1.Choose the pronoun in the given sentence: Pray, do not inconvenience yourself.

A. do

B. yourself

C. not

D. pray

2.Choose the adjective in the given sentence: Kolkata is one of the liveliest cities in the world.

A. world

B. one

C. liveliest

D. city

3.The man is important element _____ the environment.

A. to

B. in

C. over

D. of

4.She _____ in this house for years.

A. Lived

B. have lived

C. has lived

D. has been living

5.When _____ ?

A. did you arrive

B. have you arrived

C. has you arrived

D. did you arrived

6.Anil was stopped by the police because he _____ fast.

A. was driving

B. has drive

C. drive

D. has driven

7.After he …………………. painting, he had a shower.

A. finished

B. Had finished

C. has finished

D. finish

8.She has been given a topic to write _____.

A. About

B. on

C. over

D. for

###COMMON###9###9###**Direction:** Choose the most appropriate alternative to complete the sentence:
- ###DONE###

9. He had been in prison _____ 2 years at the time when he was still interested in cards.

A. at

B. in

C. since

D. for

10.

Susan watched a movie at the theatre _____ a friend.

A. of

B. on

C. in

D. with

###COMMON###11###11###**Direction:** Change Direct to Indirect Speech or vice – versa as the case
may be. ###DONE###

11. The Prime Minister said that no one would be allowed to disturb the peace.

A. The Prime Minister said, "We shall not allow anyone to disturb the peace."
B. The Prime Minister said, "No one can disturb the peace."
C. The Prime Minister said, "We would not allow no one to disturb the peace."
D. The Prime Minister said, "No one will disturb the peace."

12.

The main said, "No, I refuse to confess guilt."

A. The man was stubborn enough to confess guilt.
B. The man refused to confess his guilt.
C. The man emphatically refused to confess guilt.
D. The man told that be confesses guilt.

###COMMON###13###13###**Direction:** Change Active to Passive Voice or vice – versa as the case may be. ###DONE###

13. Peter had been opening the window.

A. The window was opened by Peter.
B. The window was being opened by Peter.
C. The window is being opened by Peter.
D. The window has been opened by Peter.

14.

The boy expected the ball.

A. The ball is expected by the boy.
B. The ball had been expected by the boy.
C. The ball has been expected by the boy.
D. The ball was expected by the boy.

15.Pick out the exact meaning of the word: Enigmatic

A. mysterious
B. silence
C. precise
D. vault

16.Choose the correctly punctuated sentence.

A. Sir. I would like you to grant me leave.
B. Sir; I would like you to grant me leave.
C. Sir! I would like you to grant me leave.
D. Sir, I would like you to grant me leave.

17.Choose the correct meaning of the phrase: Bear a grudge

A. take offence
B. take decision
C. follow right path
D. choose right option

18.Choose the correct sentence from the following:

A. There going to help us?
B. The're going to help us.
C. Is they go to help us?
D. Are they going to help us?

###COMMON###19###19###

Each item in this section consists of a part with a bold word/words followed by four words. Select the option that is **nearest in meaning** to the underlined word/words and mark your response on your Answer Sheet accordingly.
###DONE###

19. She reserved her most withering <u>scorn</u> for journalists.

A. disallow

B. disdain

C. highlight

D. willful

20. Choose the antonym for the given word: Repport

A. Unfriendliness

B. Unrapport

C. Disrapport

D. Unbehaviour

###COMMON###21###21### **Direction:** Read the following passage and answer questions 1-5 that follow:

At this stage of civilisation, when many nations are brought in to close and vital contact for good and evil, it is essential, as never before, that their gross ignorance of one another should be diminished, that they should begin to understand a little of one another's historical experience and resulting mentality. It is the fault of the English to expect the people of other countries to react as they do, to political and international situations. Our genuine goodwill and good intentions are often brought to nothing, because we expect other people to be like us. This would be corrected if we knew the history, not necessarily in details but in broad outlines, of the social and political conditions which have given to each nation its present character.

###DONE###

21. According to the author his countrymen should.

A. Read the story of other nations

B. Have a better understanding of other nations

C. Not react to other actions

D. Have vital contacts with other nations

22. Englishmen like others to react to political situations like...

A. Others

B. Us

C. Themselves

D. Each other's

23.The need for a greater understanding between nations.

A. Is more today than ever before

B. Was always there

C. Is no longer there

D. Will always be there

24.The character of a nation is the result of its...

A. Gross ignorance

B. Cultural heritage

C. Socio-politics conditions

D. Mentality

25.

According to the author 'Mentality' of a nation is mainly product of its...

A. Present character

B. International position

C. Politics

D. History

26.The Currency "Dong" belongs to which country?

A. Cambodia

B. Laos

C. Myanmar

D. Vietnam

27.The ratio of width of our National flag to its length is

A. 3:5

B. 2:3

C. 2:4

D. 3:4

28.IOC is abbreviation for: -

A. International Olympic Committee

B. International Olympiad Committee

C. International Organisation of Criminal Court

D. International Organisation of Children

29.N.C.H is known as:

A. National Consumer Helpline

B. National Customer Helpline

C. National College of Hygiene

D. National Craft Head

30.Indian Navy Day is celebrated on _____.

A. 08-Jul

B. 04-Dec

C. 14-Aug

D. 21-Jun

31.Name the sport/event with which Sanjita Chanu, who won the first gold medal for India at the 20th Commonwealth Games is associated?

A. Weightlifting

B. Cycling

C. Shooting

D. Boxing

32.Identify the correct spelling: -

A. Aceelerate

B. Acelerate

C. Accelerate

D. Acellrate

33.In the given series, find the number which is wrong.

97, 91, 86, 83, 79, 77, 76, 76

A. 86

B. 76

C. 91

D. 83

34.The Rath Yatra at Puri is celebrated in honour of which Hindu deity

A. Ram

B. Jaganath

C. Shiva

D. Vishnu

35.Which number will complete the given series?

8, 48, 16, 96, 32, ?

A. 192

B. 150

C. 64

D. 288

36. Children Day is celebrated on?

A. 11 November

B. 14 November

C. 16 November

D. 17 November

37. Who is the newly President of Myanar?

A. Aung San Suu Kyi

B. HtinKyaw

C. Thein Sein

D. Henry Van Thio

38. Who has honoured with the BBC Sports Personality of 2015 award?

A. Rooney

B. Andy Murray

C. Ellie Downie

D. AP McDoy

39. Which state has least coastal area?

A. Goa

B. Kerala

C. Karnatka

D. Tamil Nadu

40. The Capital of Manipur is?

A. Aizwal

B. Imphal

C. Kohima

D. Shillong

41. Name the Commission which had submitted its report of Muzaffarnagar Riots?

A. Verma Commission

B. Sahay Commission

C. Mishra Commission

D. Shan Commission

42.Who has been elected as the new President of the Cricket Association of Bengal (CAB)?

A. Sourav Ganguly

B. Anil Kumble

C. Sunil Gavaskar

D. Mohamed Azaruddin

43.Name the film which has been selected as India's Official entry to the Best Foreign Language category of the 88th Academy or Oscar Awards 2016?

A. PK

B. Haider

C. Court

D. Queen

44.If CONDEMN is coded as CNODMEN, then TEACHER is coded as:

A. TEACHER

B. TAEECHR

C. TCAEEHR

D. TAECEHR

45.If CHAIR is coded as FKDLU the RAID is coded as

A. ULGD

B. ULKG

C. ULDG

D. UDLG

46.Ravi is the brother of Amit's son's son. What is Amit's relation to Ravi?
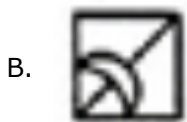
A. Cousin

B. Father

C. Grandfather

D. Son

47.Squander is to money as dissipate is to

A. Light

B. Finance

C. Savings

D. Energy

48.Ride is to Horse as smoke is to

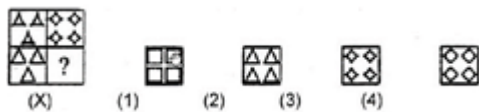A. Chimney

B. Sparkling

C. Pipe

D. Ashes

49.Identify the figure that completes the pattern.

A.

B.

C.

D.

E. none of these

50.Identify the figure that completes the pattern.

A. 1

B. 2

C. 3

D. 4

51.The value of $I = \int_0^{\pi/2} \frac{(\sin x + \cos x)^2}{\sqrt{1 + \sin 2x}} dx$ is

A. 3

B. 1

C. 2

D. 0

52.The value of determinant

$$\begin{vmatrix} \sin\theta & \cos\theta & \sin 2\theta \\ \sin\left(\theta + \dfrac{2\pi}{3}\right) & \cos\left(\theta + \dfrac{2\pi}{3}\right) & \sin\left(2\theta + \dfrac{4\pi}{3}\right) \\ \sin\left(\theta - \dfrac{2\pi}{3}\right) & \cos\left(\theta - \dfrac{2\pi}{3}\right) & \sin\left(2\theta - \dfrac{4\pi}{3}\right) \end{vmatrix}$$ is

A. sinq

B. cosq

C. sinqcosq

D. none of these

53.If AB = A, BA = B and where A and B are square matrices, then

A. $B^2 = B$ and $A^2 = A$

B. $B^2 {}^1 B$ and $A^2 = A$

C. $B^2 = B$ and $A^2 {}^1 A$

D. $B^2 {}^1 B$ and $A^2 {}^1 A$

54.The coefficient of x^r in the expression of

$1 + (1 + x) + (1 + x)^2 + (1 + x)^3 + \dots\dots (1 + x)^n$, where 0 £ r £ n is

A. ^nC_r

B. $^{n+1}C_r$

C. $^{n+1}C_{r+1}$

D. None of these

55. $\displaystyle\int \dfrac{\left(\sin^{-1} x\right)^3}{\sqrt{1 - x^2}}\, dx$ is equal to

A. $\dfrac{\left(\sin^{-1} x\right)^3}{2} + C$

B. $\dfrac{\left(\sin^{-1} x\right)^3}{3} + C$

C. $\dfrac{\left(\sin^{-1} x\right)}{x} + C$

D. $\dfrac{\left(\sin^{-1} x\right)^4}{4} + C$

56.The radius of the base of a cone is increasing at the rate of 3 cm/min and the altitude is decreasing at the rate of 4 cm/min. The rate of change of lateral surface when the radius = 7 and altitude = 24 cm is

A. 54p cm^2 / min

B. 7p cm^2 / min

C. 27p cm^2 / min

D. None of these

57. $\dfrac{d\left(e^x\right)}{dx} =$

A. e^x

B. e^{2x}

C. $2e^x$

D. None of these

58.Solve:

$\lim_{x \to 0} \tan x =$

A. 0

B. 1

C. -1

D. None of these

59.7 white balls and 3 black balls are placed in a row at random. The probability that no two black balls are adjacent, is

A. 1/2

B. 7/15

C. 2/15

D. 1/3

60.The direction cosines of the ray P (1, -2, 4) to q (-1, 1, -2) are

A. <-2, 3, -6>

B. <2, -3, 6>

C. $\left< \dfrac{2}{7}, -\dfrac{3}{7}, \dfrac{6}{7} \right>$

D. $\left< -\dfrac{2}{7}, \dfrac{3}{7}, -\dfrac{6}{7} \right>$

61.If the mean of a set of observations x_1, x_2, x_3 …………….. x_n is $\bar{x}$, then the mean of the observation x_i + 2i; I = 1, 2, 3……n is

A. $\bar{X} + 2$

B. $\bar{X} + 2n$

C. $\bar{X} + (n+1)$

D. $\bar{X} + n$

62.Write the following is Roster form.C = {x: x = N and 50 £ x £ 60}

A. C = {50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60}

B. C = {51, 52, 53, 54, 55, 56, 57, 58, 59}

C. C = {51, 52, 53, 54, 55, 56, 57, 58, 59, 60}

D. None of these

63.The value of e is

A. e<2

B. e>3

C. 2<e<3

D. None of these

64.A vector whose modulus is unity is called

A. Null vector

B. Unit vector

C. Like vector

D. None of these

65.If you have 6 New year greeting cards and you want to send them to 4 of your friends, in how many ways can this be done?

A. 360

B. 420

C. 630

D. None of these

66.If F1 and F2 be the points (0, -4) and (0, 4). The locus of point P such that

|PF|+|PF2| = 6 is

A. an ellipse

B. the straight line containing F1 and F2

C. the segment [F1F2]

D. none of these

67.The longest chord of a circle is a _____ of the circle.

A. Line

B. Diameter

C. Tangent

D. None of these

68. If the perpendicular bisector of the line segment joining P (1, 4) and Q (k, 3) has y intercept -4. Then a possible value of k, is

A. -2

B. -4

C. 1

D. 2

69. A circle with center (4, -5) is tangent to the y-axis in the standard (x, y) coordinate plane. What is the radius of this circle?

A. 4

B. 5

C. $\sqrt{41}$

D. 16

70. Evaluate the value of $(1 + \cos \pi/8) (1 + \cos 3\pi/8) (1 + \cos 5\pi/8) (1 + \cos 7\pi/8)$.

A. 1/8

B. 1/4

C. 1/2

D. 8

71. Find the sum of the sequence -8, -5, -2, …, 7

A. -3

B. -6

C. 3

D. None of these

72. Find the roots of the quadratic equation using factorization $x^2 - 11x + 30 = 0$

A. Roots are 5 and 6

B. Roots are -5 and -6

C. Roots are -5 and 6

D. None of these

73. If m, n, p, q are consecutive integers then the value of $i^m i^n i^p i^q$ is

A. 1

B. 4

C. 0

D. None of these

74. If a, b, c are three consecutive positive integers, then

Log (1 + ca) =

A. Log b

B. Log (b/2)

C. Log (2b)

D. 2Log b

75. If * is a binary operation on set Q of rational numbers defined as a*b = ab/5. Write the identity for *. If any

A. 1

B. 0

C. 5

D. None of the above

76. Interference event is observed

A. Only in transverse waves

B. Only in longitudinal waves

C. In both types of waves

D. None

77. One end of a uniform rod of mass 'M' and cross-sectional area 'A' is suspended from rigid support and an equal mass M is suspended from the other end. The stress at the mid-point of the rod will be:-

A. $\dfrac{2Mg}{A}$

B. $\dfrac{3Mg}{2A}$

C. $\dfrac{Mg}{A}$

D. 0

78. Electromagnetic waves are produced by:

A. charge less particle

B. a static charge

C. a moving charge

D. an acceleration charge

79.Three 2 *W* resistors are connected to form a triangle. The resistance between any two corners is:

A. $\frac{4}{3}$ *W*

B. 6 *W*

C. 2 *W*

D. $\frac{4}{3}$ *W*

80.In L-R circuit, the time constant is given by:

A. LR

B. R/L

C. L/R

D. 1/LR

81.An applet is _____ document application program.

A. a passive

B. an active

C. a static

D. a dynamic

82.Tunnel diode is another name for

A. power diode

B. varactor diode

C. Photo diode

D. Esaki diode

83.In which of the following process, convection does not take place primarily?

A. Sea and land Breeze

B. Boiling of water

C. warming of glass of bulb due to filament

D. heating of air around a furnance

84.Which of the following carbohydrates is the sweetest sugar?

A. Glucose

B. Fructose

C. Cellulose

D. Maltose

85.For a simple Harmonic Oscillator, the potential energy is equal to kinetic energy

A. once during each cycle

B. twice during each cycle

C. when x = a/2

D. when x = a

86. A stone is dropped into a lake from a tower 500 meter high. The sound of splash will be heard by the man approximately after:

A. 11.5 sec

B. 21 sec

C. 10 sec

D. 14 sec

87. A 5 W constant wire is bent to form a ring. Find the resistance across the diameter of the wire.

A. 2.5 ohm

B. 1.25 ohm

C. 5 ohm

D. 0.625 ohm

88. The decay constant of the end product of a radioactive series is:

A. Zero

B. Infinity

C. Uncertain

D. Same as another nucleus

89. The work done by pseudo forces is:

A. Positive

B. Negative

C. Zero

D. All of these

90. A glass bulb is balanced by a brass weight in a sensitive beam balance. Now the balance is covered by a bell – jar which is then evacuated; then:

A. The beam will remain horizontal

B. The pan containing the bulb will go down

C. The pan containing the bulb will go up

D. The pan will rotate about its axis

91. In an L-C circuit L = 3.3 H and C = 840 pF. Att = 0 and charge on the capacitor is 105 mC at t = 2.0 ms calculate total energy in the circuit

A. 4.56 J

B. 5.67 J

C. 4.56 J

D. None of these

92.An electron is moving along x-axis. A uniform electric field exist towards negative y-axis. What should be the direction of magnetic field of suitable magnitude so that net force on electron is zero?

A. Positive z-axis

B. Negative z-axis

C. Positive y-axis

D. Negative y-axis

93.An electric dipole is placed in a uniform electric field. The net electric force on the dipole

A. Is always zero

B. Is always -ve

C. Depends on the orientation of the dipole

D. None of these

94.Which of the following systems may be adequately described by classical physics?

A. Motion of cricket ball

B. A hydrogen atom

C. A neutron changing a proton

D. None of these

95.Which of the following system is analog modulation system?

A. PCM

B. Differential PCM

C. Delta

D. PWM

96.A light wave can travel

A. In vacuum

B. In vacuum only

C. Only in material medium

D. None of these

97.In an electromagnetic wave, the average energy density associated with magnetic field is:

A. $Li_0^2 / 2$

B. $\dfrac{B^2}{2\mu_0}$

C. $\mu_0 B^2 / 2$

D. $\dfrac{\mu_0}{2B^2}$

98. Speed of electromagnetic waves is the same

A. for all wavelengths

B. in all media

C. for all intensities

D. for all frequencies

99. If the forward voltage of the diode is increased, the width of depletion layer

A. Increases

B. Decreases

C. Fluctuates

D. None of these

100. A rod of length 2m rests on smooth horizontal floor. If the rod is heated from 0° C to 20° C. Find the longitudinal strain developed?) ($\mu = 5 \times 10^{-5}$/°C)

A. 10^{-3}

B. 2×10^{-3}

C. zero

D. 10^{-4}

###ANSWERS###

1. Ans. B.

2. Ans. C.

3. Ans. D.

4. Ans. C.

5. Ans. D.

6. Ans. A.

7. Ans. B.

8. Ans. B.

9. Ans. D.

10. Ans. D.

11. Ans. A.

12. Ans. C.

13. Ans. D.

14. Ans. D.

15. Ans. A.

16. Ans. D.

17. Ans. A.

18. Ans. D.

19. Ans. B.

20. Ans. A.

21. Ans. B.

22. Ans. C.

23. Ans. A.

24. Ans. C.

25. Ans. D.

26. Ans. D.

27. Ans. B.

28. Ans. A.

29. Ans. A.

30. Ans. B.

31. Ans. A.

32. Ans. C.

33. Ans. D.

34. Ans. B.

35. Ans. A.

36. Ans. B.

37. Ans. B.

38. Ans. B.

39. Ans. A.

40. Ans. B.

41. Ans. B.

42. Ans. A.

43. Ans. C.

44. Ans. D.

45. Ans. D.

46. Ans. C.

47. Ans. D.

48. Ans. A.

49. Ans. C.

50. Ans. D.

51. Ans. C.

52. Ans. D.

53. Ans. A.

54. Ans. C.

55. Ans. D.

56. Ans. A.

57. Ans. A.

58. Ans. A.

59. Ans. B.

60. Ans. A.

61. Ans. C.

62. Ans. A.

63. Ans. D.

64. Ans. B.

65. Ans. A.

66. Ans. D.

67. Ans. B.

68. Ans. B.

69. Ans. A.

70. Ans. C.

71. Ans. A.

72. Ans. A.

73. Ans. D.

74. Ans. D.

75. Ans. C.

76. Ans. C.

77. Ans. B.

78. Ans. D.

79. Ans. A.

80. Ans. C.

81. Ans. B.

82. Ans. D.

83. Ans. C.

84. Ans. B.

85. Ans. B.

86. Ans. A.

87. Ans. B.

88. Ans. B.

89. Ans. C.

90. Ans. B.

91. Ans. A.

92. Ans. B.

93. Ans. A.

94. Ans. A.

95. Ans. C.

96. Ans. A.

97. Ans. B.

98. Ans. C.

99. Ans. B.

100. Ans. A.