) $\frac{\Delta H}{\Delta G}$
38.	Thymine is : (1) 5-methyluracil (2) 4-methyluracil (3) 3-methyluracil (4) 1-methyluracil
39.	If the rate of the reaction is equal to the rate constant, the order of the reaction is (1) 0 (2) 1 (3) 2 (4) 3
40.	Which of the following polymer can be formed by using the following monomer unit ?  (1) Nylon 6, 6 (2) Nylon 2-nylon 6 (3) Melamine polymer (4) Nylon-6

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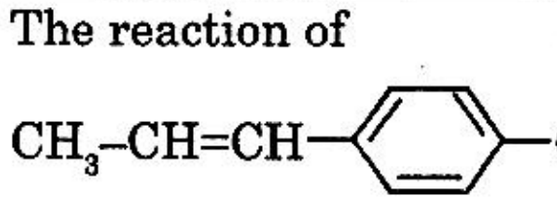
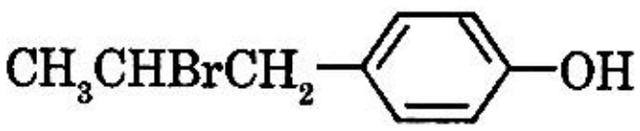
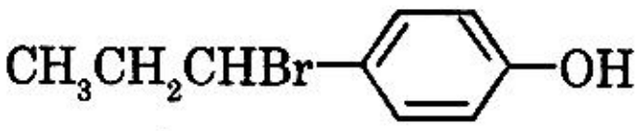
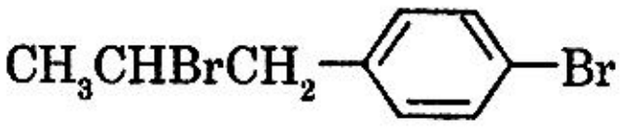
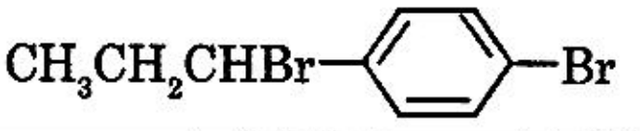
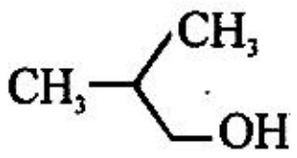
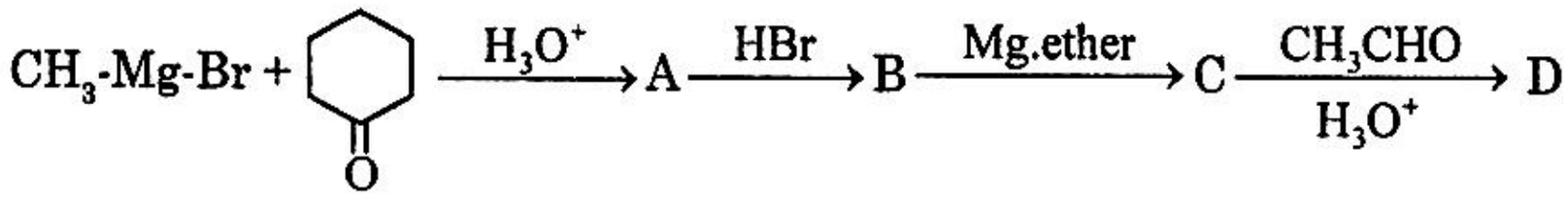
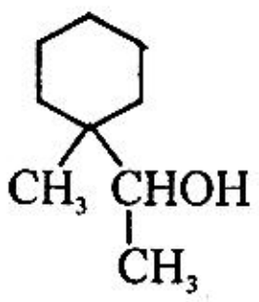
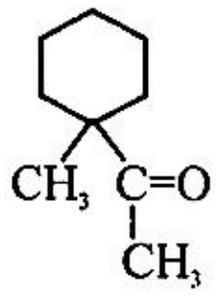
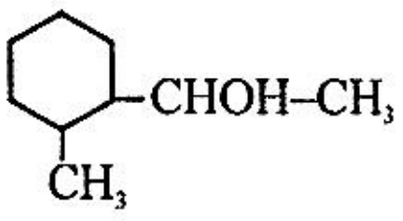
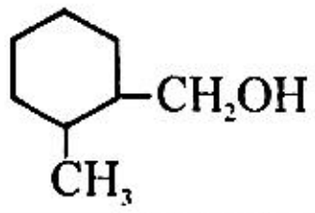
Question No.	Questions
41.	The reaction of  with HBr gives : (1)  (2)  (3)  (4) 
42.	Among the following the one that gives positive Idoform test upon reaction with I_2 and NaOH is : (1) $CH_3CH_2CH(OH)CH_2CH_3$ (2) $C_6H_5CH_2CH_2OH$ (3)  (4) $PhCHOHCH_3$
43.	In the following sequence of reaction, identify the final product :  (1)  (2)  (3)  (4) 

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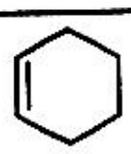
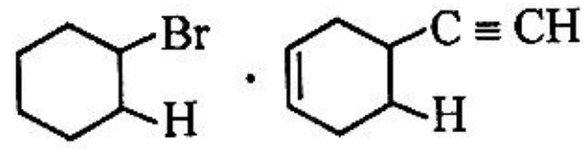
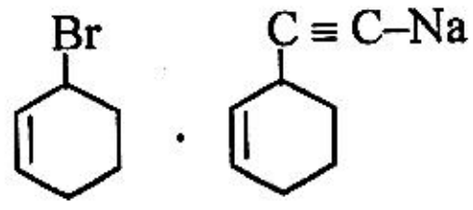
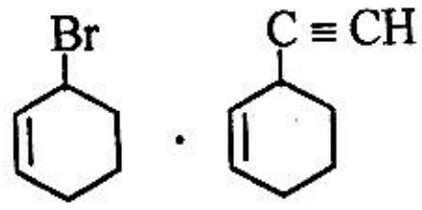
Question No.	Questions
44.	The correct order of increasing acidic strength is - (1) Phenol < Ethanol < Chloroacetic acid < Acetic acid (2) Ethanol < Phenol < Chloroacetic acid < Acetic acid (3) Ethanol < Phenol < Acetic acid < Chloroacetic acid (4) Chloroacetic acid < Acetic acid < Phenol < Ethanol
45.	Among the following which one does not act as an intermediate in Hofmann rearrangement ? (1) RNCO (2) RCON: (3) RCON:HBr (4) RNC
46.	Which alkene on ozonolysis gives CH_3CH_2CHO and CH_3COCH_3 ? (1) $CH_3CH_2CH=C(CH_3)_2$ (2) $CH_3CH_2CH=CHCH_2CH_3$ (3) $CH_3CH_2CH=CHCH_3$ (4) $CH_3C(CH_3)=CHCH_3$
47.	 $\xrightarrow{NBS}$ A $\xrightarrow{NaC\equiv CH}$ B , what are A and B : (1)  (2)  (3)  (4) None of them

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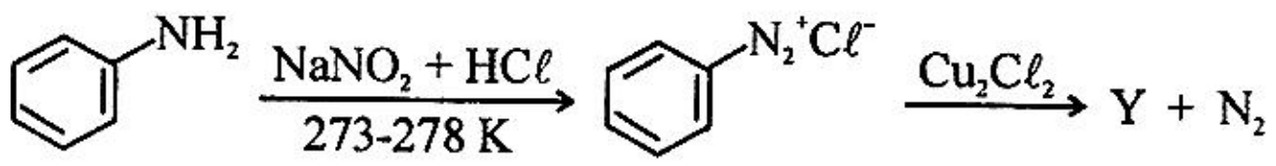
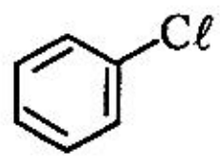
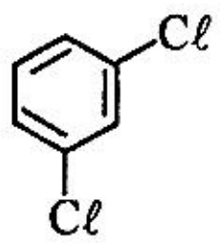
Question No.	Questions
48.	Identify the compound Y in the following reaction :  (1)  (2) (3)  (4)
49.	Which reagent will you use for the following reaction ? $CH_3CH_2CH_2CH_3 \rightarrow CH_3CH_2CH_2CH_2C\ell + CH_3CH_2CHC\ell CH_3$ (1) $C\ell_2$ / UV light (2) $NaC\ell + H_2SO_4$ (3) $C\ell_2$ gas in dark (4) $C\ell_2$ gas in the presence of iron in dark
50.	In the following sequence of reaction : $CH_3CH_2OH \xrightarrow{P+I_2} A \xrightarrow[Ether]{Mg} B \xrightarrow{HCHO} C \xrightarrow{H_2O} D$ The compound D is : (1) Butanal (2) n- butyl alcohol (3) n- propyl alcohol (4) Propanal

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Question No.	Questions
51.	The term that accounts for intramolecular force in van der Waal's equation for non-ideal gas is (1) RT (2) $V - b$ (3) $P + \frac{a}{V^2}$ (4) $(RT)^{-1}$
52.	Which one of the following is not applicable to the phenomena of absorption (1) $\Delta H > 0$ (2) $\Delta G < 0$ (3) $\Delta S < 0$ (4) $\Delta H < 0$
53.	Which one of the following is a positively charged sol (1) Gold sol (2) As_2S_3 sol (3) Methylene blue sol (4) Gelatin
54.	What is the normality of 1 M H_3PO_2 solution ? (1) 0.5 N (2) 1.0 N (3) 2.0 N (4) 3.0 N
55.	A cricket ball 0.5 Kg is moving with a velocity of 100 ms^{-1}. The wavelength associated with its motion is : (1) 1/100 cm (2) 6.6×10^{-34} m (3) 1.32×10^{-35} m (4) 6.6×10^{-28} m

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Question No.	Questions
56.	25 mL of a solution of $Ba(OH)_2$ on titration with 0.1 M solution of $HC\ell$ gave a titre value of 35 mL. The molarity of barium hydroxide solution was (1) 0.07 (2) 0.14 (3) 0.28 (4) 0.35
57.	Identify the least stable among the following : (1) Li^- (2) Be^- (3) B^- (4) C^-
58.	The correct order of size among $C\ell$, $C\ell^+$ and $C\ell^-$ is (1) $C\ell^+ < C\ell^- < C\ell$ (2) $C\ell^+ > C\ell^- > C\ell$ (3) $C\ell^+ < C\ell < C\ell^-$ (4) $C\ell^- < C\ell < C\ell^+$
59.	The geometry of $C\ell O_4^-$ ion is : (1) Pyramidal (2) Tetrahedral (3) Trigonal Planar (4) Trigonal bipyramidal
60.	The number of orbitals in a subshell is equal to (1) $2\ell - 1$ (2) 2ℓ (3) ℓ^2 (4) $2\ell + 1$

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Question No.	Questions
61.	Which of the following is not a target molecule for drug function in body ? (1) Carbohydrates (2) Lipids (3) Vitamins (4) Proteins
62.	The pollutants released by jet aeroplane in the atmosphere as fluorocarbons are called (1) Photochemical oxidants (2) Photochemical reductants (3) Aerosols (4) Physical pollutants
63.	Which of the following pairs has the same size ? (1) Zn^{2+}, Hf^{4+} (2) Fe^{2+}, Ni^{2+} (3) Zr^{4+}, Ti^{4+} (4) Zr^{4+}, Hf^{4+}
64.	The coordination number and oxidation state number of Cr in $K_3Cr(C_2O_4)_3$ are respectively (1) 3 and + 3 (2) 3 and 0 (3) 6 and + 3 (4) 4 and + 2
65.	Ionic solids, with Schottky defects, contain in their structure (1) Cation vacancies only (2) Cation vacancies and interstitial cations (3) Equal number of cation and anion vacancies (4) Anion vacancies and interstitial anions

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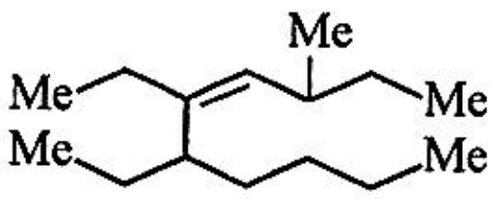
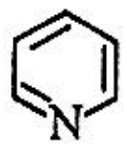
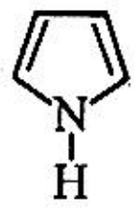
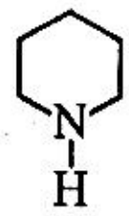
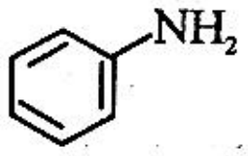
Question No.	Questions
66.	Ortho and para hydrogen differ in (1) atomic number (2) mass number (3) electron spin in two atoms (4) nuclear spin in two atoms
67.	Which of the following carbonates is least stable (1) $MgCO_3$ (2) Na_2CO_3 (3) K_2CO_3 (4) Rb_2CO_3
68.	The IUPAC name of the  Structure is : (1) 2,4,5-triethyl-3-nonene (2) 5,6-diethyl-3-methyl-4-decene (3) 2,4,6-triethyl-3-octene (4) 3-ethyl-5-methyl-3-heptene
69.	The strongest base among the following is : (1)  (2)  (3)  (4) 
70.	The number of σ-and Π-bonds present in pent-4-ene-1-yne is : (1) 10, 3 (2) 4, 9 (3) 3, 10 (4) 9, 4

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Question No.	Questions
	Part–C {Opt. (i)} (Mathematics)
71.	The largest value of a third order determinant whose elements are 0 or 1 is : (1) 3 (2) 2 (3) 1 (4) 0
72.	The set of all points, where the function $f(x) = \frac{x}{1+\|x\|}$ is differentiable is : (1) $(0, \infty)$ (2) $(-\infty, \infty)$ (3) $(-\infty, 0) \cup (0, \infty)$ (4) None of these
73.	The function f (x) is defined by $f(x) = \begin{cases} \frac{\|x+2\|}{\tan^{-1}(x+2)}, & x \neq -2 \\ 2, & x = -2 \end{cases}$, then f (x) is : (1) continuous at $x = -2$ (2) differentiable at $x = -2$ (3) not continuous at $x = -2$ (4) continuous but not derivable at $x = -2$
74.	If $\int \frac{\cos 4x + 1}{\cot x - \tan x} dx = A \cos 4x + B$, then (1) $A = -1/8$ (2) $A = -1/4$ (3) $A = -1/2$ (4) -1

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Question No.	Questions
75.	The area of the figure bounded by $y = \sin x$, $y = \cos x$ in the first quadrant is : (1) $2(\sqrt{2}-1)$ (2) $\sqrt{3}+1$ (3) $2(\sqrt{3}-1)$ (4) None of these
76.	The one which is the measure of central tendency is : (1) co-efficient of correlation (2) standard deviation (3) mean deviation (4) mode
77.	If S be a finite set containing n elements. The the total number of binary operations on S is : (1) n^n (2) 2^{n^2} (3) n^2 (4) n^{n^2}
78.	The solution of the equation $\tan^{-1}(1+x) + \tan^{-1}(1-x) = \pi/2$ is : (1) $x = 1$ (2) $x = -1$ (3) $x = 0$ (4) $x = \pi$
79.	If $A = [a \quad b]$, $B = [-b \quad -a]$ and $C = \begin{bmatrix} a \\ -a \end{bmatrix}$, then the correct statement is : (1) $A = -B$ (2) $A + B = A - B$ (3) $AC = BC$ (4) $CA = CB$

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Question No.	Questions
80.	The value of λ and μ for which the system of equations $x + y + z = 6$, $x + 2y + 3z = 10$ and $x + 2y + \lambda z = \mu$ have unique solution are : (1) $\lambda \neq 3, \mu \in R$ (2) $\lambda = 3, \mu = 10$ (3) $\lambda \neq 3, \mu = 10$ (4) $\lambda \neq 3, \mu \neq 10$
81.	Area of the triangle formed by 3 complex numbers $1 + i$, $i - 1$, $2i$ in the Argand plane is (1) $\frac{1}{2}$ (2) 1 (3) $\sqrt{2}$ (4) 2
82.	If the equations $2x^2 + kx - 5 = 0$ and $x^2 - 3x - 4 = 0$ have one root in common, then the value of k is : (1) 3 (2) -3 (3) 4 (4) None of these
83.	The solution of the equation $1 + \lvert x - 1 \rvert \geq 0$ is : (1) $(-\infty, 0)$ (2) $(-2, 0)$ (3) $(0, \infty)$ (4) $(0, 2)$
84.	12 persons are to be arranged to a round table. If two particular persons among them are not to be side by side, the total number of arrangements is : (1) 9 (10 !) (2) 2 (10 !) (3) 2 (11 !) (4) 10 !
85.	The positive integer just greater than $(1 + 0.0001)^{10000}$ is (1) 3 (2) 4 (3) 5 (4) None of these

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Question No.	Questions
86.	If A and B are any two sets, then $A - B \neq$ (1) $B \cap A'$ (2) $A \cap B'$ (3) $(A' \cup B)'$ (4) None of these
87.	Let R be the relation of the set R of all real numbers defined by aRb iff $\|a - b\| \leq 1$. Then R is (1) reflexive and symmetric (2) symmetric only (3) transitive only (4) anti-symmetric only
88.	If $f(x) = \frac{x-1}{x+1}$, then $f\left(\frac{1}{f(x)}\right)$ equals : (1) 0 (2) 1 (3) x (4) $1/x$
89.	Which of the following is correct ? (1) $\sin 1^\circ > \sin 1$ (2) $\sin 1^\circ < \sin 1$ (3) $\sin 1^\circ = \sin 1$ (4) $\sin 1^\circ = \frac{\pi}{180} \sin 1$.
90.	The cube roots of unity lie on a circle (1) $\|z - 1\| = 1$ (2) $\|z + 1\| = 1$ (3) $\|z\| = 1$ (4) None of these

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Question No.	Questions
91.	The order of the differential equation whose solution is $y = a \cos x + b \sin x + c\, e^{-x}$ is (1) 2 (2) 1 (3) 3 (4) None of these
92.	If $\vec{r} = x\hat{i} + y\hat{j} + z\hat{k}$, then value of $(\vec{r}.\hat{i})\hat{i} + (\vec{r}.\hat{j})\hat{j} + (\vec{r}.\hat{k})\hat{k}$ is (1) 0 (2) $3\vec{r}$ (3) $8\vec{r}$ (4) $\vec{r}$
93.	The vectors $2\hat{i} + 3\hat{j} - 4\hat{k}$ and $a\hat{i} + b\hat{j} + c\hat{k}$ are perpendicular when : (1) $a = 2, b = 3, c = 4$ (2) $a = 4, b = 4, c = -2$ (3) $a = 5, b = 4, c = 4$ (4) $a = 4, b = 4, c = 5$
94.	A fair coin is tossed 100 times. The probability of getting tails an odd number of times is : (1) $\frac{3}{8}$ (2) $\frac{1}{2}$ (3) $\frac{1}{8}$ (4) None of these
95.	The equation $\lvert\vec{r}\rvert^2 - 2(\vec{r}.\vec{a}) + \lambda = 0$ represents a (1) plane (2) straight line (3) sphere (4) none of these

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Question No.	Questions
96.	If H be the HM between a and b, then the value of $\frac{H}{a}+\frac{H}{b}$ is (1) $\frac{ab}{a+b}$ (2) $\frac{a+b}{ab}$ (3) 2 (4) None of these
97.	The straight lines $x + y = 0$, $3x + y - 4 = 0$, $x + 3y - 4 = 0$ form a triangle which is : (1) right angled (2) equilateral (3) isosceles (4) none of these
98.	The circle $x^2 + y^2 + 4x - 7y + 12 = 0$ cuts an intercept on y-axis is of length : (1) 3 (2) 4 (3) 7 (4) 1
99.	The value of $\lim_{x\to\infty}\left(\frac{x+3}{x-1}\right)^{x+3}$ is (1) e (2) e^2 (3) e^3 (4) e^4
100.	If there are 6 girls and 5 boys who sit in a row, then the probability that no two boys sit together is : (1) $\frac{6!\,7!}{2!\,11!}$ (2) $\frac{5!\,7!}{2!\,11!}$ (3) $\frac{6!\,6!}{2!\,11!}$ (4) None of these

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Question No.	Questions
	Part–C {Opt. (ii)} (Biology)
101.	Seed coat is not thin, membranous in (1) Groundnut (2) Coconut (3) Maize (4) Gram
102.	Lenticels are involved in (1) Transportation (2) Gaseous exchange (3) Food transport (4) Photosynthesis
103.	Insect mouthparts are adapted for different functions in different species. Mouthparts of houseflies are used for (1) Siphoning (2) Piercing and sucking (3) Sponging and lapping (4) Biting and chewing
104.	The first enzyme to be purified and crystalized was (1) Urease (2) Diastase (3) Insulin (4) Zymase
105.	Many enzymes are secreted in inactive form to protect (1) Cell membrane (2) Mitochondria (3) Cell proteins (4) Cell DNA

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Question No.	Questions
106.	GIFT (Gamete intrafallopian transfer) mixes egg and sperm in the _____ (1) Fallopian tube (2) Uterus (3) Vagina (4) Culture medium
107.	An example of merocrine gland is _____ (1) Sebaceous gland (2) Pineal gland (3) Salivary gland (4) Mammary gland
108.	ATPase enzyme needed for muscle contraction is located in _____ (1) Actinin (2) Troponin (3) Myosin (4) Actin
109.	Casparian strips are present in the _____ of the root. (1) Pericycle (2) Cortex (3) Epiblema (4) Endodermis
110.	The inner, darker and harder portion of secondary xylem that cannot conduct water, in an older dicot stem, is called (1) Bast (2) Alburnum (3) Duramen (4) Wood

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Question No.	Questions
111.	Synapsis occurs between (1) mRNA and ribosomes (2) male and female gametes (3) Two homologous chromosomes (4) Spindle fibers and centromere
112.	A nitrogen fixing microbe associated with *Azolla* in rice fields is (1) Frankia (2) Tolypothrix (3) Spirulina (4) Anabaena
113.	A patient brought to a hospital with myocardial infarction is normally immediately given (1) Cyclosporin-A (2) Statins (3) Penicillin (4) Streptokinase
114.	Rotenone is (1) A bioherbicide (2) A natural insecticide (3) An insect hormone (4) A natural herbicide
115.	Variation in gene frequencies within populations can occur by chance rather than by natural selection. This is referred to as (1) Genetic flow (2) Genetic drift (3) Random mating (4) Genetic load

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Question No.	Questions
116.	Genetic engineering is connected with (1) Eugenics (2) Euthenics (3) Euphenics (4) All of these
117.	Some people who have suffered from a disease may not be affected again during their life time ; such immunity is called (1) Natural immunity (2) Acquired immunity (3) Innate immunity (4) Passive immunity
118.	Raw cheese is known as (1) Blue cheese (2) Cottage cheese (3) Swiss cheese (4) None of these
119.	Cell division cannot be stopped in which phase of the cell cycle ? (1) G_1-Phase (2) G_2-Phase (3) S-Phase (4) Prophase
120.	What type of plant is formed when colchicine is used in the process of development of Raphanobrassica ? (1) Autotetraploid (2) Haploid (3) Triploid (4) Allotetraploid

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Question No.	Questions
121.	An action potential in the nerve fiber is produced when positive and negative charges on outside and the inside of the axon membrane are reversed because (1) All potassium ions leave the axon (2) More potassium ions enter the axon as compared to sodium ions leaving it (3) More sodium ions enter the axon as compared to potassium ions leaving it (4) All soidum ions enter the axon
122.	Sequence of taxonomic categories is (1) Divison – Class – Order – Family – Tribe – Genus – Species (2) Class – Phylum – Tribe – Order – Family – Genus – Species (3) Phylum – Order – Class – Tribe – Family – Genus – Species (4) Division – Class – Family – Tribe – Order – Genus – Species
123.	In the five-kingdom system of classification, which single kingdom out of the following can include blue green algae, nitrogen-fixing bacteria and methanogenic archaebacteria ? (1) Protista (2) Fungi (3) Monera (4) Plantae
124.	Methanogens are (1) Obligate anaerobic bacteria (2) Aerobic fungi (3) Aerobic bacteria (4) Obligate anaerobic fungi

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Question No.	Questions
125.	Noise is measured using sound meter and the unit is (1) Hertz (2) Decibel (3) Joule (4) Sound
126.	The tendency of population to remain in genetic equilibrium may be disturbed by (1) Random mating (2) Lack of migration (3) Lack of mutation (4) Lack of random mating
127.	If two pea plants having red (Dominant) colored flowers with unknown genotypes are crossed, 75% of the flowers are red and 25% are white. The genotypic constitution of the parents having red colored flowers will be (1) Both heterozygous (2) One homozygous and other heterozygous (3) Both homozygous (4) Both hemizygous
128.	The deposition of lipids on the wall lining the lumen of large and medium sized arteries is referred to as (1) Osteoarthritis (2) Osteoporosis (3) Stokes-Adams Syndrome (4) Atherosclerosis

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Question No.	Questions
129.	Which of the following matches correctly ? (1) Pulmonary artery – Carries deoxygenated blood to the lungs (2) Superior vena cava – Receives deoxygenated blood from the lower body and organs (3) Inferior vena cava – Receives deoxygenated blood from the head and body (4) Hepatic artery – carries deoxygenated blood to the gut
130.	The function of leghemoglobin in the root nodules of legumes is (1) Oxygen removal (2) Inhibition of nitrogenase activity (3) Expression of nif gene (4) Nodule differentiation

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