DEECET – 2022

(PART - A)

Teaching Aptitude – SET – 2

1. The meaning of the Greek word "Philos" is
    1. Wisdom
    2. Learning
    3. Knowing
    4. Love

2. The Academic authority to develop textbooks for school Education in our state is
    1. SCERT, Andhra Pradesh
    2. SSA, Andhra Pradesh
    3. NCERT, New Delhi
    4. SIET, Andhra Pradesh

3. RTE – 2009 Act related to
    1. Teachers Salaries
    2. Adult Education
    3. Free and compulsory Education to 6 to 14 years age group children
    4. Right to Information Act

4. Expand ECCE
    1. Early child character and Education
    2. English course on continuing Education
    3. Early child control and Education
    4. Early childhood care and Education

5. If majority of students in your class are weak you should

   1. keep your teaching slow
   2. not care about them
   3. keep your teaching slow along with some extra guidance to bright pupil
   4. suggest them to read guides

G. K. – SET - 2

6. Kanjeevaram Silk is famous in the state of

   1. Tamilnadu
   2. Kerala
   3. Karnataka
   4. Telangana

7. The martial art of Andhra Pradesh

   1. Kathi Samu
   2. Silambam
   3. Parikhand
   4. Thoda

8. The "International Teacher's Day" is celebrated on

   1. 5^{th} September
   2. 8^{th} March
   3. 1^{st} January
   4. 5^{th} October

9. The headquarter of “Reserve Bank of India” is located at

1. Bengaluru
2. Mumbai
3. Hyderabad
4. New Delhi

10. The full form of “IPL” is

1. Indian Premier League
2. Indo – Pakistan League
3. International Premier League
4. Indian Players League

English – SET – 2

11. A person who knows many languages

1. linguist
2. polyglot
3. grammarian
4. bilingual

12. I finished my project work several days _____

of the deadline.

1. ahead of
2. instead of
3. in spite of
4. according to

13. He was fond ___ Jimmy.

    1. in
    2. to
    3. of
    4. at

14. Would you like a _____ of cake.

    1. piece
    2. peace
    3. piese
    4. peece

15. Find the passive form for the following sentence

    The dog chased the cat.

    1. The cat chases the dog.
    2. The cat was chased by the dog.
    3. The cat is chased by the dog.
    4. The cat chased by the dog.

Telugu – SET – 2

16. కింది వాటిలో "అల్పప్రాణాలు"తో ఏర్పడిన పదం

    1. ఖగం
    2. తల
    3. రథం
    4. ఫలం

17. కింది వాటిలో “చ” వర్గకు చెందిన అక్షరం

1. జ
2. న
3. ప
4. ట

18. కింది వాటిలో సంయుక్తాక్షరం గల పదాన్ని గుర్తించండి.

1. పట్టణం
2. నన్ను
3. గొర్రె
4. దర్బారు

19. “కాళ్ళా వేళ్ళా పడు” - ఈ జాతీయానికి అర్థం

1. ఎవరు పట్టించుకోక పోవడం
2. బాగా అభ్యాసం కల
3. బ్రతిమలాడు
4. దు:ఖించు

20. ‘బ్రహ్మ’ పదానికి వికృతి

1. బామ్మడు
2. బామ్మ
3. బ్రాహ్మ
4. బమ్మ

1st Language English – SET – 2

21. Fill in the blank with right form of the verb

    Indian Cricket team _____ (win) the trophy in 2017.

    1. won
    2. will win
    3. wins
    4. winning

22. A person who goes from place to place to mend pots, pans etc.,

    1. carpenter
    2. sculptor
    3. goldsmith
    4. tinker

23. Our family ‘move in’ to the new house once it was white washed.

    Choose the meaning of the phrasal verb “ move in” from the following

    1. Make progress
    2. start living in a place
    3. remove
    4. move to lower level

24. What does the following sentence mean?

Could I use your pen , please?

1. giving advice
2. Asking permission
3. asking a question
4. making an offer

25. She wants to become ___ engineer.

1. a
2. the
3. an
4. no article

26. Sravani goes to school _____ Sudha daily.

1. along with
2. in front of
3. by means of
4. inspite of

27. Mrs.Slater is a vigorous woman.

Find the synonym and antonym of the word ‘vigorous’ from the following.

1. lazy, sharp
2. boring,exciting
3. powerful, weak
4. beautiful, ugly

28. Find the wrongly spelt word from the following

1. reciept
2. amaze
3. announcement
4. honour

29. _____ he was a good mechanic, he couldn't repair the car.

1. although
2. since
3. because
4. besides

30. A personal document of a person to store his/her emotions, thoughts, or feelings.

1. bioigraphy
2. description
3. notice
4. diary entry

Mathematics – SET - 2

31. The maximum number in the common factors of the numbers 504, 792, 1080

1. 4
2. 5
3. 6
4. 7

32. The length of the quadrilateral is twice to its breadth. If the perimeter is 48c.m, the length of the quadrilateral is.

1. 16 cm
2. 8 cm
3. 15 cm
4. 9 cm

33. A motor bike can travel 62.5 k.m with 1 litre of petrol. With 10 litres of petrol how much distance can it travel?

1. 525 km
2. 625 km
3. 635 km
4. 265 km

34. If the ratio of diameters of two circles is 3:4, then find the ratio of their perimeters?

1. 4:3
2. 2:3
3. 3:2
4. 3:4

35. A tank with capacity of 50 litres can be filled in 5 hours. If the capacity of the tank is 75 litres, how many hours does it take to fill?

1. $7\frac{1}{2}$
2. $8\frac{1}{2}$
3. $9\frac{1}{2}$
4. $7\frac{1}{3}$

36. For the principal amount of Rupees 12000, the interest rate is 10 % for the period of $1\frac{1}{2}$ years. If the interest is compounded for 6 months how much interest has to be paid?

1. Rs. 3972
2. Rs. 3872
3. Rs. 3672
4. Rs. 4072

37. The owner of a house enhancing the rent at the rate of 5% per annum. If the present rent is Rs.2500 then how much rent has to pay after two years?

1. Rs. 2756.25
2. Rs. 2756.50
3. Rs. 2678.25
4. Rs. 2678.50

38. If the polynomials $x^3 + ax^2 + 5$ and $x^3 - 2x^2 + a$ are divided by (x+2) leave the same remainder, find the value of a.

1. $-\frac{13}{3}$
2. $\frac{13}{3}$
3. $\frac{14}{3}$
4. $-\frac{14}{3}$

39. Length of the shadow of a 15mts. high pole is $5\sqrt{3}$mts. at 7 ^{o} clock in the morning. Then what is the angle of elevation of the Sun rays with the ground at that time?

1. 70°
2. 60°
3. 90°
4. 30°

40. Product of the roots of a quadratic equation is

1. $\frac{a}{b}$
2. $\frac{c}{a}$
3. $\frac{d}{a}$
4. $\frac{a}{c}$

General Science – SET – 2
(Biology)

41. The immovable joints are present in

1. Knee
2. Shoulder
3. Neck
4. Skull

42. Non insectivorous plant

1. Drosera
2. Nepenthes
3. utricularia
4. dodder

43. The synthetic fibre which is generally called “fake fur” is

1. Acrylic
2. Rayon
3. Nylon
4. Silk

44. Malphigian tubules are secretory organs in

1. earth worm
2. housefly
3. flat worm
4. hen

45. The digestive Juice without enzyme is

1. Bile juice
2. Gastric juice
3. Pancreatic juice
4. Saliva

General Science SET-2

Physical Science

46. The process which add water vapour to the atmosphere is

    1. Solidification
    2. Precipitation
    3. Condensation
    4. Evaporation

47. A freely suspended magnet always comes to rest in direction of

    1. North - East
    2. South - West
    3. East - West
    4. North - South

48. If two mirrors are kept at an angle of 180° between them, then the number of images formed will be

    1. 1

    2. 2

    3. 3

    4. 4

49. Which of the following is the unit of acceleration

    1. ms^{-1}
    2. ms^{-2}
    3. Newton
    4. ms^{2}

50. Formula for Aluminium Oxide is

1. Al_3O
2. Al_2O_3
3. AlO_2
4. AlO_3

Social Studies – SET – 2

51. International Date line

1. 180º longitude
2. 0º longitude
3. 0º latitude
4. 90º latitude

52. A flat – topped table lands standing above the surrounding area

1. plateaus
2. mountains
3. plains
4. oceans

53. Ruling by a king or queen is called

1. Democracy
2. Government
3. Parliament
4. Monarchy

54. The word “Sikh” means

1. prophet
2. teacher
3. student
4. leader

55. Which is used extensively in electrical and electronic industry?

1. Chromium
2. Mica
3. Barytes
4. Asbestos

56. “Sare Jahase Achaha” was written by

1. Mohammed Iqbal
2. Rabindranath Tagore
3. Bankim Chandra Chatterjee
4. Sarojini Naidu

57. In Telugu the first talkie movie was

1. Alam Ara
2. Bhakta Prahalada
3. Bhishma Pratigna
4. Mana Desham

58. Dowry prohibition act was made in the year

1. 1959
2. 1961
3. 1963
4. 1965

59. The following is a working capital

1. Tools
2. Machines
3. Raw material
4. Buildings

60. “Do or Die” slogan was given by

1. Jawaharlal Nehru
2. Tilak
3. Mahatma Gandhi
4. Subash Chandra Bose

DEECET – 2022

(Mathematics)

SET – 1

61. If $a+\alpha=1, b+\beta=2$ and $af(x)+\alpha f\left(\frac{1}{x}\right)=bx+\frac{\beta}{x}, x\neq 0$ then $\frac{f(x)+f\left(\frac{1}{x}\right)}{x+\frac{1}{x}}=$

1. 2
2. 4
3. 6
4. 8

62. x^n+y^n is divisible by _____

1. $x-y \quad \forall n\in N$
2. $x+y \quad \forall n\in N$
3. $x+y \quad \forall n=2m-1, m\in N$
4. $x+y \quad \forall n=2m, m\in N$

63. Let A=$\begin{bmatrix} a & b \\ c & d \end{bmatrix}$ and $B=\begin{bmatrix}\alpha \\ \beta\end{bmatrix}\neq\begin{bmatrix}0\\0\end{bmatrix}$ such that AB=B and $a+d=2021$ then $ad-bc=$

1. 2010
2. 2020
3. 2030
4. 2040

64. If A is invertible matrix of order n, then the determinant of |adj A| is equal to

1. $|A|^n$
2. $|A|^{n+1}$
3. $|A|^{n-1}$
4. $|A|^{n+2}$

65. $\overrightarrow{OA} = i + 2j + 3k, \overrightarrow{OB} = 3i \mp j - 2k, \overrightarrow{OC} = 2i - 3j + k$ then $\overrightarrow{AB}.\overrightarrow{AC}$ =

1. 15
2. 17
3. 0
4. None of these

66. If the two out of three vectors a, b, c are unit vectors such that a + b + c = 0 and 2(a.b + b.c + c.a)+3 = 0 then the length 3rd vector is

1. 3
2. 2
3. 1
4. 0

67. $Tan203^0 + Tan22^0 + Tan203^0.Tan22^0 =$

1. – 1
2. 0
3. 1
4. 2

68. $a\ sin^2\theta + bcos^2\theta = c$ then $tan^2\theta$=

1. $\frac{b-c}{a-c}$
2. $\frac{c-b}{a-c}$
3. $\frac{a-c}{b-c}$
4. $\frac{a-c}{c-b}$

69. The period of $sin^4x + cos^4x$ =

1. 2π
2. π
3. $\frac{\pi}{2}$
4. $\frac{\pi}{4}$

70. If $tan\frac{A}{2} = \frac{5}{6}$ and $tan\frac{C}{2} = \frac{2}{5}$ then a, b, c are in

1. A.P
2. G.P
3. H.P
4. Direct Proportion

71. Evaluate $\underset{x \to 0}{Lt}\left(\frac{\sqrt{1+x}-1}{x}\right)$

1. 2
2. $-\frac{1}{2}$
3. 1
4. $\frac{1}{2}$

72. Find the slope of the tangent to the curve $y = 3x^4 - 4x$ at $x = 4$

1. 764
2. 746
3. 647
4. 476

73. If (3, 2, –1), (4, 1, 1) and (6, 2, 5) are the three vertices and (4, 2, 2) is the centroid of a tetrahedron then find the fourth vertex

1. (2,2,2)
2. (3,3,3)
3. (4,4,4)
4. (2,4,5)

74. If $y = e^{x+e^{x+e^{x+\ldots\ldots\ldots \text{to } \infty}}}$, then find $\frac{dy}{dx}$

1. $\frac{y^2}{1-y}$
2. $\frac{y^2}{y-1}$
3. $\frac{y}{1-y}$
4. $\frac{-y}{1-y}$

75. The curves $y = ae^{-x}$ and $y = be^{x}$ are orthogonal if

1. a = b
2. a = – b
3. ab = –1
4. ab = 1

76. Find the slope of the tangent to the curves $x = 3t^2 - 1, y = t^3 - 1$ at $x = 1$

1. 2
2. 0
3. 4
4. 5

77. The distance between the parallel lines $5x - 3y - 4 = 0$ and $10x - 6y - 9 = 0$ is

1. $\frac{1}{2}$
2. $\frac{1}{\sqrt{3}}$
3. $\frac{1}{2\sqrt{34}}$
4. 0

78. Find the interval in which the function $x^2 + 2x - 5$ is strictly increasing

1. $(1, \infty)$
2. $(-1, \infty)$
3. $(1,1)$
4. $(-1, -1)$

79. Find the equation of the plane passing through the point (1, 1, 1) and parallel to the plane $x + 2y + 3z - 7 = 0$

1. $x + 2y + 3z - 5 = 0$
2. $x + 2y + 3z + 6 = 0$
3. $x + 2y + 3z - 6 = 0$
4. $x + y + z = 0$

80. Find the angle between the lines whose direction ratios are $(1,1,2), (\sqrt{3}, -\sqrt{3}, 0)$

1. 2π
2. π
3. $\frac{\pi}{2}$
4. $\frac{\pi}{4}$

81. The amplitude of $\frac{1+\sqrt{3}i}{\sqrt{3}+i}$

1. $\frac{\pi}{3}$
2. $-\frac{\pi}{3}$
3. $\frac{\pi}{6}$
4. $-\frac{\pi}{6}$

82. If $\left(\sqrt{3}+i\right)^8 - \left(\sqrt{3}-i\right)^8 = \alpha + i\beta$ then $\alpha - \frac{\sqrt{3}}{2}\beta =$

1. 256
2. $384\sqrt{3}$
3. 384
4. $256\sqrt{3}$

83. For which least positive value of 'a' the equation $2x^2 + (a - 10)x + \frac{33}{2} = 2a$ has real roots

1. 2
2. 4
3. 6
4. 8

84. If the roots of $x^3 - 14x^2 + 56x + k = 0$ are in G.P then k =

1. 16
2. – 72
3. 56
4. – 64

85. If $22P_{r+1} : 20P_{r+2} = 11 : 52$ then $r =$

1. 3
2. 5
3. 7
4. 9

86. If the variance of the first n natural numbers is 10 and the variance of first m even natural numbers is 16 then $m + n =$

1. 18
2. 20
3. 22
4. 24

87. If $\frac{ax-1}{(1-x+x^2)(2+x)} = \frac{x}{1-x+x^2} - \frac{1}{2+x}$ then $a =$

1. 2
2. 3
3. – 3
4. – 2

88. The number of ways of dividing 2n dissimilar things into two equal groups containing 'n' things in each is

1. $\frac{(2n)!}{2!n!n!}$
2. $\frac{4n!}{2!n!n!}$
3. $\frac{(n!)^2}{2!}$
4. $\frac{n!}{(2n!)^2}$

89. When two dice are thrown, the probability of getting the sum 10 or 11 is

1. $\frac{7}{36}$
2. $\frac{5}{36}$
3. $\frac{7}{18}$
4. $\frac{5}{18}$

90. If X is a poisson variable and $P(X = 1) = P(X = 2)$ then $P(X = 0)$=

1. 1
2. 2
3. $\frac{1}{e}$
4. $\frac{1}{e^2}$

91. I: The circle $x^2 + y^2 - 6x - 4y - 7 = 0$ touches Y - axis

II: The circle $x^2 + y^2 - 6x - 4y - 7 = 0$ touches X - axis

1. Both I and II are true
2. Neither I nor II true
3. I is true II is false
4. I is false II is true

92. The circles $(x + a)^2 + (y + b)^2 = a^2, (x + \alpha)^2 + (y + \beta)^2 = b^2$ cut orthogonally if

1. $2(a\alpha + b\beta) = b^2 + \alpha^2$
2. $a\alpha + b\beta = b^2 + \alpha^2$
3. $2(a\alpha + b\beta) = a^2 + \beta^2$
4. $a\alpha + b\beta = a^2 + \beta^2$

93. The focus of the parabola $x^2 - 2x - 8y - 23 = 0$ is

1. (1,1)
2. (1, –1)
3. (–1, 1)
4. (–1, –1)

94. Two vertices of a ellipse are (5, 0) and (0, –4) then equation of ellipse is

1. $\frac{x^2}{16}+\frac{y^2}{25}=1$
2. $\frac{x^2}{25}+\frac{y^2}{16}=1$
3. $\frac{x^2}{5}+\frac{y^2}{4}=1$
4. $x^2+y^2=41$

95. The mid-point of the chord $4x-3y=5$ of the hyperbola $2x^2-3y^2=12$ is

1. $\left(0,-\frac{5}{3}\right)$
2. $(2,1)$
3. $\left(\frac{5}{4},0\right)$
4. $\left(\frac{11}{4},2\right)$

96. $\int \frac{sinx}{sinx-cosx}dx=$

1. $\frac{1}{2}[x+log\lvert sinx-cosx\rvert+c$
2. $x+log\lvert sinx-cosx\rvert+c$
3. $x+log\lvert sinx-cosx\rvert-x+c$
4. $x+log\lvert sinx-cosx\rvert-x-c$

97. $\int e^{xcosecx}\,cosecx(1-xcotx)dx=$

1. $e^{xcotx}+c$
2. $e^{xcosecx}+c$
3. $e^{-xcosecx}+c$
4. $e-^{xcotx}+c$

98. $\int_0^{\frac{\pi}{2}} e^{sin^2x}.sin2x\ dx =$

1. e
2. e + 1
3. e – 1
4. 2e + 1

99. $\int_0^{\frac{\pi}{2}} \frac{\pi sinx}{1+cos^2x} dx =$

1. π^2
2. $\frac{\pi^2}{2}$
3. $\frac{\pi^2}{4}$
4. $\frac{\pi^2}{6}$

100. The integrating factor of $(x + 2y)^3 \frac{dy}{dx} = y^2$ is

1. $e^{\frac{1}{y}}$
2. $e^{-\frac{1}{y}}$
3. y
4. $-\frac{1}{y}$