120/2025-K

INSTRUCTIONS TO CANDIDATES

1. The question paper will be given in the form of a Question Booklet. There will be four versions of question booklets with question booklet alpha code viz. A, B, C & D.

2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the question booklet.

3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.

4. If you get a question booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.

5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your question booklet is un-numbered, please get it replaced by new question booklet with same alpha code.

6. The question booklet will be sealed at the middle of the right margin. Candidate should not open the question booklet, until the indication is given to start answering.

7. Immediately after the commencement of the examination, the candidate should check that the question booklet supplied to him contains all the 100 questions in serial order. The question booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.

8. A blank sheet of paper is attached to the question booklet. This may be used for rough work.

9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**

10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball-Point Pen in the OMR Answer Sheet.

11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**

12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.

13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

120/2025-K

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Which of the following statement/s about 'demonetisation' is/are true?

    (i) Demonetisation is the process by which a nation's economic unit of exchange loses its legally enforceable validity.

    (ii) Raghuram Rajan was the Governor of Reserve Bank at the time of demonetization of 2016.

    (iii) On November 8, 2016, the central government has notified that the specified bank notes of denominations of the existing series of the value, of Rs. 500 and Rs. 1,000 shall cease to be legal tender with effect from November 9, 2016.

    (iv) Demonetisation of 2016 was presented as an initiative of the central government targeted to address disparate evils plaguing the nation's economy including practices of hoarding black money and money laundering.

    (A) (i), (ii), (iii) and (iv)   (B) (i), (iii) and (iv)

    (C) (i) and (iv)   (D) (i), (ii) and (iv)

2. Which of the following statement/s about Han Kang who won the Nobel Prize for Literature in 2024 is/are incorrect?

    (i) Han Kang began her career in 1993 as a poet, but has since written mainly novels and short stories.

    (ii) Her most famous works are 'The Vegetarian', 'Human Acts' and 'We Do Not Part'.

    (iii) 'The Vegetarian' was first published in 2017.

    (iv) 'The Vegetarian' tells the story of a graphic designer who suddenly decides to stop eating meat.

    (A) (i) and (iv)   (B) (i) only

    (C) (iii) only   (D) (iv) only

3. Which of the following statement/s about Niti Ayog is/are incorrect?

    (i) It started functioning since 01/04/2016.

    (ii) Its full form is National Institution for Transforming India.

    (iii) One of its declared objectives is to foster cooperative federalism.

    (iv) Narendra Damodardas Modi was its first chairman.

    (A) (i) only   (B) (ii) and (iii)

    (C) (iv) only   (D) (i) and (iv)

4. Which of the following does not match?

    (i)   Lord Lytton   —   Vernacular Press Act
    (ii) Lord Ripon   —   Local Self Government
    (iii) Lord Linlithgow —   Delhi Durbar
    (iv) Lord Mayo   —   Census

    (A) (i) and (iii)   (B) (iii) only

    (C) (i) and (iv)   (D) (iv) only

5. To which of the following five year plans, the motto '*gharibi hatao*' (Removal of Poverty) is associated?

    (A) Third Five Year Plan   (B) Fourth Five Year Plan

    (C) Second Five Year Plan   (D) Fifth Five Year Plan

6. Arrange the following events occurred in 1919 in exact chronological sequence

    (i) Formation of the 'Disorders Inquiry Committee'

    (ii) Rowlatt Act

    (iii) Jalianwala Bagh Massacre

    (iv) Renunciation of Knighthood by Rabindranath Tagore

    (A) (iii), (i), (ii), (iv)   (B) (ii), (iii), (iv), (i)

    (C) (ii), (iii), (i), (iv)   (D) (iii), (i), (iv), (ii)

7. Which of the following does not match?

    (i) Brahmananda Sivayogi   — *Adwaitha chintha paddhathi*

    (ii) Sri Narayana Guru   — *Darsanamala*

    (iii) Chattampi Swamikal   — *Pracheena malayalam*

    (iv) V.T. Bhattathirippad   — *Markkudakkullile mahanarakam*

    (A) (i) and (iv)   (B) (i) only

    (C) (iv) only   (D) (iii) only

8. Which of the following statement/s about the 71st National Film Awards declared on 1st August 2025 is/are incorrect?

    (i) '12th Fail', the Hindi language biographical film directed by Vidhu Vinod Chopra won the Best Feature Film Award.

    (ii) Shah Rukh Khan and Vikrant Massey shared the Best Actor award for their performances in *Jawan* and *12th Fail* respectively.

    (iii) *Ullozhukku* directed by Christo Tomy is adjudged the Best Malayalam Feature Film.

    (iv) Vijayaraghavan has won the award for 'Best Actor in a Supporting Role' for his role in the Malayalam movie *Ullozhukku*.

    (A) (iii) and (iv)   (B) (iii) only

    (C) (iv) only   (D) (i) and (iii) only

9. What was the result of the cricket test match between India and England held at Edgbaston in July 2025?

    (A) India beat England for 336 runs

    (B) England won the match by 3 wickets

    (C) India won the match by 3 wickets

    (D) Ended in a draw

10. Which of the following statement/s about Marayoor is/are true?

    (i) Marayoor is a small town situated in Idukki Taluk.

    (ii) There exist some prehistoric rock paintings in Marayoor.

    (iii) Marayoor was famous for its sandalwood forests.

    (iv) A beautiful sight in Marayoor is the scenic Pambar river.

    (A) All the above   (B) (i), (ii) and (iii)

    (C) (ii), (iii) and (iv)   (D) (i), (iii) and (iv)

11. Choose the appropriate question tag :
Please stop talking, _____?

    (A)   won't you?   (B)   will you?
    (C)   don't you?   (D)   do you?

12. Choose the word which is opposite in meaning to the given word :
Discrepancy

    (A)   consistency   (B)   respectful
    (C)   disrespectful   (D)   inconsistency

13. Pick out the right synonym for the word, awful from the options given :

    (A)   nice   (B)   fight
    (C)   friendly   (D)   terrible

14. Find the meaning of idiom, "beat around the bush".

    (A)   to agree completely   (B)   avoid saying something
    (C)   clear the forest   (D)   pamper one's baby

15. Complete the sentence with the correct preposition from the choices given :
We are very excited _____ our trip to Dubai next week.

    (A)   at   (B)   with
    (C)   over   (D)   about

16. Write the right form of the verb that agrees with the subject :
In his garden, the lights _____ on automatically.

    (A)   turns   (B)   turning
    (C)   is turning   (D)   turn

17. Write the comparative form of the adjective in the sentence given :
Michelle is _____ (tall) than her sister.

    (A)   tallest   (B)   tall
    (C)   taller   (D)   the tallest

18. Fill in the blank with suitable article :
This is _____ man I saw in Malaysia.

    (A)   an   (B)   a
    (C)   the   (D)   none

19. Choose the right one from the option to form the correct phrasal verb :
We couldn't take _____ our jackets in the whole trip. It was very cold everywhere.

    (A)   down   (B)   up
    (C)   off   (D)   in to

20. Select the word with correct spelling :
Mrs. Naveen introduced the new _____ to the PTA members.

    (A)   principle   (B)   prinsiple
    (C)   principal   (D)   prinsipal

21. A wire of length 3 m and cross-sectional area 2 mm² is stretched by a force of 200 N. If Young's modulus of the material is 1.5×10^{11} Pa, what is the extension produced :

(A) 0.2 mm
(B) 2 mm
(C) 4 mm
(D) 0.02 mm

22. Estimate the work done against the surface tension in blowing a soap bubble of diameter 2 cm. The surface tension of soap solution is $2.5 \times 10^{-2} \dfrac{N}{m}$:

(A) $6.28 \times 10^{-5} J$
(B) $3.14 \times 10^{-5} J$
(C) $6.28 \times 10^{-3} J$
(D) $3.14 \times 10^{-3} J$

23. When two pipes having diameter (d), converge to form a pipe of diameter (D). What should be the relation between d and D, such that the velocity in the third pipe becomes one by fourth of that in each of the two pipes?

(A) $d = \dfrac{D}{2\sqrt{2}}$
(B) $d = \dfrac{D}{\sqrt{2}}$
(C) $d = \sqrt{2}\, D$
(D) $d = \dfrac{D}{2}$

24. Water from a tap emerges vertically downwards with an initial speed of $\sqrt{2.0}$ m/s. The cross-sectional area of the tap is $10^{-4}\, m^2$. Assume that the pressure is constant throughout the stream of water and that the flow is steady, the cross-sectional area of stream 0.10 m below the tap is (Given $g = 10$ m/s²) :

(A) $2 \times 10^{-4} m^2$
(B) $\sqrt{2} \times 10^{-4} m^2$
(C) $\dfrac{10^{-4}}{2} m^2$
(D) $\dfrac{10^{-4}}{\sqrt{2}} m^2$

25. A Carnot's engine whose temperature of the source is 500 K takes 2000 J of heat at this temperature and rejects 1500 J of heat to the sink. Calculate the efficiency of the engine :

(A) 20%
(B) 25%
(C) 15%
(D) 30%

26. 10 g at 0°C is mixed with 10 g of steam at 100°C. What is the final temperature of the mixture?

(A) 50°C
(B) 25°C
(C) 100°C
(D) 75°C

27. An ice cube at 0°C is dropped on the ground melts to water at 0°C. If all the kinetic energy of the ice went into melting it, from what height did it fall. (Latent heat of fusion of ice = $3.35 \times 10^5 \dfrac{J}{Kg}$); $g = 10$ m/s² ?

   (A) 3.35×10^5 m   (B) 3.35×10^3 m

   (C) 3.35×10^4 m   (D) 3.35×10^6 m

28. In Newton's rings experiment, diameter of the 5th and 25th rings were 0.562 cm and 0.762 cm. Find the radius of curvature of the plano convex lens if the wavelength of the light used was 662 nm. :

   (A)   0.5 m   (B)   0.05 m

   (C)   0.75 m   (D)   0.075 m

29. The core and cladding of a silica optical fiber have refractive index $n_1 = 1.55$ and $n_2 = 1.44$. Calculate the acceptance angle of the optical fiber :

   (A)   25°   (B)   35°

   (C)   45°   (D)   50°

30. How many half period elements are there in a circular portion of $2 \times 10^{-2}\, m$ radius of a plane wavefront given that the wavelength is $500 \times 10^{-7}\, m$ and the distance of the point of observation of the wavefront is 2 meter?

   (A)   8   (B)   2

   (C)   4   (D)   6

31. Which of the following is not a possible value for the magnitude of the orbital angular momentum in hydrogen atom?

   (A) $\sqrt{12}\,\hbar$ (B) $\sqrt{20}\,\hbar$

   (C) $\sqrt{30}\,\hbar$ (D) $\sqrt{40}\,\hbar$

32. Obtain the Miller Indices of a plane parallel to y and z axis :

   (A)   (010)   (B)   (111)

   (C)   (001)   (D)   (100)

33. The photoelectric threshold wavelength of silver is 275 nm. Find the maximum kinetic energy of the ejected electron when the surface of the silver is illuminated with ultra violet light of wavelength 200 nm. (where $h = 6.63 \times 10^{-34} J/s$) :

   (A) $1.98 \times 10^{-19}\, J$ (B) $1.98 \times 10^{-20}\, J$

   (C) $1.98 \times 10^{-18}\, J$ (D) $1.98 \times 10^{-21}\, J$

34. Archeologists unearth charcoal from an ancient campfire and find its carbon-14 activity per unit mass to be 7.4% activity measured in living wood. Find the half-life period of the charcoal :

(A) 5370 y (B) 5730 y

(C) 3750 y (D) 3570 y

35. If the position of a particle is known with high accuracy, then according to Heisenberg's principle :

(A) Its momentum is exactly known

(B) Its momentum becomes highly uncertain

(C) Its momentum is zero

(D) Nothing can be predicted

36. Which of the following statements about para-hydrogen is correct?

(A) It is more stable at room temperature

(B) It has parallel nuclear spins

(C) It has antiparallel nuclear spins and total spin = 0

(D) It is unstable below 20 K

37. Which of the following is an example of intermolecular hydrogen bonding?

(A) Para-nitrophenol   (B) Ortho-nitrophenol

(C) Both (A) and (B)   (D) None

38. Peroxyacetyl nitrate (PAN), a constituent of photochemical smog, is formed from the reaction of nitrogen dioxide with :

(A) Sulfur dioxide   (B) Ozone

(C) Volatile organic compounds   (D) Carbon dioxide

39. Which of the following contains a coordinate covalent bond?

(A) H_2 molecule   (B) O_2 molecule

(C) NaCl   (D) H_3O^+ ion

40. Markovnikov's rule specifically applies to :

(A) Radical addition reactions

(B) Elimination reactions

(C) All nucleophilic substitutions

(D) Electrophilic additions where the electrophile is H^+

41. The Lucas test is most useful for alcohols containing :

    (A)   More than six carbons

    (B)   Less than six carbons

    (C)   Aromatic rings only

    (D)   Polyhydroxy compounds only

42. The configuration of natural rubber is predominantly :

    (A)   cis-1, 4-polyisoprene   (B)   trans- 1, 4-polyisoprene

    (C)   cis-1, 2-polyisoprene   (D)   trans-1, 2-polyisoprene

43. Which of the following is currently used as an octane booster instead of TEL?

    (A)   Benzene and Toluene

    (B)   Cyclohexane and n-Heptane

    (C)   MTBE and ETBE

    (D)   Carbon tetrachloride and Chloroform

44. The expression $PV = (1/3) \, mNc^2$ represents :

    (A)   Van der Waals equation   (B)   Kinetic gas equation

    (C)   Dalton's law of partial pressures   (D)   Joule-Thomson effect

45. If the internal energy of a system increases by 40 J and at the same time the system does 10 J of work, the heat absorbed is :

    (A)   30 J   (B)   –50 J

    (C)   –30 J   (D)   50 J

46. Which of the following terms correctly describes the turnover frequency (TOF) of a catalyst?

    (A)   The number of substrate molecules adsorbed per unit surface area

    (B)   The number of catalytic cycles a site undergoes per unit time

    (C)   The reciprocal of the activation energy

    (D)   The rate of desorption of products per gram of catalyst

47. The Hittorf method for determining transport numbers is based on :

    (A)   The speed of ion migration

    (B)   The difference in ionic conductance

    (C)   The change in concentration of ions observed in the vicinity of the electrodes

    (D)   The emf of a concentration cell

48. In aliphatic ketones, the carbonyl stretching frequency is usually observed in the range :

    (A) $1710 - 1720 \ cm^{-1}$ (B) $1660 - 1700 \ cm^{-1}$

    (C) $1600 - 1650 \ cm^{-1}$ (D) $1750 - 1800 \ cm^{-1}$

49. Find out the algae which shows multiaxial thallus organization :

 (A) *Batrachospermum*

 (B) *Polysiphonia*

 (C) *Oedogonium*

 (D) *Volvox*

50. Which among the following is an adaptation of hydrophytes?

 (A) Velamen tissue

 (B) Sunken stomata

 (C) Heterophily

 (D) Salt glands

51. Which among the following is correct regarding potato tuber?

 (A) Stem tuber

 (B) Root tuber

 (C) Bulbil

 (D) Corm

52. The fruit type in arecanut is :

 (A) Achene

 (B) Capsule

 (C) Drupe

 (D) Follicle

53. Which among the following is not correct regarding secondary growth in dicot root?

 (A) Cambial ring is completely secondary in origin

 (B) The cambial ring is wavy initially

 (C) Lenticels are not very prominent

 (D) Periderm originates from cortical cells

54. Which among the following hormone can destroy weeds?

 (A) Ethylene

 (B) 2,4-D

 (C) Abscisic acid

 (D) Gibberellins

55. Which is the final electron donor in non-cyclic photophosphorylation?

    (A) Water

    (B) ATP

    (C) Cytochrome

    (D) Ferredoxin

56. Find out the major drawback of transpiration pull theory from the following :

    (A) It fails to explain the cohesion and adhesion of water molecules

    (B) It fails to explain the role of stomata

    (C) It could not explain how plants handle cavitation

    (D) Mineral absorption mechanism is not explained

57. Edible palm oil is obtained from _____ part of the oil palm fruit.

    (A) Endocarp

    (B) Epicarp

    (C) Endosperm

    (D) Mesocarp

58. Find out the wrong statement regarding hemp :

    (A) Hemp is obtained from bast fibers

    (B) Sun hemp is *Crotalaria juncea*

    (C) Hemp is obtained from the seed of *Corchorus capsularis*

    (D) The botanical name of hemp is *Cannabis sativa*

59. A rain is considered as acid rain when the pH is less than :

    (A) 5.6

    (B) 6.2

    (C) 7.0

    (D) 6.0

60. Which among the following is/are correct?

    (i) Olive ridley sea turtles are conserved in Gahirmatha Marine Wildlife Sanctuary

    (ii) First marine national park in India is located at Gulf of Kutch, Gujarat

    (iii) Jim Corbett national park is the first national park in India

    (iv) African cheetahs were recently introduced in Kaziranga national park

        (A) All of the above (i), (ii), (iii), (iv)

        (B) Only (i) and (ii)

        (C) Only (iii)

        (D) (i), (ii) and (iii)

61. Choose the incorrect statement :

 (A) The concept of biodiversity hotspots was developed by Norman Myers

 (B) The Great Banyan is a banyan tree (*Ficus benghalensis*) is conserved in Acharya Jagadish Chandra Bose Indian Botanic Garden, Kolkata

 (C) The botanical garden in Kerala is famous for aquatic plant conservation is Malabar Botanical Garden and Institute for Plant Sciences

 (D) Nilgiri Tahr is conserved in Aaralam wildlife sanctuary

62. Choose the correct statement from the following :

 (i) Noise above 65 decibels (dB) is considered as noise pollution

 (ii) Bromine can cause depletion of ozone layer

 (iii) CFCs can cause ozone layer depletion

 (iv) Deepwater Horizon oil spill, largest marine oil spill occurred in the Gulf of Mexico

  (A) Only (iii) and (iv) correct

  (B) All are correct (i), (ii), (iii) and (iv)

  (C) Only (i), (iii) and (iv) are correct

  (D) Only (iii) is correct

63. Angina pectoris means :

 (A) Interference with the blood supply to the brain

 (B) The volume of water retained in the vascular system regulated by hormones

 (C) Chest pain occurs in the heart and often also in the left arm and shoulder

 (D) The volume of blood pumped by each ventricle per minute

64. Which of the following clotting factor known as factor IV?

 (A) Prothrombin

 (B) Hageman factor

 (C) Calcium

 (D) Fletcher factor

65. A shift of oxygen hemoglobin dissociation curve to the right in response to increased blood carbondioxide and hydrogen ions are known as :

 (A) Bohr effect

 (B) Buffer effect

 (C) Phosphate effect

 (D) Shift effect

66. The portion of myofibril that lies between two successive '*Z*' disc is called :

 (A) Sarcolemma   (B) Sarcomere

 (C) H-zone   (D) Actomere

67. Relaxin is secreted by :

   (A)   Pituitary gland

   (B)   Pineal gland

   (C)   Thyroid gland

   (D)   None of these

68. Most abundant immunoglobulin in human plasma is :

   (A)   IgG   (B)   IgM

   (C)   IgE   (D)   IgA

69. Which of the following statements are correct?

   (i)   The 'T' wave on the ECG corresponds to the repolarisation of the ventricles

   (ii)   The AV node provides the only pathway for conduction of the depolarisation from atria to the ventricles

   (iii) The second peak QRS in ECG, is produced by ventricular repolarisation

   (iv)   Baroreceptors located in the arch of aorta detects changes in arterial blood pressure

      (A)   All of the above

      (B)   Only (i), (ii) and (iv)

      (C)   Only (iii) is correct

      (D)   Only (ii) and (iv)

70. The domains of chromatin that are not expressed are called :

   (A)   Euchromatin

   (B)   Nucleosome

   (C)   Heterochromatin

   (D)   Demochromatin

71. Read the following statements :

   (i)   Bacterial cell wall consist of peptidoglycan

   (ii)   Down syndrome is a developmental defect produced by trisomy 21

   (iii) Each strand of DNA is made up of repeating sugar and phosphate units joined by hydrogen bonds

   (iv)   Satellite DNAs are unique to an individual

      (A)   All the statements are correct

      (B)   All the statements are wrong

      (C)   Only (i) is correct

      (D)   Only (iii) is incorrect

72. Identify Klinefelter's syndrome :

    (A) 44A + XXY   (B) 44A + XO

    (C) 45A + XX   (D) 45A + XXY

73. DNA duplex is coiled around a core of eight histone proteins forms :

    (A) Scaffolden   (B) Solenoid

    (C) Nucleosome   (D) Rosette

74. Cell mediated immunity is :

    (A) One type of innate immunity

    (B) Develops by circulating antibodies

    (C) Activated through activated B-lymphocytes

    (D) Acquired immunity activated by T-lymphocytes

75. Which of the following statement is incorrect?

    (A) The resting membrane potential of large nerve fibers when not transmitting nerve signal is about –90 millivolts

    (B) GABA is an example of neuro transmitter

    (C) Broca's area in brain is associated with vision

    (D) Dyslexia is the condition in which person may able to see words but not be able to interpret their meanings

76. Which among the following is not related to allergy?

    (A) Histamine

    (B) Mast cells

    (C) Basophils

    (D) Autograft

77. If A and B are two square matrices of same order, then $AB = I$ implies :

    (A) Only A is invertible

    (B) Only B is invertible

    (C) Both A and B are invertible

    (D) None of the above

78. Characteristic roots of a Hermitian matrix are :

    (A) All equal

    (B) All real numbers

    (C) Conjugate pairs

    (D) All complex numbers

79. If a,b,c are the distinct cube roots of unity (1), then which of the following is true?

(A) $a + b^2 + c^3 = 0$

(B) $a + b + c = 1$

(C) $abc = 1$

(D) $abc = 0$

80. Which of the following is the polar form of the complex number $1 + i$?

(A) $2e^{\frac{\pi}{3}i}$

(B) $2e^{\frac{\pi}{4}i}$

(C) $\sqrt{2}e^{\frac{\pi}{3}i}$

(D) $\sqrt{2}e^{\frac{\pi}{4}i}$

81. Polar equation of the line bisecting the 1ˢᵗ and 3ʳᵈ quadrants of the Cartesian plane is :

(A) $r \sin\theta = 1$

(B) $r = \theta$

(C) $\theta = \dfrac{5\pi}{4}$

(D) $r = \dfrac{\pi}{4}$

82. The acute angle between the lines $x - 2y - 2 = 0$ and $3x + 2y - 6 = 0$ is :

(A) $\tan^{-1} 8$

(B) $\tan^{-1} 6$

(C) $\tan^{-1}\dfrac{3}{2}$

(D) $\tan^{-1}\dfrac{2}{3}$

83. What is the value of $\lim_{x \to 1} \dfrac{1 - x}{\log x}$?

(A) -1

(B) 1

(C) 0

(D) Does not exist

84. Which of the following is a point of inflection of the curve $y = 3x^4 - 4x^3 + 1$?

(A) $(0,1)$

(B) $(1,0)$

(C) $\left(\dfrac{2}{3}, \dfrac{8}{3}\right)$

(D) $\left(\dfrac{8}{3}, \dfrac{2}{3}\right)$

85. Order and degree of the differential equation $\dfrac{d^2y}{dx^2} + \left(\dfrac{dy}{dx}\right)^3 + 2xy^2 = 0$ are respectively :

    (A)   1, 2   (B)   2, 1

    (C)   2, 3   (D)   3, 2

86. Which of the following is an exact differential equation?

    (A) $\sec y\,(x\tan y\,dy + dx) = 0$

    (B) $\sin y\,(x\cos y\,dy + dx) = 0$

    (C) $xy\,dx + x^2\,dy = 0$

    (D) $xy\,dy + y^2\,dx = 0$

87. Angle between the vectors $3\hat{i} - 4\hat{k}$ and $-3\hat{j} + 4\hat{k}$ is

    (A) $\tan^{-1}\dfrac{-16}{25}$ (B) $\sec^{-1}\dfrac{-16}{25}$

    (C) $\sin^{-1}\dfrac{-16}{25}$ (D) $\cos^{-1}\dfrac{-16}{25}$

88. Which of the following vector is a solenoidal vector?

    (A) $3x\hat{i} + (2y + z)\hat{j} - 4\hat{k}$

    (B) $(x + 3y)\hat{i} + (y - 2z)\hat{j} + (x - 2z)\hat{k}$

    (C) $(-2x + z)\hat{i} + 3y\hat{j} + 2z\hat{k}$

    (D) $(x - 2z)\hat{i} - (x + 3y)j + (x + 2y)\hat{k}$

89. In the cyclic group Z_{12} (under addition modulo 12), Which of the following is a generator?

    (A)   2   (B)   3

    (C)   5   (D)   8

90. Which of the following is a possible number of elements in a field?

    (A)   1   (B)   6

    (C)   15   (D)   16

91. ಕೆಳಗೆ ಕೊಟ್ಟಿರುವವುಗಳಲ್ಲಿ ಯಾವುದು ಉಳಿದವುಗಳಿಗಿಂತ ಭಿನ್ನವಾಗಿದೆ?

(A) ಅರಣ್ಯ (B) ಬಯಲು

(C) ಕಾನನ (D) ವಿಪಿನ

92. ಇವುಗಳಲ್ಲಿ ಸರಿಯಾದ ಪದವನ್ನು ಗುರುತಿಸಿರಿ.

(A) ಅವಿಶ್ವಾಸ (B) ಅವಿಸ್ವಾಸ

(C) ಅವಿಶ್ವಾಶ (D) ಅವಿಸ್ವಾಶ

93. ಚಿಕವೀರರಾಜೇಂದ್ರ - ಈ ಕಾದಂಬರಿಯನ್ನು ಬರೆದವರು ಯಾರು?

(A) ಶಿವರಾಮಕಾರಂತ (B) ಮಾಸ್ತಿ ವೆಂಕಟೇಶ ಅಯ್ಯಂಗಾರ್

(C) ಯು.ಆರ್. ಅನಂತಮೂರ್ತಿ (D) ಗಿರೀಶ್ ಕಾರ್ನಾಡ್

94. Verification – ಇದರ ಕನ್ನಡ ರೂಪ :

(A) ಅನ್ವೇಷಣೆ (B) ಸಂಶೋಧನೆ

(C) ಪರಿಶೀಲನೆ (D) ಪರಿವರ್ತನೆ

95. ಕೆಳಗೆ ಕೊಟ್ಟಿರುವವುಗಳಲ್ಲಿ ಯಾವುದು ಅನುಕರಣೆಯ ಪದವಾಗಿದೆ?

(A) ಓಡೋಡು (B) ನೋಡುನೋಡು

(C) ಊಟಗೀಟ (D) ಜುಳುಜುಳು

96. ಹೊರರೂಪದಂತೆ ವ್ಯಕ್ತಿಯ ಅಂತರಂಗ ಇರುವುದಿಲ್ಲ ಎಂಬ ಅರ್ಥವನ್ನು ಕೊಡುವ ಗಾದೆಮಾತು :

(A) ಹೊಳೆಯುವುದೆಲ್ಲಾ ಚಿನ್ನವಲ್ಲ   (B) ಮನಸ್ಸಿದ್ದರೆ ಮಾರ್ಗ

(C) ಹಾಸಿಗೆಯಿದ್ದಷ್ಟು ಕಾಲುಚಾಚು   (D) ತುಂಬಿದ ಕೊಡ ತುಳುಕುವುದಿಲ್ಲ

97. ಆಗಮನ - ಇದರ ವಿರೋಧಾರ್ಥ ಪದ ಯಾವುದು?

(A) ನಿಗಮನ   (B) ಅನುಗಮನ

(C) ಪುರೋಗಮನ   (D) ನಿರ್ಗಮನ

98. ಕೆಳಗೆ ಕೊಟ್ಟಿರುವವುಗಳಲ್ಲಿ ಅನ್ಯಭಾಷಾ ಪದ ಯಾವುದು?

(A) ಬಾವಿ   (B) ನೆಲ

(C) ಕಾಗದ   (D) ಬೆಟ್ಟ

99. ವರ್ಗೀಯ ವ್ಯಂಜನಗಳಲ್ಲಿ ಒಟ್ಟು ಎಷ್ಟು ಅಕ್ಷರಗಳಿವೆ?

(A) 9   (B) 15

(C) 19   (D) 25

100. ಇವುಗಳಲ್ಲಿ ಸರಿಯಾದ ವಾಕ್ಯ ಯಾವುದು?

I. ನಾನು ಅವರನ್ನು ನಾಳೆ ಭೇಟಿಯಾಗುವೆನು.

II. ನಾನು ಅವರನ್ನು ನಾಳೆ ಭೇಟಿಯಾದೆನು.

III. ನಾನು ಅವರನ್ನು ನಾಳೆ ಭೇಟಿಯಾಗಲಿರುವೆನು.

IV. ನಾನು ಅವರನ್ನು ನಾಳೆ ಭೇಟಿಯಾಗಿದ್ದೆನು.

(A) I ಮತ್ತು III   (B) I ಮತ್ತು IV

(C) III ಮತ್ತು IV   (D) I ಮತ್ತು II

————————

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK