

AJMAL SUPER 40

ADMISSION CUM SCHOLARSHIP TEST: 2021-22

FOR 12th PASSED/APPEARING

Conducted by : **AJMAL FOUNDATION, Hojai**



INSTRUCTIONS TO CANDIDATE

1. Candidates are to use the Answer Sheet provided.
2. Ensure that you fill in your **Registration No.** correctly in the space provided in the OMR sheet .
3. Candidates are required to mark the correct answer choice by **shading** the circle completely with blue or black ball point pen. (Pen of any other colour or pencil is not allowed). For example, if the correct answer to question no 1. is 'B' then the marking should be:



4. Write your details on the OMR sheet which are asked for.
5. Only one circle, i.e. the correct one should be shaded. Shading more than one circle will render the answer invalid.
6. A candidate having completed his/her **ANSWER SHEET** must hand it over, even if blank, to the invigilator.
7. An examinee must not bring any loose paper, book, etc. to the Examination Hall. Any examinee found in possession of even loose papers will be **EXPELLED**.
8. An examinee must not talk to, disturb or seek help from a fellow examinee during the examination.
9. Any mechanical or digital calculating device (calculator, smart watch, mobile etc.) shall not be used by the examinee during the examination.
10. No candidate will be allowed to leave the Examination Hall before completion of three hours.
11. For each correct answer 4 marks will be awarded and for each incorrect answer 1 mark will be deducted.
12. Duration of the exam is 03 hours from 11:00 AM to 02:00 PM.
13. For Class XII [Med] Passed/Appearing, Students are asked to use the OMR from 01 to 180.
For Class XII[Engg] Passed/Appearing, Students are asked to use the OMR from 01 to 120.

Medical			Engineering		
Subject	Questions	Marks	Subject	Questions	Marks
Physics	45	180	Physics	45	180
Chemistry	45	180	Chemistry	45	180
Botany	45	180	Math	30	120
Zoology	45	180			
Total	180	720	Total	120	480

14. Contravention of any of the instruction mentioned above shall render a candidate liable for disciplinary action as per rule.

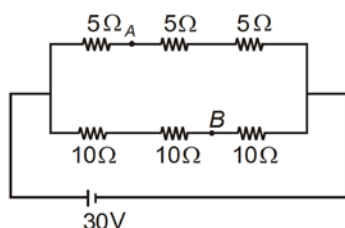
Your Registration Number

Write your Full Name

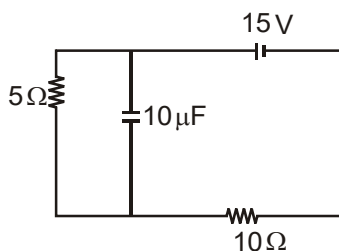
ADMISSION CUM SCHOLARSHIP TEST
FOR 12TH PASSED / APPEARING [REPEATERS]

PHYSICS

- In a region containing uniform electric field an electron is fired at an angle of 30° with the electric field. Which of the following is true?
 - The path of electron will be straight line
 - Electron will not be deflected
 - Electron will move in elliptical path
 - Kinetic energy of electron will change
- In a region electric potential $V(x,y,z)$ is equal to x^2yz . The electric field at point $P(1, 2, 3)$ is
 - $-12\hat{i} - 3\hat{j} - 2\hat{k}$
 - $-6\hat{i} - 3\hat{j} - 2\hat{k}$
 - $6\hat{i} + 3\hat{j} + 2\hat{k}$
 - $12\hat{i} + 3\hat{j} + 2\hat{k}$
- The potential drop between points A and B in the following circuit is



- 10 volt
 - 20 volt
 - 15 volt
 - 5 volt
- In the circuit shown, the electrical energy stored in the capacitor in steady state is



- $375 \mu\text{J}$
 - $500 \mu\text{J}$
 - $125 \mu\text{J}$
 - $250 \mu\text{J}$
- Two concentric metal spheres have radii R_1 and R_2 ($R_2 > R_1$). The outer sphere is grounded and the inner sphere is given a charge q . The charge induced on the outer sphere is

- $-\frac{qR_2}{R_1}$
- $-\frac{qR_1}{R_2}$
- $+q$
- $-q$

- If a galvanometer of resistance 25Ω is shunted by a resistance of 2.5Ω then fraction of total current that flows through the galvanometer is

- $\frac{1}{10}$
- $\frac{3}{11}$
- $\frac{3}{10}$
- $\frac{1}{11}$

- Temperature of the magnet of a vibration magnetometer is changed such that its magnetic moment decreases by 2%. Then the time period of magnetometer will

- Increase by 1%
- Decrease by 1%
- Increase by 2%
- Decrease by 2%

- Across a capacitor $C = 2 \mu\text{F}$ the voltage is changing at a rate of 6 volt per second. The displacement current in the circuit is

- $24 \mu\text{A}$
- $12 \mu\text{A}$
- $6 \mu\text{A}$
- $3 \mu\text{A}$

- The material of a permanent magnet has

Retentivity	Coercivity
(A) High	low
(B) High	high
(C) Low	high
(D) Low	low

- An electron is fired into a region which may have uniform magnetic field B and uniform electric field E . If the electron passes on undeflected then which of the following is true?

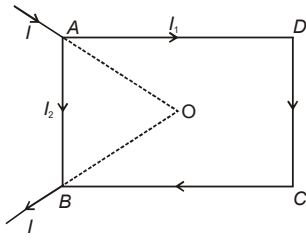
- $E = 0, B = 0$
- $E \neq 0, B = 0$
- $E = 0, B \neq 0$
- All of these

- Which of the following devices does not depend on magnetic effect at all?

- Dynamo
- Hot wire ammeter
- Moving coil galvanometer
- Electric motor

- In the following diagram all the wires are of same material and have uniform cross-section. The magnitude of magnetic field at the centre O of the

square due to arm AB is B_1 and due to the arm CD is B_2 then the ratio $\frac{B_1}{B_2}$ is

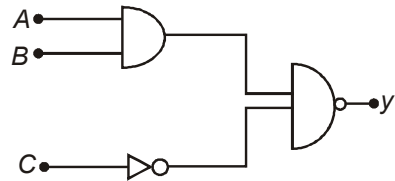


- (A) 1 : 1 (B) 3 : 1
(C) 2 : 1 (D) 4 : 1
13. Which of the following has/have zero average value in a plane electromagnetic wave?
- (A) Magnetic energy
(B) Magnetic energy and electric energy both
(C) Electric field only
(D) Both magnetic and electric fields
14. An inductor of inductance 10 mH and a capacitor of capacitance 5 μ F are in LC oscillation. If the maximum energy stored in the capacitor is 2 J, the maximum current in the circuit is
- (A) 0.2 A (B) 2 A
(C) 20 A (D) 5 A
15. After three half lives, 8 g of radioactive material remains in a sample. What will be the amount of substance at $t = 0$ s?
- (A) 48 g (B) 64 g
(C) 20 g (D) 44 g
16. In a photo cell, if a linear source of light is placed at a distance 20 m, the photoelectric current is 2 μ A. If distance of the source is halved then photoelectric current will become
- (A) 2 μ A (B) 4 μ A
(C) 16 μ A (D) 8 μ A
17. During transition of an electron from higher energy level to lower energy level in hydrogen atom photon emitted has frequency f . The recoil energy of atom is
- (A) $\propto f^2$ (B) $\propto f$
(C) $\propto \frac{1}{f^2}$ (D) $\propto \frac{1}{f^{3/2}}$
18. Energy of the photon produced by annihilation of an electron and a positron is approximately

- (A) 1.02 MeV (B) 1.02 keV
(C) 1.02 eV (D) 1.02 GeV

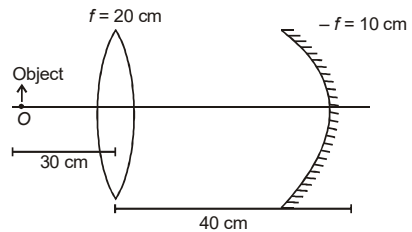
19. Which of the following is a correct statement?
- (A) Energy of thermal neutrons is approximately 0.025 eV
(B) The electron emitted in beta radiation originates from inner orbits of atom
(C) Fast neutrons can be slowed down by elastic collision with heavy nuclei
(D) The rest mass of a stable nucleus is more than the sum of the rest masses of separated nucleons

20. In the given circuit the output y is given by



- (A) $\overline{(A + B)}.C$ (B) $(A + B).C$
(C) $(\overline{A} + \overline{B}) + C$ (D) $(\overline{A} . \overline{B}) + C$

21. In the given figure a convex lens and concave mirror are separated by 40 cm. Position of final image is (from the pole of mirror)



- (A) + 6.7 cm (B) - 6.7 cm
(C) + 3.8 cm (D) - 3.8 cm

22. In YDSE the fringe width is 0.06 mm. If the wavelength of light used is increased by 25% and the slit separation is decreased by 25% then fringe width will be
- (A) 0.06 mm (B) 0.03 mm
(C) 0.05 mm (D) 0.10 mm
23. An unpolarised light of intensity I_0 is incident on a pair of two polaroids held coaxially such that their transmission axes make an angle of 30° with each other. The fraction of intensity of light emerging from the pair is

- (A) $\frac{1}{2}$ (B) $\frac{3}{8}$ (C) $\frac{1}{8}$ (D) $\frac{9}{16}$

24. The refracting angle of a prism is A and the critical angle for the medium of the prism is Q_C . There will be no emergent ray when

- (A) $A = 2Q_C$ (B) $A < Q_C$
(C) $A > 2Q_C$ (D) $Q_C < A < 2Q_C$

25. A gamma ray may be emitted

- (A) When nucleus returns to ground state from excited state
(B) After α -decay
(C) After β -decay
(D) All of these

26. Monochromatic radiation of wavelength λ is incident on a hydrogen atom in ground state. Hydrogen atom absorbs fraction of light and emits 15 different wavelength. The energy of the incident wave is approximately

- (A) 0.58 eV (B) 0.48 eV
(C) 2.26 eV (D) 13.22 eV

27. Two slits, 4 mm apart are illuminated by light of wavelength 6000 Å. Position of 2nd bright fringe on the screen 2m away will be

- (A) 0.24 mm (B) 0.6 mm
(C) 6 mm (D) 8 mm

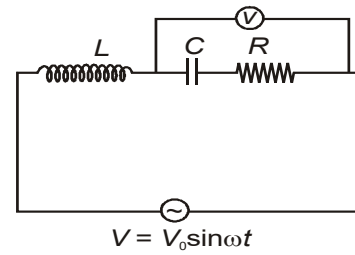
28. In a common emitter configuration collector current and emitter current are 3.09 mA and 3.19 mA respectively. The current gain in this configuration is

- (A) 3.09 (B) 31.9
(C) 30.9 (D) 1.003

29. Select incorrect statement

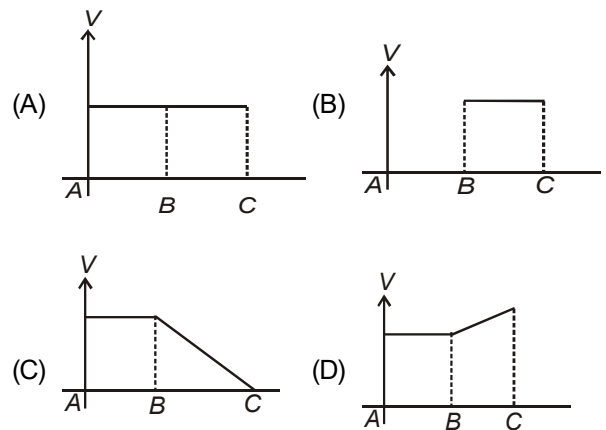
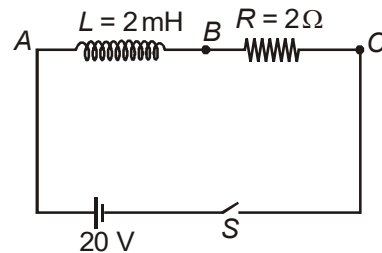
- (A) For a given change in magnetic flux linked with a closed coil, the amount of charge flow in it is inversely proportional to its resistance
(B) Electromagnetic induction is based on the law of conservation of energy
(C) The metallic cores of transformer is laminated to minimize eddy current
(D) A time varying magnetic field can't exert a force on the stationary charge

30. The given LCR series circuit is at resonance. Potential across the inductor capacitor and resistor are 40 V, 40 V and 30 V respectively. The reading of voltmeter will be



- (A) 30 V (B) Zero
(C) 50 V (D) 40 V

31. An electric circuit containing a wire of resistance $2\ \Omega$, inductor and battery is shown. At $t = 0$ switch is closed. In steady state variation of potential drop as one moves from A to C is correctly shown in



32. If two bulbs (30 W, 220 V) and (70 W, 220 V) are connected in series with 220 V supply, then effective wattage is

- (A) 21 W (B) 100 W
(C) 30 W (D) 40 W

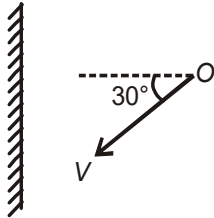
33. The energy released when 3α -particles combine to form a C^{12} nucleus is, (mass of ${}_2\text{He}^4 = 4.002603\ \text{u}$)

- (A) 23.67 MeV (B) 0.961 MeV
(C) 1.3674 MeV (D) 7.27 MeV

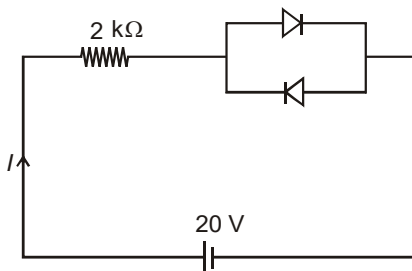
34. A simple microscope has maximum magnifying power of 7. The minimum magnifying power of the microscope will be

- (A) 6 (B) 5
(C) 3 (D) 2

35. Which of the following has highest penetrating power?
 (A) X-ray (B) β -particle
 (C) γ -ray (D) α -particle
36. An object moves towards a plane mirror with a speed V at an angle of 30° to the perpendicular of the mirror. Velocity of object with respect to its image will be



- (A) $\frac{v\sqrt{3}}{2}$ (B) v
 (C) $\sqrt{3}v$ (D) $\frac{v}{2}$
37. Current in the following circuit will be

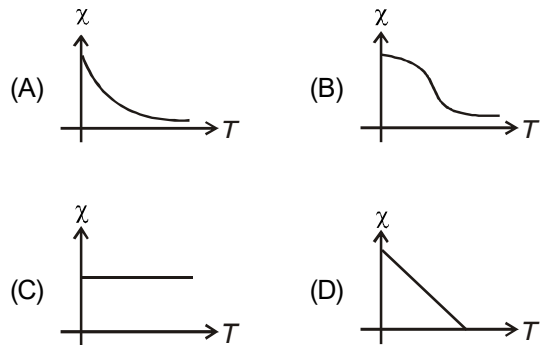


- (A) Zero (B) 10 mA
 (C) 1 mA (D) 9.6 mA
38. A conducting sphere of radius 5 cm and carrying charge q is joined to a conducting sphere of radius 10 cm and carrying a charge $-2q$. The charge flowing between them will be
 (A) $\frac{4q}{3}$ (B) q
 (C) $\frac{q}{3}$ (D) $\frac{q}{6}$
39. In photoelectric effect, the electrons are ejected from metals if the incident light has certain maximum
 (A) Amplitude (B) Wavelength
 (C) Frequency (D) Intensity
40. In a full wave rectifier, input ac current has a frequency f then output frequency of current is
 (A) f (B) $2f$
 (C) $\frac{f}{2}$ (D) $4f$

41. The sun is rotating about its own axis. The spectral lines emitted from the two ends of its equator for an observer on the earth will show
 (A) Shift towards violet end
 (B) Shift towards red end
 (C) No shift
 (D) Shift towards red end by one line and towards violet end by other line

42. A ray of light passes through the equilateral prism such that angle of incidence is equal to angle of emergence. If angle of incidence is 45° then angle of deviation will be
 (A) 15° (B) 75°
 (C) 60° (D) 30°

43. Select the correct statement about PN junction
 (A) The potential is same everywhere if it is not connected to any circuit
 (B) The width of the depletion zone is independent of density of impurities
 (C) The electric field in the depletion zone is produced by the ionized impurities atoms.
 (D) Potential barrier doesn't depend on temperature
44. The variation of magnetic susceptibility (χ) with absolute temperature T for a ferromagnetic material is



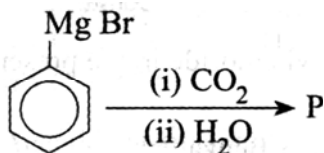
45. A photon of energy 3.4 eV is incident on a metal of work function 2 eV. The stopping potential is equal to
 (A) 1.7 V (B) 5.4 V
 (C) 6.8 V (D) 1.4 V

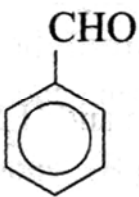

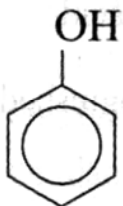
CHEMISTRY

46. The total number of tetrahedral voids in the face centred unit cell is _____
(A) 6 (B) 8
(C) 10 (D) 12
47. In which pair most efficient packing is present?
(A) *hcp* and *bcc* (B) *hcp* and *ccp*
(C) *bcc* and *ccp*
(D) *bcc* and simple cubic cell
48. A metal crystallizes within a face centred cubic lattice. The edge of the unit cell is 408 pm. The diameter of the metal atom is:
(A) 204 pm (B) 144 pm
(C) 408 pm (D) 288 pm
49. Which one of the following solution has least vapour pressure?
(A) 0.01 M CaCl_2 (B) 0.01 M glucose
(C) 0.01 M Na_2SO_4 (D) 0.01 M Na_3PO_4
50. Which of the following is correct for a solution showing positive deviations from Raoult's law?
(A) $\Delta V = +ve, \Delta H = +ve$
(B) $\Delta V = -ve, \Delta H = +ve$
(C) $\Delta V = +ve, \Delta H = -ve$
(D) $\Delta V = +ve, \Delta H = -ve$
51. 0.5 M of H_2SO_4 is diluted from 1 litre to 10 litre, normality of the resulting solution is:
(A) 1 N (B) 10 N
(C) 11 N (D) 0.1 N
52. When X amperes of current is passed through molten AlCl_3 for 96.5 seconds, 0.09 g of aluminium is deposited. What is the value of X?
(A) 10 (B) 20
(C) 30 (D) 40
53. Faraday's laws of electrolysis are related to the:
(A) Speed of the cation
(B) Equivalent weight of the electrolyte
(C) Atomic number of the reaction
(D) Atomic number of the anion
54. The reduction potential values of M, N and O are +2.46, -1.13 and -3.13 V respectively. Which of the following order is correct, regarding their reducing property?
(A) $\text{O} > \text{N} > \text{M}$ (B) $\text{O} > \text{M} > \text{N}$
(C) $\text{M} > \text{N} > \text{O}$ (D) $\text{M} > \text{O} > \text{N}$
55. A dilute aqueous solution of Na_2SO_4 is electrolyzed using platinum electrodes. The product at the anode and cathode are:
(A) O_2, H_2 (B) $\text{S}_2\text{O}_8^{2-}, \text{Na}$
(C) O_2, Na (D) $\text{S}_2\text{O}_8^{2-}, \text{H}_2$
56. The rate constant of a reaction depends on:
(A) Extent of reaction (B) Time of reaction
(C) Temperature
(D) Initial concentration of the reactants
57. For a particular gaseous reaction, a graph was plotted as shown below. It shows that the reaction of A is
-
- (A) Zero-order w.r.t. A
(B) First-order w.r.t. A
(C) Second-order w.r.t. A
(D) A non-integer order w.r.t. A
58. For the reaction $\text{H}_2 + \text{Br}_2 \rightleftharpoons 2\text{HBr}$ the reaction rate = $k[\text{H}_2]^1 [\text{Br}_2]^{3/2}$ which is correct about it?
(A) Molecularity = 2 (B) Order = 2
(C) Order = 3/2 (D) Both (A) and (C)
59. What will be the initial rate of a reaction if its rate constant is 10^{-3} min^{-1} and the concentration of reactant is 0.2 mol dm^{-3} ?
(A) $0.02 \text{ mol dm}^{-3} \text{ min}^{-1}$
(B) $0.002 \text{ mol dm}^{-3} \text{ min}^{-1}$
(C) $0.0002 \text{ mol dm}^{-3} \text{ min}^{-1}$
(D) $2 \text{ mol dm}^{-3} \text{ min}^{-1}$
60. The simplest way, to check whether a system is colloidal or not is by:
(A) Tyndall effect
(B) Electrodialysis
(C) Finding out particle size
(D) Brownian movement
61. Colloidal solution of silver is prepared by:
(A) Bredig's arc method
(B) Peptization
(C) Colloidal milk
(D) Double decomposition method
62. The solution of rubber is an example of:
(A) Lyophobic colloid
(B) Multimolecular colloid
(C) Associated colloid
(D) Macromolecular colloid
63. The percentage of silver in german silver, is:
(A) 0% (B) 10%
(C) 2.5% (D) 4.5%
64. Chromite ore can be given as:
(A) FeCr_2O_7 (B) Cr_2O_3
(C) FeCr_2O_4 (D) Fe_3O_4

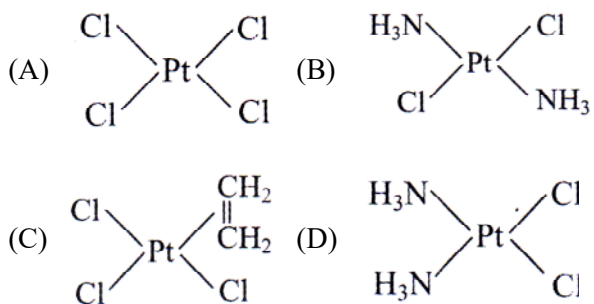
65. The number of P–O–P and P–O–H bonds present respectively in pyrophosphoric acid molecule are:
 (A) 2, 2 (B) 1, 8
 (C) 1, 2 (D) 1, 4
66. Nitrogen dioxide cannot be prepared by heating
 (A) KNO_3 (B) $\text{Pb}(\text{NO}_3)_2$
 (C) $\text{Cu}(\text{NO}_3)_2$ (D) AgNO_3
67. What is the order of basic nature of hydrides of group V elements?
 (A) $\text{AsH}_3 > \text{SbH}_3 > \text{PH}_3 > \text{NH}_3$
 (B) $\text{NH}_3 > \text{SbH}_3 > \text{PH}_3 > \text{AsH}_3$
 (C) $\text{NH}_3 > \text{PH}_3 > \text{AsH}_3 > \text{SbH}_3$
 (D) $\text{PH}_3 > \text{NH}_3 > \text{SbH}_3 > \text{AsH}_3$
68. How many bridging oxygen atoms are present in P_4O_{10} ?
 (A) 6 (B) 4
 (C) 2 (D) 5
69. There is $p\pi - d\pi$ multiple bonding in
 (A) CO_2 (B) NO_2
 (C) SO_3 (D) NO
70. Which one of the following hydrides is least acidic?
 (A) H_2O (B) H_2S
 (C) H_2Te (D) H_2Se
71. Acid strength of oxoacids of halogens is in order:
 (A) $\text{HOI} > \text{HOBr} > \text{HOCl} > \text{HOF}$
 (B) $\text{HOCl} > \text{HOBr} > \text{HOI} > \text{HOF}$
 (C) $\text{HOF} > \text{HOCl} > \text{HOBr} > \text{HOI}$
 (D) $\text{HOI} > \text{HOCl} > \text{HOBr} > \text{HOF}$
72. Which one of the following order is correct for the bond energies of halogen molecules?
 (A) $\text{Cl}_2 > \text{Br}_2 > \text{I}_2$ (B) $\text{Br}_2 > \text{Cl}_2 > \text{I}_2$
 (C) $\text{I}_2 > \text{Cl}_2 > \text{Br}_2$ (D) $\text{I}_2 > \text{Br}_2 > \text{Cl}_2$
73. The correct order of acidic strength is:
 (A) $\text{Cl}_2\text{O}_7 > \text{SO}_2 > \text{P}_4\text{O}_{10}$
 (B) $\text{CO}_2 > \text{N}_2\text{O}_5 > \text{SO}_3$
 (C) $\text{Na}_2\text{O} > \text{MgO} > \text{Al}_2\text{O}_3$
 (D) $\text{K}_2\text{O} > \text{CaO} > \text{MgO}$
74. The manganate and permanganate ions are tetrahedral, due to
 (A) The π -bonding involves overlap of p-orbitals of oxygen with d-orbitals of manganese
 (B) There is no π -bonding
 (C) The π -bonding involves overlap of p-orbitals of oxygen with p-orbitals of manganese
 (D) The π -bonding involves overlap of d-orbitals of oxygen with d-orbitals of manganese
75. Which of the following is a complex salt?
 (A) $\text{KCl} \cdot \text{MgCl}_2 \cdot 6\text{H}_2\text{O}$
 (B) $\text{FeSO}_4 \cdot (\text{NH}_4)_2 \cdot \text{SO}_4 \cdot 6\text{H}_2\text{O}$
 (C) $4\text{KCN} \cdot \text{Fe}(\text{CN})_2$
 (D) $\text{K}_2\text{SO}_4 \cdot \text{Al}_2(\text{SO}_4)_3 \cdot 24\text{H}_2\text{O}$
76. The correct name of the compound $[\text{Cu}(\text{NH}_3)_4](\text{NO}_3)_2$ according to system is:
 (A) Tetraamminecopper (II) dinitrite
 (B) Tetraamminecopper (II) nitrite
 (C) Cuprammonium nitrate
 (D) Tetraamminecopper (II) nitrate
77. The order of reactivity of alkyl halides towards elimination reaction is:
 (A) $1^\circ > 2^\circ > 3^\circ$ (B) $2^\circ > 1^\circ > 3^\circ$
 (C) $3^\circ > 2^\circ > 1^\circ$ (D) $3^\circ > 1^\circ > 2^\circ$
78. Which of the following are arranged in the decreasing order of dipole moment?
 (A) $\text{CH}_3\text{Cl}, \text{CH}_3\text{Br}, \text{CH}_3\text{F}$
 (B) $\text{CH}_3\text{Cl}, \text{CH}_3\text{F}, \text{CH}_3\text{Br}$
 (C) $\text{CH}_3\text{Br}, \text{CH}_3\text{Cl}, \text{CH}_3\text{F}$
 (D) $\text{CH}_3\text{Br}, \text{CH}_3\text{F}, \text{CH}_3\text{Cl}$
79. The basic character of the transition metal monoxides follows the order
 (A) $\text{CrO} > \text{VO} > \text{FeO} > \text{TiO}$
 (B) $\text{TiO} > \text{VO} > \text{CrO} > \text{FeO}$
 (C) $\text{TiO} > \text{FeO} > \text{VO} > \text{CrO}$
 (D) $\text{VO} > \text{CrO} > \text{TiO} > \text{FeO}$
80. Identify Z in the following series:
 $\text{C}_2\text{H}_5\text{I} \xrightarrow{\text{Alc. KOH}} \text{X} \xrightarrow{\text{Br}_2} \text{Y} \xrightarrow{\text{KCN}} \text{Z}$
 (A) $\text{CH}_3\text{CH}_2\text{CN}$ (B) $\text{NCCH}_2 - \text{CH}_2\text{CN}$
 (C) $\text{BrCH}_2 - \text{CH}_2\text{CN}$
 (D) $\text{BrCH} = \text{CHCN}$
81. Which one of the following sets of reactants is used in Reimer-Tiemann reaction?
 (A) $\text{C}_6\text{H}_5\text{OH} + \text{CO}_2 + \text{KOH}$
 (B) $\text{C}_6\text{H}_5\text{NH}_2 + \text{CH}_3\text{Cl} + \text{KOH}$
 (C) $\text{C}_6\text{H}_5\text{NH}_2 + \text{CHCl}_3 + \text{KOH}$
 (D) $\text{C}_6\text{H}_5\text{OH} + \text{CHCl}_3 + \text{KOH}$
82. The reaction of Grignard reagent with formaldehyde followed by acidification gives
 (A) An aldehyde (B) A ketone
 (C) A carboxylic acid (D) A primary alcohol

83. In Williamson synthesis, ethoxyethane is prepared by
- Heating sodium ethoxide with ethyl bromide
 - Passing ethanol over heated alumina
 - Heating ethanol with dry Ag_2O
 - Treating ethyl alcohol with excess of at 430 – 440 K
84. Which of the following orders of relative strengths of acids is correct?
- $ClCH_2COOH > FCH_2COOH > BrCH_2COOH$
 - $ClCH_2COOH > BrCH_2COOH > FCH_2COOH$
 - $BrCH_2COOH > ClCH_2COOH > FCH_2COOH$
 - $FCH_2COOH > ClCH_2COOH > BrCH_2COOH$
85. In the reaction product P is



- (A)  (B) 
- (C)  (D) $C_6H_5 - CO - C_6H_5$

86. Which of the following is considered to be an anticancer species?



87. Among the following, identify the species with an atom in +6 oxidation state
- CrO_2Cl_2
 - MnO_4^-
 - Cl_2O_7
 - I_3^-
88. The base found in DNA but not in RNA is
- Cytosine
 - Guanine
 - Thymine
 - Adenine
89. Caprolactum is used for the manufacture of?
- Nylon 6, 6
 - Teflon
 - Terylene
 - Nylon, 6
90. Match list 1 with list 2 and select the correct answer using the code given below the lists

List 1 (Chemotherapeutic agents)		List 2 (Examples)	
1	Antibiotic	A	Chloroxylenol
2	Antiseptic	B	Chloampheniramine
3	Analgesic	C	Chloramphenicol
4	Tranquilizer	D	Diclophenac sodium
		E	Veronal

Codes:

- 1-A, 2-C, 3-D, 4-E
- 1-B, 2-A, 3-D, 4-E
- 1-B, 2-C, 3-E, 4-D
- 1-C, 2-A, 3-D, 4-E

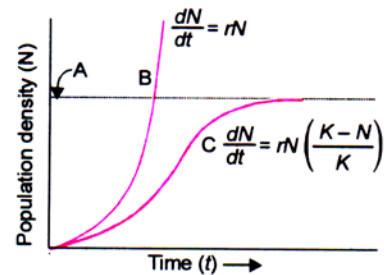
BIOLOGY

91. Apomixis is development of a new plant
- Without fusion of gametes
 - From fusion products of gametes
 - From stem cuttings
 - From root cuttings
92. Asexually produced organism inheriting all the characters of the parent is
- Offspring
 - Clone
 - Variety
 - Hybrid
93. Identify from the following group of animals which exhibit oestrus cycle
- Lion, deer, dog and cow
 - Cow, monkey, elephant and ape
 - Monkey, ape, man and elephant
 - Lion, dog, monkey and ape
94. Transfer of pollen from anthers of one flower to the stigma of another flower of the same plant is
- Geitonogamy
 - Xenogamy
 - Dichogamy
 - Dicliny

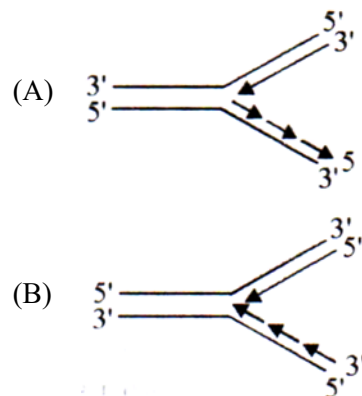
95. How many meiotic divisions are required to form 64 pollen grains
 (A) 16 (B) 32
 (C) 64 (D) 80
96. Sporopollenin is chemically
 (A) Homopolysaccharide
 (B) Heteropolysaccharide
 (C) Protein
 (D) Fatty substance
97. Number of nuclei participating in double fertilization is
 (A) 5 (B) 3
 (C) 4 (D) 2
98. Meiosis is best observed in dividing
 (A) Cells of apical meristem
 (B) Cells of lateral meristem
 (C) Microspores and anther wall
 (D) Microsporocytes
99. Female gametophyte of angiosperms is represented by
 (A) Ovule (B) Megaspore mother cell
 (C) Embryo sac (D) Nucellus
100. RR (Red) *Antirrhinum/Snapdragon* is crossed with white (WW) one. Offspring RW are pink. This is an example of
 (A) Dominant-recessive
 (B) Incomplete dominance
 (C) Hybrid
 (D) Supplementary genes
101. Marriages between close relatives should be avoided because it induces more
 (A) Recessive alleles to come together
 (B) Mutations
 (C) Multiple births
 (D) Blood group abnormalities
102. In a cross between $AABB \times aabb$, the ratio of F_2 genotypes between AABB, AaBB, Aabb and aabb would be
 (A) 9 : 3 : 3 : 1 (B) 2 : 1 : 1 : 2
 (C) 1 : 2 : 2 : 1 (D) 7 : 5 : 3 : 1
103. A man of A-blood group marries a woman of AB blood group. Which type of progeny would indicate that man is heterozygous A?
 (A) AB (B) A
 (C) O (D) B
104. Which is wrong about Mendel?
 (A) He was born in 1822
 (B) Mendel presented his work in the form of a paper at Heinzendorf in 1856
 (C) Mendel carried out his experiments for 8 years
 (D) Mendel died in 1884
105. Which law of Mendelian genetics can be considered universal
 (A) Dominance
 (B) Codominance
 (C) Independent assortment
 (D) Segregation
106. Which is not true about emasculation of a flower while performing an artificial cross
 (A) It is removal of anthers from flower
 (B) It is done before anthesis
 (C) It is to avoid self pollination
 (D) It is done in flowers of plants selected as male parent
107. During incomplete dominance, F_2 generation will have
 (A) 3 : 1 genotypic ratio
 (B) 3 : 1 phenotypic ratio
 (C) 1 : 2 : 1 phenotypic ratio
 (D) 1 : 2 : 1 genotypic ratio
108. If a child has blood group 'A' and his mother has blood group 'A', what are the possibilities of blood group of his father
 (A) 'A' (B) 'O'
 (C) 'B' (D) All the above
109. Okazaki fragments give rise to
 (A) Master strand (B) Sense strand
 (C) Lagging strand (D) Leading strand
110. Initiation codons for protein synthesis are
 (A) UUU and GGG (B) AAU and UAA
 (C) AUG and GUA (D) GUG and AUG
111. The first codon discovered by Nirenberg and Mathaei was
 (A) GGG (B) CCC
 (C) UUU (D) AAA
112. Semiconservative DNA/chromosome replication using ^{15}N was demonstrated by
 (A) Meselson
 (B) Taylor
 (C) Meselson and Stahl
 (D) Hershey and Chase
113. Operon is
 (A) Sequence of three nitrogen bases determining a single amino acid
 (B) A set of closely placed genes regulating a metabolic pathway in procaryotes
 (C) Segment of DNA specifying a polypeptide
 (D) Gene responsible for switching on and switching off of other genes
114. The technique of DNA finger printing relies on
 (A) Repetitive DNA (B) Minisatellite DNA
 (C) Both A and B (D) None of the above

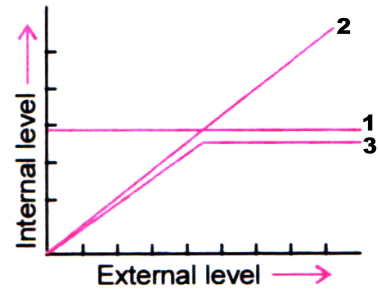
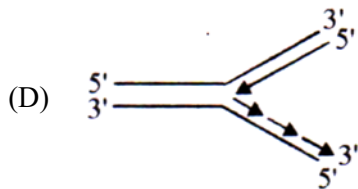
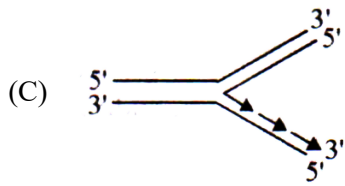
115. Which is wrongly matched
 (A) Translation—Using information in mRNA to make protein
 (B) Repressor protein—Binds to operator to stop enzyme synthesis
 (C) Operon—Structural genes, operator and promoter
 (D) Transcription—Writing information from DNA to tRNA
116. When a nucleotide change in one codon causes termination of polypeptide synthesis it is called
 (A) Missense mutation (B) Nonsense mutation
 (C) Same sense codon (D) Nonsense codon
117. Lac operon is turned on when allolactose binds to
 (A) Operator gene (B) *mRNA*
 (C) Repressor protein (D) Promoter site
118. Virus free plants can be obtained by
 (A) Antibiotic treatment (B) Bordeaux mixture
 (C) Root tip culture (D) Shoot tip culture
119. In callus culture, root can be induced by supply of
 (A) Ethylene (B) Gibberellin
 (C) Cytokinin (D) Auxin
120. Krishna/Ratna and 'Jaya' are varieties of
 (A) Maize (B) Wheat
 (C) Rice (D) Barley
121. Yeast is used in preparation of
 (A) Acetic acid (B) Curd
 (C) Ethyl alcohol (D) Cheese
122. Which one of the following is free living nitrogen fixing bacterium
 (A) *Azotobacter* (B) *Anabaena azollae*
 (C) *Pseudomonas* (D) Cyanobacterium
123. Single cell protein is
 (A) Protein synthesised by skin cell
 (B) A protein synthesised by liver cell
 (C) Protein synthesised by microorganisms
 (D) A protein synthesised by muscle cell.
124. Submerged hydrophytes have a well developed
 (A) Vascular system (B) Aerenchyma
 (C) Root system (D) Stomatal system
125. Niche of a species is
 (A) Place of living
 (B) Specific functions and competitive power
 (C) Habitat and specific functions
 (D) None of the above
126. Viviparity and pneumatophores are features of
 (A) Hydrophytes (B) Halophytes
 (C) Mesophytes (D) Xerophytes
127. Which is correct for secondary succession
 (A) It follows primary succession
 (B) It is similar but faster than primary succession

- (C) It begins on bare rock
 (D) It occurs on deforested site
128. CO_2 and O_2 balance in atmosphere is due to
 (A) Photosynthesis (B) Respiration
 (C) Leaf anatomy (D) Photorespiration
129. Path of energy flow in an ecosystem is
 (A) Herbivores → Producers → Carnivores → Decomposers
 (B) Herbivores → Carnivores → Producers → Decomposers
 (C) Producers → Carnivores → Herbivores → Decomposers
 (D) Producers → Herbivores → Carnivores → Decomposers
130. Detritus food chain begins with
 (A) Primary producers
 (B) Primary consumers
 (C) Secondary consumers
 (D) Dead organic matter
131. Renewable exhaustible natural resource of energy is
 (A) Biomass/Forest (B) Coal
 (C) Petroleum (D) Kerosene
132. Which is correctly labeled



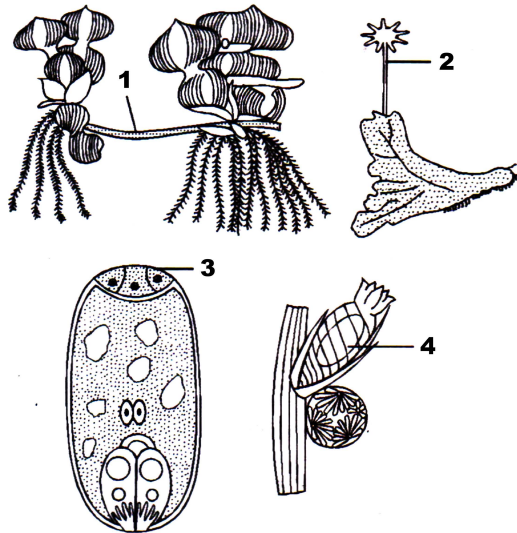
- (A) B-logistic curve
 (B) C-carrying capacity
 (C) C-exponential curve
 (D) A-carrying capacity
133. Which one represents the correct manner of DNA replication?





	1	2	3
(A)	Regulator	Partial regulator	Conformer
(B)	Partial regulator	Regulator	Conformer
(C)	Regulator	Conformer	Partial regulator
(D)	Conformer	Regulator	Partial regulator

134. Examine the figures (1 - 4) given below and select the right option in which all the four structures are identified correctly



	1	2	3	4
(A)	Rhizome	Sporangiophore	Polar cell	Globule
(B)	Runner	Archegoniophore	Synergid	Antheridium
(C)	Offset	Antheridiophore	Antipodals	Oogonium
(D)	Sucker	Seta	Megaspore mother cell	Gemma cup

135. The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do (1), (2), (3) represent respectively?

136. Spot the odd one out from the following structures with reference to the male reproductive system
 (A) Rete testis (B) Epididymis
 (C) Vasa efferentia (D) Isthmus
137. Mature Graafian is generally present in the ovary of a healthy human female around
 (A) 5 – 8 day of menstrual cycle
 (B) 11 – 17 day of menstrual cycle
 (C) 18 – 23 day of menstrual cycle
 (D) 24 – 28 day of menstrual cycle
138. Identify the odd from the following
 (A) Labia minora (B) Fimbriae
 (C) Infundibulum (D) Isthmus
139. The first menstruation begins at..... (a)..... and is called.....(b).....(a) and (b) are respectively
 (A) (a) menarche, (b) puberty
 (B) (a) menopause, (b) puberty
 (C) (a) puberty, (b) menopause
 (D) (a) puberty, (b) menarche
140. Gubernaculum is the ligamentous connective cord which connects
 (A) Testes to scrotum
 (B) Ovary to body wall
 (C) Testes to abdominal wall
 (D) None of these
141. In which year medical termination of pregnancy (MTP) act was passed by Indian government
 (A) 1951 (B) 1961
 (C) 1971 (D) 1981
142. Which of the following is true about "Saheli"
 (A) Developed by CDRI, Lucknow
 (B) made up of Non-steroid substance CENTCHROMANE
 (C) Once a week pill
 (D) All the above

143. The technique called gamete intrafallopian transfer (GIFT) is recommended for those females:
 (A) Who cannot produce an ovum
 (B) Who cannot retain the foetus inside uterus
 (C) Whose cervical canal is too narrow to allow passage for the sperms
 (D) Who cannot provide suitable environment for fertilization
144. A contraceptive is
 (A) Condom, cervical cap and diaphragm
 (B) IUD (C) pill
 (D) All of these
145. In the vertebrates testes, for nourishment during spermiogenesis, the spermatids get attached to
 (A) Interstitial cells (B) Sperm mother cell
 (C) Spermatocytes (D) Sertoli cells
146. Analogous organs arise due to:
 (A) Divergent evolution
 (B) Artificial selection
 (C) Genetic drift
 (D) Convergent evolution
147. Evolution of life shows that life forms had a trend of moving from:
 (A) Land to water
 (B) Dry land to wet land
 (C) Fresh water to sea water
 (D) Water to land
148. Fossils are generally found in:
 (A) Sedimentary rocks (B) Igneous rocks
 (C) Metamorphic rocks (D) Any type of rock
149. Which of these was most influential in foundation of natural selection theory by Darwin
 (A) Malthus's essay on population
 (B) Inheritance of acquired characters
 (C) Struggle for existence
 (D) Wallace's paper on survival
150. Paleontological evidence for evolution refer to the
 (A) Development of embryo
 (B) Homologous organs
 (C) Fossils
 (D) Analogous
151. $(p + q)^2 = p^2 + 2pq + q^2 = 1$ Represents an equation used in
 (A) Population genetics (B) Mendelian genetics
 (C) Biometrics (D) Molecular genetics
152. A sudden and heritable change in a character of an organism was called as mutation by Hugo deVries while working on
 (A) Evening primrose (B) Neurospora
 (C) Ascaris (D) Drosophila
153. Who believed that an organ in disuse will become vestigial?
 (A) Lamarck (B) De vries
 (C) Mendel (D) Darwin
154. About how long ago was the earth originated
 (A) 3.0 billion years ago
 (B) 10 billion years ago
 (C) 4.6 billion years ago
 (D) 20 billion years ago
155. Which one is present today but was absent about 3500 million years ago?
 (A) N_2 (B) O_2
 (C) H_2 (D) CH_2
156. Process of evolution
 (A) is discontinuous (B) was discontinuous
 (C) was continuous in the past but discontinuous presently
 (D) is continuous
157. Finding of Miller's experiment on origin of life has provided evidence for
 (A) Theory of biogenesis
 (B) Oparin-Haldane theory
 (C) Theory of special creation
 (D) Theory of organic evolution
158. 'Pathogens' are
 (A) Substance produced against any disease causative agent
 (B) Chemical substance produced by the host cells to kill the parasite animal
 (C) Disease spreading factors
 (D) Cells which kill the parasites
159. Infectipus or communicable diseases
 (A) Cannot be communicated from one man to another
 (B) Can develop infection from one man to another
 (C) Can spread without any intermediate host
 (D) Can spread with some intermediate host
160. Most bacteria ingested with food are killed by
 (A) Cilia and mucus on the lining of the tract
 (B) Stomach acids
 (C) The intrinsic factor in the stomach
 (D) Bile in the small intestine
161. The major phagocytic cells are
 (A) Lymphocytes rate of heart beat
 (B) Increasing quantity of blood
 (C) Resistance developed after disease
 (D) Resistance developed before disease
162. Which one of the following acts as physiological barrier to the entry of microorganisms in human body?
 (A) Skin
 (B) Epithelium of Urogenital tract
 (C) Tears
 (D) Monocytes

163. What are needed for good health?
 (A) Balanced diet (B) Healthy air
 (C) Hygiene (D) All of these
164. Which one is a viral disease?
 (A) Syphilis (B) Measles
 (C) Rickets (D) Beri – beri
165. If you are advised to get a WIDAL test done for yourself–which disease is your doctor suspending?
 (A) Typhoid (B) Cholera
 (C) Pneumonia (D) Filariasis
166. Which stage of plasmodium parasite is infective for man?
 (A) Schizont (B) Gametocytes
 (C) Typhoid (D) Leprosy
167. Elephantiasis is caused by
 (A) Sporozoite (B) Taenia
 (C) Wuchereria (D) Entamoeba
168. Haemozoin is a toxic substance formed in case of malaria. It is produced by
 (A) Globin protein of RBC
 (B) Colour pigment of RBC
 (C) Dead WBC
 (D) Cryptozoites
169. Non–specific host defense that exist prior to exposure to an antigen is called
 (A) Acquired immunity
 (B) Innate immunity
 (C) Adaptive acquired immunity
 (D) All of these
170. The immunoglobulin present in mother’s milk is
 (A) IgD (B) IgE
 (C) IgM (D) IgA
171. Antibody which mediates allergic response is
 (A) IgA (B) IgD
 (C) IgE (D) IgM
172. Livestock refers to
 (A) Pet animals
 (B) Poultry and pet animals
 (C) Domestic animals which are kept for use or profit
 (D) None of the above
173. Chose the correct pair
 (A) Apiculture – Honey bee
 (B) Sericulture – Fish
 (C) Pisciculture – Silk worm
 (D) Aquaculture – Lac insect
174. Alcoholic beverages are obtained with the help of
 (A) Penicillium (B) Yeast
 (C) Blue–green algae (D) none of the above
175. Activated sludge is the sedimentation production of
 (A) Primary treatment (B) Secondary treatment
 (C) Tertiary treatment (D) All of these
176. Crystals of Bt–toxin produced by some bacteria do not kill the bacteria themselves because
 (A) Bacteria are resistant to the toxin
 (B) Toxin is immature
 (C) Toxin is inactive
 (D) Bacteria encloses toxin in a special sac
177. Genetic engineering would not have been possible if one of these were absent
 (A) DNA polymerase
 (B) Reverse transcriptase
 (C) DNA ligase
 (D) RNA synthesis
178. During “gene cloning” which is called as “gene taxi?”
 (A) Vaccine (B) Plasmid
 (C) Bacterium (D) Protozoa
179. Bt in popular Bt–cotton stands for
 (A) Biotechnology
 (B) Bacillus tomentosa
 (C) Bacillus thuringiensis
 (D) Best type
180. Match between the following representing parts of the sperm and their functions and choose the correct option

Column A		Column B	
A	Head	i	Enzymes
B	Middle piece	ii	Sperm motility
C	Acrosome	iii	Energy
D	Tail	iv	Genetic material

- (A) A→ ii→, B→ iv, C→ i, D→ iii
 (B) A→ iv→, B→ iii, C→ i, D→ ii
 (C) A→ iv→, B→ i, C→ ii, D→ iii
 (D) A→ ii→, B→ i, C→ iii, D→ iv

MATHEMATICS

91. Function, $f(x) = \frac{\lambda \sin x + 6 \cos x}{2 \sin x + 3 \cos x}$ is monotonic increasing, if

- (A) $\lambda > 1$ (B) $\lambda < 1$
 (C) $\lambda < 4$ (D) $\lambda > 4$

92. The function which is neither decreasing nor increasing in $\left(\frac{\pi}{2}, \frac{3\pi}{2}\right)$ is

- (A) $\operatorname{cosec} x$ (C) $\tan x$
 (C) x^2 (D) $|x-1|$

93. Number of binary operations on the set $\{a, b\}$ are

- (A) 4 (B) 10 (C) 16 (D) 20

94. If $f: IR \rightarrow IR$ & $g: IR \rightarrow IR$ defined by $f(x) = 2x + 3$ & $g(x) = x^2 + 7$, then the value of x for which $f(g(x)) = 25$ is :

- (A) ± 1 (B) ± 2
 (C) ± 3 (D) ± 4

95. The identity element for which the binary operation * defined on

$Q - \{0\}$ as $a * b = \frac{ab}{2} \forall a, b \in Q - \{0\}$ is :

- (A) 1 (B) 0
 (C) 2 (D) None of these

96. Solve $\tan^{-1}\left(\frac{x}{y}\right) - \tan^{-1}\left(\frac{x-y}{x+y}\right)$ is equal to

- (A) $\frac{\pi}{2}$ (B) $\frac{\pi}{3}$
 (C) 0 (D) None of these

97. The equation $2 \cos^{-1} x + \sin^{-1} x = \frac{11\pi}{6}$ has

- (A) No solution (B) only one solution
 (C) two solutions (D) three solutions

98. If A is square matrix such that $A^2 = A$, then $(I + A)^3 - 7A$ is equal to,

- (A) A (B) $I - A$
 (C) I (D) $3A$

99. Total number of possible matrices of order 3×3 With each entry 2 or 0 is

- (A) 9 (B) 27
 (C) 81 (D) 512

100. The number of distinct real roots of

$$\begin{vmatrix} \sin x & \cos x & \cos x \\ \cos x & \sin x & \cos x \\ \cos x & \cos x & \sin x \end{vmatrix} = 0$$
 in the interval

$$-\frac{\pi}{4} \leq x \leq \frac{\pi}{4}$$
 is -

- (A) 0 (B) 2 (C) 1 (D) 3

101. If the equation

$$a(y+z) = x, b(z+x) = y, c(x+y) = z$$

have non-trivial solutions then the value of

$$\frac{1}{1+a} + \frac{1}{1+b} + \frac{1}{1+c}$$
 is:

- (A) 1 (B) 2 (C) -1 (D) -2

102. Let, $f(t) = \begin{vmatrix} \cos t & t & 1 \\ 2 \sin t & t & 2t \\ \sin t & t & t \end{vmatrix}$, then $\lim_{t \rightarrow 0} \frac{f(t)}{t^2} =$

- (A) 0 (B) -1 (C) 2 (D) 3

103. If Rolle's theorem holds for the function

$$f(x) = x^3 + bx^2 + ax + 5$$
 on $[1, 3]$ with

$c = \left(2 + \frac{1}{\sqrt{3}}\right)$, Find the value of a & b

- (A) $a = 11, b = -6$ (B) $a = 10, b = 6$
 (C) $a = -11, b = 6$ (D) $a = 11, b = 6$

104. The derivative of $y = (1-x)(2-x)\dots(n-x)$ at $x = 1$ is equal to -

- (A) 0 (B) $(-1)(n-1)!$
 (C) $n! - 1$ (D) $(-1)^{n-1}(n-1)!$

105. Let, $f(x) = \frac{1 - \tan x}{4x - \pi}, x \neq \frac{\pi}{4}, x \in \left(0, \frac{\pi}{2}\right)$. If

$f(x)$ is continuous in $\left(0, \frac{\pi}{2}\right)$, then $f\left(\frac{\pi}{4}\right) =$

- (A) 1 (B) $\frac{1}{2}$
 (C) $-\frac{1}{2}$ (D) -1

106. If $f(x) = -\sqrt{25 - x^2}$, then $\lim_{x \rightarrow 1} \frac{f(x) - f(1)}{x - 1}$

is equal

- (A) $\frac{1}{24}$ (B) $\frac{1}{5}$ (C) $-\sqrt{24}$ (D) $\frac{1}{\sqrt{24}}$

107. The value of $\int_0^1 \tan^{-1}\left(\frac{2x-1}{1+x-x^2}\right) dx$ is equal to,
- (A) 1 (B) -1
(C) $\frac{\pi}{4}$ (D) None of these
108. If $\int \frac{dx}{(x+2)(x^2+1)} = a \log|1+x^2| + b \tan^{-1} x + \frac{1}{5} \log|x+2| + c$, then
- (A) $a = \frac{-1}{10}, b = \frac{-2}{5}$ (B) $a = \frac{1}{10}, b = \frac{-2}{5}$
(C) $a = \frac{-1}{10}, b = \frac{2}{5}$ (D) $a = \frac{1}{10}, b = \frac{2}{5}$
109. The area bounded by the curve $y = x|x|$, x-axis & the ordinates $x = -1$ & $x = 1$ is given by -
- (A) 0 (B) $\frac{1}{3}$
(C) $\frac{2}{3}$ (D) $\frac{4}{3}$
110. If $y = 2 \sin x + \sin 2x$ for $0 \leq x \leq 2\pi$, then the area enclosed by the curve & x-axis is
- (A) $\frac{1}{2}$ sq. units (B) 8 sq. units
(C) 12 sq. units (D) 4 sq. units
111. The general solution of the differential equation $e^x dy + (ye^x + 2x) dx = 0$ is
- (A) $xe^y + x^2 = C$ (B) $xe^y + y^2 = C$
(C) $ye^y + x^2 = C$ (D) $ye^x + x^2 = C$
112. The curve for which the slope of the tangent at any point is equal to the ratio of the abscissa to the ordinate of the point is:
- (A) an ellipse (B) parabola
(C) circle (D) rectangular -hyperbola
113. If $|\vec{a}| = 8, |\vec{b}| = 3$ & $|\vec{a} \cdot \vec{b}| = 12\sqrt{3}$, then the value of $|\vec{a} \times \vec{b}|$ is
- (A) 12 (B) $12\sqrt{3}$,
(C) 6 (D) $4\sqrt{3}$
114. Find λ , so that the vectors $2\hat{i} - \hat{j} + \hat{k}, \hat{i} + 2\hat{j} - 3\hat{k}$ and $3\hat{i} + \lambda\hat{j} + 5\hat{k}$ are co-planar
- (A) 4 (B) -3
(C) 0 (D) none of these
115. If $|\vec{a}| = 4$ & $-3 \leq \lambda \leq 2$ then the range of $|\lambda\vec{a}|$ is -
- (A) [0, 8] (B) [-12, 8]
(C) [0, 12] (D) [8, 12]
116. A line makes angle α, β, γ with x-axis y-axis & z-axis respectively then $\cos 2\alpha + \cos 2\beta + \cos 2\gamma$ is equal to:
- (A) 2 (B) 1
(C) -2 (D) -1
117. If the straight lines $\frac{x-1}{k} = \frac{y-2}{2} = \frac{z-3}{3}$ and $\frac{x-2}{3} = \frac{y-3}{k} = \frac{z-1}{2}$ intersect at a point then the integer k is equal to:
- (A) -5 (B) 5
(C) 2 (D) -2
118. If L be the line of intersection of the planes $2x + 3y + z = 1$ & $x + 3y + 2z = 2$. If L makes an angle α with the +ve x-axis, then $\cos \alpha$ equals:
- (A) $\frac{1}{\sqrt{3}}$ (B) $\frac{1}{2}$
(C) 1 (D) $\frac{1}{\sqrt{2}}$
119. Let a student attempts a M.C.Q (with more than one correct or one correct), he either knows the answer (or) copies it (or) make a guess with respective probabilities as 0.3, 0.5 & 0.2. Also the prob. that his answer is correct if he copies is $\frac{1}{2}$. Now, it was found that his answer is correct find the probability that he knows the answer.
- (A) $\frac{15}{31}$ (B) $\frac{45}{62}$
(C) $\frac{62}{150}$ (D) $\frac{3}{10}$
120. 100 cards are numbered from 1 to 100. Find the probability of getting a prime number.
- (A) $\frac{3}{4}$ (B) $\frac{27}{50}$
(C) $\frac{1}{4}$ (D) $\frac{29}{100}$

SPACE FOR ROUGH WORK

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AJMAL SUPER 40

OUR ACHIEVEMENTS



OUTSTANDING PERFORMERS OF NEET & JEE, 2020

JAMINUL A. BARBHUIYA (SILCHAR) NEET 2020 JNMC, ALIGARH	MAMUN H. BARBHUIYA (BALKANGANI) NEET 2020 GMC	ASHIQUE E. MONDAL (S. S. BANIKACHAR) NEET 2020 GMC	MOHD DANIAL (KARIMGANJ) NEET 2020 GMC	SAHIN A. TALUKDAR (DIBRUIGUR) NEET 2020 GMC	EUNAJ A. RAHMAN (DIBRUIGUR) NEET 2020 GMC	GOLAM MOSTAFA SK (KARIMGANJ) NEET 2020 GMC	MUJAKKIR HUSSAIN (HOJAI) NEET 2020 GMC	DILSHAD A. LASKAR (BALKANGANI) NEET 2020 GMC	MOHD. ABDULLAH (KARIMGANJ) NEET 2020 GMC	JAMAL UDDIN SK (DIBRUIGUR) NEET 2020 GMC

MARUF AHMED (HOJAI) NEET 2020 GMC	KRISHIMA GHOSH (HOJAI) NEET 2020 GMC	GANIM ATHAR LASKAR (HOJAI) NEET 2020 GMC	NAYEEMA F. BORBHUYAN (HOJAI) NEET 2020 GMC	DIBYA MARAK (W. KARBI ANGLONG) NEET 2020 GMC	NOZIBUL ADUD (HOJAI) NEET 2020 GMC	IMAM UDDIN (KARIMGANJ) NEET 2020 AMC	SIRAJUL HOQUE (DIBRUIGUR) NEET 2020 AMC	SHAHANAAZ HUSSAIN (S. S. BANIKACHAR) NEET 2020 AMC	MOMINUR RAHMAN (DIBRUIGUR) NEET 2020 AMC	RUHULLAH AHMED (BARPETA) NEET 2020 AMC

D. SHAHABUL ISLAM (BARPETA) NEET 2020 AMC	BASU JOISHI (DIBRUIGUR) NEET 2020 AMC	EIAMIN ALI (HOJAI) NEET 2020 AMC	ABDUL QUADIR CHY. (HOJAI) NEET 2020 AMC	INDIRA SAHA (HOJAI) NEET 2020 AMC	VEDANTA BIJOY DAS (HOJAI) NEET 2020 AMC	SILPI ENGTIPI (W. KARBI ANGLONG) NEET 2020 AMC	REZWAN A. BARBHUIYA (DIBRUIGUR) NEET 2020 SMC	SHAHANARA KHANAM (KARIMGANJ) NEET 2020 SMC	IQBAL H. TALUKDAR (HOJAI) NEET 2020 SMC	MEHBUB H. MONDAL (DIBRUIGUR) NEET 2020 SMC

ABU TAHER LASKAR (BALKANGANI) NEET 2020 SMC	S. SUTRADHAR (HOJAI) NEET 2020 SMC	SADIAH TASNEM (HOJAI) NEET 2020 SMC	UJJAH AHMED (HOJAI) NEET 2020 JMC	FAHAD HUSSAIN (KARIMGANJ) NEET 2020 JMC	SAYEF ULLAH (KARIMGANJ) NEET 2020 JMC	ANKAN ROY (HOJAI) NEET 2020 JMC	SOYED AHMED ALI (DIBRUIGUR) NEET 2020 FAMC	RAJDEEP RAHMAN (BARPETA) NEET 2020 FAMC	KHALADA BEGUM CHY (KARIMGANJ) NEET 2020 FAMC	RAJIBUL ISLAM (BARPETA) NEET 2020 FAMC

SALMA AHMED (DIBRUIGUR) NEET 2020 FAMC	SHORIFA KHATUN (DIBRUIGUR) NEET 2020 FAMC	SURAYYA KHANAM (KARIMGANJ) NEET 2020 FAMC	PROKASH BORDOLOI (W. KARBI ANGLONG) NEET 2020 FAMC	HUNNILI SINGERPI (W. KARBI ANGLONG) NEET 2020 FAMC	HAZRUL ALOM (HOJAI) NEET 2020 TMC	SUBHA S. BARBHUIYA (SILCHAR) NEET 2020 TMC	MUSTAFIJUR RAHMAN (HOJAI) NEET 2020 TMC	BABOR HUSSAIN (DIBRUIGUR) NEET 2020 TMC	ABRAR M. TAPADAR (KARIMGANJ) NEET 2020 TMC	MUZAID ALI (BARBANSI) NEET 2020 TMC

JUBAIR AHMED (S. S. BANIKACHAR) NEET 2020 TMC	RUBIYA SULTANA (KARIMGANJ) NEET 2020 TMC	MARTINA TUDU (DIBRUIGUR) NEET 2020 TMC	OLI ULLAH (KARIMGANJ) NEET 2020 DMC	REZZAQUE ALI SHEIKH (HOJAI) NEET 2020 DMC	BAHARUL I. CHY (KARIMGANJ) NEET 2020 DMC	ASHISH GUPTA (HOJAI) NEET 2020 DMC	SHAHREEN SULTANA (HOJAI) NEET 2020 DMC	SERDIHUN BEYPI (E. KARBI ANGLONG) NEET 2020 DMC	MUKUTA BEYPI (W. KARBI ANGLONG) NEET 2020 DMC	ABIDA SULTANA (S. S. BANIKACHAR) NEET 2020 FAMC

ARMINA PARBIN (BARPETA) NEET 2020 RDC, GHY	RUHUL A. CHOUDHURY (DIBRUIGUR) NEET 2020 RDC, GHY	RAHIM HUSSAIN (BARPETA) NEET 2020 GDC, SILCHAR	HUSNA PARVEEN (KARIMGANJ) NEET 2020 GDC, SILCHAR	SHIVA JYOTI SAHA (HOJAI) NEET 2020 GDC, SILCHAR	ASHRAFUL HUSSAIN (BALKANGANI) NEET 2020 GHY	KARAN UPADHYAYA (KARBI ANGLONG) JEE (MAINS) 2020 IIT (GUWAHATI)	JIR ET KATHARPI (KARBI ANGLONG) JEE (MAINS) 2020 IIT (KHARAGPUR)	RUHAN MOZUMDAR (HOJAI) JEE (ADV) 2020 IIT (DARWAD)	ABU S. S. CHOUDHURY (BALKANGANI) JEE (ADV) 2020 NIT (SILCHAR)	FARUK ABDULLA (KARIMPUR) JEE (ADV) 2020 NIT (SILCHAR)

SIMON KUMAR DAS (KARIMGANJ) JEE (ADV) 2020 NIT (SILCHAR)	DIPAK SARMAH (BARBI GHONGRI) JEE (ADV) 2020 TU (TEZPUR)	SAKIBUL ISLAM (KARIMGANJ) NEET 2020 NIT (SILCHAR)	NIKUNJ BERIWAL (DIBRUIGUR) JEE (ADV) 2020 AEC (GHY)	A. MATIN SARKAR (DIBRUIGUR) JEE 2020 NIT (SILCHAR)	MUHAMMAD AHMED (HOJAI) NEET 2020 AEC (GHY)	ABDUL KAYUM (BARPETA) NEET 2020 AEC (GHY)	SAFIQ I. SIDDIQUE (BARBANSI) JEE (ADV) 2020 NIT (SILCHAR)	ANURAG SAMADDAR (KARIMPUR) JEE (ADV) 2020 AEC (GHY)

80+ Students got selected for Medical & 18+ Students got selected in Engineering

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