DEECET – 2021

PART - A

Teaching Aptitude – SET – 2

1. What is the important instrument for social change?
    1. Media
    2. Education
    3. Wealth
    4. Temples

2. According to New Education Policy – 2020, what is the new pattern of School system
    1. 10 + 2 + 3
    2. 5 + 3 + 3 + 4
    3. 4 + 3 + 4 + 5
    4. 2 + 4 + 4 + 5

3. One of the following is not a co-curricular activity
    1. Excursion
    2. Essay writing competition
    3. Home work
    4. Sports

4. Physical growth is caused by which of the following?
    1. Sports
    2. Clay modelling
    3. Story telling
    4. Music

5. Which of the following is the best way to maintain discipline in the class?

   1. Choosing strong monitor among the students
   2. Giving a variety of activities on the topics taught in the class
   3. Isolating the trouble making child from the class
   4. Spending more time to correct the behaviour of the problem child

G. K. – SET - 2

6. 'Clean India programme' has been inaugurated from which state?

   1. Bihar
   2. Uttar Pradesh
   3. Gujarath
   4. West Bengal

7. Who among the following is not been a teacher

   1. Maria Montessori
   2. Stephen Hawking
   3. Jawaharlal Nehru
   4. Sarvepalli Radha Krishnan

8. The app that is used to identify any individual who are at risk of Covid – 19 infection

   1. Spandana
   2. MyGov
   3. UMANG
   4. Aarogya Setu

9. The game that originated in India is

    1. Chess
    2. Judo
    3. Boxing
    4. Volleyball

10. What is the highest literacy award in India?

    1. Arjuna
    2. Jnanpith
    3. Bharat Ratna
    4. Padma Shri

English – SET – 2

11. Set backs are inevitable in life. A set back can act as a driving force and also teach us humility. In grief we learn to become victors, not victims.

    What positive impact do setbacks have on us?

    1. They enable us to become victims, not victors
    2. They act as a driving force
    3. They make us believe in God.
    4. Setbacks are never happening

12. With <u>gratitude</u> I'll reach my goal

    Choose the correct synonym and the antonym of the word, "gratitude" respectively

    1. greatness (synonym); generosity (antonym)
    2. energy (synonym); ability (antonym)
    3. thankfulness (synonym); thanklessness (antonym)
    4. courage (synonym), discourage(antonym)

13. Choose the word that cannot be used after the word ‘deep’

    1. dream
    2. sympathy
    3. sleep
    4. breath

14. What do we write in a diary

    1. Our syllabus
    2. Notices we have seen
    3. Headlines of a newspaper
    4. Personal feelings, events other than routine.

15. “What is her name?” This sentence is

    1. an enquiry
    2. an offer
    3. an apology
    4. a wish

Telugu – SET – 2

16. కఠినంగా పలికే అక్షరాలను ఏమంటారు?

    1. పరుషాలు
    2. సరళాలు
    3. అనునాసికాలు
    4. స్థిరాలు

17. "రాజువారి తోటలో రోజాపూలు, చూసేవారే కానీ కోసేవారు లేరు" ఇది ఒక

    1. సామెత
    2. పొడుపుకథ
    3. జాతీయం
    4. అభ్యర్థన

18. తెలుగు భాషకు అక్షరాలు ఎన్ని?

    1. 40
    2. 56
    3. 36
    4. 50

19. ఒక హల్లుకు వేరొక హల్లు ఒత్తుగా చేరితే అది

1. ద్విత్వము
2. సంయుక్తాక్షరం
3. బహుళము
4. సంశ్లేషాక్షరం

20. “త్యాగం” - ఈ పదానికి వికృతి

1. తలము
2. చాగం
3. సోదెము
4. దమ్మము

1st Language English – SET - 2

21. Identify the present perfect tense from the following sentences

1. I chose Mathematics
2. I have lived in Vijayawada for a long time
3. He will go to Delhi next week
4. She likes songs

22. Match the following to make compound adjectives

Set – A	Set – B
i) moon	a) house
ii) light	b) set
iii) sea	c) light
iv) sun	d) shore

1. i – d, ii – c, iii – b, iv – a
2. i – b, ii – a, iii – d, iv – c
3. i – c, ii – a, iii – d, iv – b
4. i – a, ii – d, iii – b, iv – c

23. Change the following into passive voice.

Do not waste water

1. waste the water not
2. Waste water not do
3. Water do not waste
4. Let the water not be wasted

24. Find the one word substitute for ‘a film that gives facts about something’.

1. Publisher
2. documentary
3. en route
4. Manuscript

25. I understand your problem; _____ I can’t help you

1. besides
2. However
3. as a result
4. Where as

26. I took off my black coat.

Choose the meaning of the phrasal verb “took off” from the following

1. to remove
2. to buy
3. to wash
4. to tell

27. If you leave the door of the cage open, _____

1. The bird fly out
2. The bird would fly
3. The bird will fly out
4. The bird flew

28. I met _____ lawyer yesterday. _____ lawyer was famous in the city

1. the, a
2. a, the
3. a, an
4. an, the

29. Could I use your bat, please?

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

30. Borra caves are the largest caves in Eastern Ghats.

This sentence is in _____

1. Comparative degree
2. Negative degree
3. Positive degree
4. Superlative degree

Mathematics – SET - 2

31. A man buys a toy for Rs. 25 and sells it for Rs. 30, then the percentage of profit is

    1. 10
    2. 20
    3. 30
    4. 40

32. In what time (in years) will Rs. 1200 amount becomes Rs. 1323 at 5% Interest rate per annum on compound interest

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

33. A can complete a piece of work in 5days, B can complete the same work in 6 days. If they work together how many days will they complete the work?

    1. $\frac{30}{11}$
    2. $\frac{20}{11}$
    3. $\frac{19}{11}$
    4. None

34. $\dfrac{\sqrt{0.1296} \times \sqrt{0.1764}}{0.1512}$

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

35. $(175)^2 - (75)^2$

1. 5000
2. 20000
3. 25000
4. 10000

36. $3^7 + 3^7 + 3^7 = 3^x$ then x =

1. 3
2. 4
3. 5
4. 8

37. $\sqrt[3]{\sqrt{64}}$ =

1. 2
2. 4
3. 8
4. $\sqrt{2}$

38. Cube of an odd number is

1. even
2. 1
3. odd
4. None

39. $0.75 : x :: 5 : 8$ then $x =$

1. 1
2. 2
3. 1.3
4. 1.2

40. In a school out of 180 students, $\frac{4}{9}$ of the students are boys then the number of Girls in the School is

1. 100
2. 80
3. 120
4. 60

General Science – SET – 2
(Biology)

41. The term cardiac refers to which organ in the body?

1. heart
2. vein
3. lymph
4. capillary

42. The important function of stomata is

1. Conduction
2. Transpiration
3. Photosynthesis
4. Absorption

43. Non insectivorous plant

1. Drosera
2. Nepenthes
3. Utricularia
4. Dodder

44. What are the “Power houses of the cell?”

1. Golgi apparatus
2. Chloroplast
3. Mitochondria
4. Lysosomes

45. At which position of the food chain would you place a human being

1. Primary consumer
2. Secondary consumer
3. Tertiary consumer
4. Primary producer

General Science SET-2

Physical Science

46. The substances which turn blue litmus into red color
    1. Acids
    2. Bases
    3. Salts
    4. All the above

47. The method useful for the separation of dissolved substances from a liquid
    1. Sedimentation
    2. Chromatography
    3. Crystallization
    4. Filtration

48. Specific heat (S)
    1. $\frac{Q}{\Delta T}$
    2. $Q\Delta T$
    3. $\frac{Q}{m\Delta T}$
    4. $\frac{m\Delta T}{Q}$

49. Ramu's house has five 60W bulbs. If they used all the bulbs for 5 hours, then the power consumed by him

1. 1500 KWH
2. 0.3 KWH
3. 70 KWH
4. 1.5 KWH

50. Which of the following is the most active metal?

1. lithium
2. sodium
3. potassium
4. rubidium

Social Studies – SET – 2

51. Velocity of Light in vacuum
    1. 3,00,000 km/sec
    2. 4,00,000 km/sec
    3. 2,00,000 km/sec
    4. 5,00,000 km/sec

52. Aryabhatta was a well-known
    1. Astronomer
    2. Economist
    3. Astrologist
    4. Physician

53. $80^{o}\ 30^{l}$ E longitude passes through which city in India?
    1. Karim Nagar
    2. Allahabad
    3. Tirupathi
    4. Bengaluru

54. The second world war lasted from _____to _____
    1. 1914 – 1918
    2. 1919 – 1923
    3. 1939 – 1945
    4. 1947 – 1951

55. Who is the present governor of Andhra Pradesh?

1. Biswabhusan Harichandan
2. E.S.L. Narasimhan
3. N. Ranga Swamy
4. D. Kiran Bedi

56. Whose motto is “Swaraj is my birthright”

1. Bal Gangadhra Tilak
2. Lala Lajapat Rai
3. Bipin Chandra Pal
4. Annie Besant

57. Rampur lied in the fertile alluvial plains of the ……. in the western part of Uttar Pradesh

1. Ganga Plain
2. Krishna Basin
3. Godavari Basin
4. Periyar Basin

58. Who presided in the first session of the Indian National Congress at Bombay?

1. Mahatma Gandhi
2. S. Subrahmania Ayyar
3. W.C. Benerjee
4. Ramesh Chandra Dutt

59. Expand ‘PDS’

1. Public Development System
2. Public Debit System
3. Public Distribution System
4. Public Discount System

60. The first railway line in Britain connected the cities _____ and ____

1. Liverpool and Monchester
2. Liverpool and Darlington
3. Stackton and Darlington
4. Stackton and Monchester

DEECET – 2021

(MATHEMATICS)

Maths – SET - 2

61. If $f(x) = ax^4 + bx^2 + c = 0$ is an even function then the value of c

1. 0
2. 1
3. –1
4. any real number

62. $4^n - 3n - 1$ is divisible by ……..

1. 9
2. 5
3. 6
4. 7

63. If $\begin{bmatrix} 1 & 2 & x \\ 4 & -1 & 7 \\ 2 & 4 & -6 \end{bmatrix}$ is singular matrix then the value of x

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

64. If $\bar{a} = 2i + 5j + k, \bar{b} = 4i + mj + nk$ are collinear then the values of m and n are respectively

1. 2, 5
2. 10, 2
3. 2, 9
4. 3, 3

65. If $\bar{a} = i + 2j - 3k$ and $\bar{b} = 3i - j + 2k$ then the angle between $\bar{a} + \bar{b}$ and $\bar{a} - \bar{b}$

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

66. If $(\bar{a} - \lambda\bar{b}).(\bar{b} - 2\bar{c}) \times (\bar{c} + 3\bar{a}) = 0$ then the value of λ

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

67. $\log tan1^0 \times log\ tan\ 2^0 \times \ldots\ldots\ldots\ldots\ldots \times \log tan89^0$ value

1. 0
2. 1
3. –1
4. 2

68. The period of the function tan $(3x + 5)$

1. $\frac{2\pi}{3}$
2. $\frac{\pi}{6}$
3. $\frac{\pi}{3}$
4. $\frac{2\pi}{5}$

69. If $\sqrt{sinx} + cosx = 0$ then sin x =

1. $\frac{\sqrt{5}+1}{2}$
2. $\frac{\sqrt{5}+1}{8}$
3. $\frac{\sqrt{5}-1}{8}$
4. $\frac{\sqrt{5}-1}{2}$

70. $cos^{-1}\left(\frac{5}{13}\right) + cos^{-1}\left(\frac{3}{5}\right) = cos^{-1}\, x$ then x =

1. $\frac{3}{65}$
2. $-\frac{36}{65}$
3. $-\frac{33}{65}$
4. -1

71. The perpendicular distance from (1, 2) to the straight line $12x + 5y = 7$ is

1. $\frac{15}{13}$
2. $\frac{12}{13}$
3. $\frac{5}{13}$
4. $\frac{7}{13}$

72. The angle between the pair of lines

$2x^2 + 5xy + 2y^2 + 3x + 3y + 1 = 0$ is

1. $\text{Cos}^{-1}\left(\frac{4}{5}\right)$
2. $\text{Tan}^{-1}\left(\frac{4}{5}\right)$
3. 0
4. $\frac{\pi}{2}$

73. The acute angle between the two lines whose direction ratios are given by $l + m - n = 0$ and $l^2 + m^2 - n^2 = 0$

1. 0
2. $\frac{\pi}{6}$
3. $\frac{\pi}{4}$
4. $\frac{\pi}{3}$

74. The equation of the plane making intercepts 4, 5 and 2 on the axes is

1. $5x + 4y + 10z - 20 = 0$
2. $5x + 4y - 10z - 20 = 0$
3. $5x - 4y + 10z - 2 = 0$
4. $5x + 4y + 10z + 20 = 0$

75. $\lim_{x \to \infty} \frac{1}{\sqrt{x^2+4x-7}-x} =$

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

76. $\lim_{x \to 0} \frac{5|x|-2x}{3|x|+5x} =$

1. $\frac{3}{8}$
2. $-\frac{7}{2}$
3. 1
4. does not exist

77. If $y = a\ sinx + (5 + 2x)$ Cos x then $y'' + y =$

$y = a\ sinx + (5 + 2x)$ Cos x అయితే $y'' + y =$

1. 4 cos x
2. – 4 cos x
3. 4 Sin x
4. – 4 sin x

78. The point collinear with $(1, -2, -3)$ and $(2, 0, 0)$ among the following is

1. (0, 4, 6)
2. (0, –4, –6)
3. (–1, 1, 1)
4. (1, 1, 1)

79. The constant "c" of lagrange's theorem for $f(x) = x^3 - 4x^2 + 4x$ on [0, 2] is

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

80. The greatest value of $sin^3x + cos^3x$ is

1. 1
2. –1
3. 2
4. – 2

81. A: If argument of $z_1 = \frac{\pi}{3}, argument\ of\ z_2 = \frac{\pi}{4}$ *then argument* of $Z_1 Z_2 = \frac{7\pi}{12}$

B: $\text{Arg}(z_1 z_2) = \text{Arg}z_1 + \text{Arg}z_2$

1. A-true, B-true
2. A-false, B-False
3. A-false, B-true
4. None

82. $If\ x + \frac{1}{x} = 2\ cos\theta\ then\ x^{10} + \frac{1}{x^{10}} =$

$x + \frac{1}{x} = 2\ cos\theta$ అయితే $x^{10} + \frac{1}{x^{10}} =$

1. $2^{10} cos 10\ \theta$
2. $2\ cos 10\ \theta$
3. $2\ ^{10} cos^{10}\theta$
4. $2\ cos^{10}\theta$

83. If one root of $x^2 + px + 1 = 0$ is square of the other root, the value of p is

1. 1, –2
2. 3, –1
3. 2, –5
4. None

84. α, β, γ *are the roots of the equation* $x^3 - 10x^2 + 7x + 8 = 0$ match the following

i) $\alpha + \beta + \gamma$	p) $-\frac{7}{8}$
ii) $\alpha\beta\gamma$	q) 10
iii) $\frac{1}{\alpha} + \frac{1}{\beta} + \frac{1}{\gamma}$	r) -8
iv) $\alpha\beta + \beta\gamma + \gamma\alpha$	s) 7

1. i-p, ii-r, iii-s, iv-q
2. i-q , ii-r, iii-p, iv-s
3. i-p, ii-q, iii-r, iv-s
4. i-s, ii-r, iii-p, iv-q

85. How many permutations can be made using all the letters of the word "FLOWER"

1. 120
2. 240
3. 480
4. 720

86. The term independent of x in $\left(x + \frac{1}{x}\right)^6$ is

1. 5
2. 10
3. 15
4. 20

87. Standard deviation of first three consecutive integers is

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

88. A: If $P(A)=\frac{2}{7}, P(A\cap B)=\frac{1}{5}$ then $P\left(\frac{B}{A}\right)=\frac{7}{10}$

B: If A, B are two events then $P(A\cap B)=P(A).P\left(\frac{B}{A}\right)$

1. A-true, B-true
2. A-false, B-true
3. A-false, B-false
4. None

89. If a binomial distribution has mean 20 and variance is 15 then the value of p is

1. 20
2. $\frac{1}{8}$
3. $\frac{1}{2}$
4. $\frac{1}{4}$

90. If X is a poisson variate such that P(X) = 0 = P(X=1)

then the parameter λ =

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

91. For a parabola the distance between the focus and directrix is equal to

1. a
2. $4a$
3. semi latus rectum
4. None

92. A: Focus of parabola $y^2 - x - 2y + 2 = 0$ is $\left(\frac{5}{4}, 1\right)$

B: Focus of parabola $y^2 - 8x - 4y - 4 = 0$ is (2, 2)

1. A – true, B – true
2. A – true, B - false
3. A – false, B – false
4. None

93. A: The Ellipse $9x^2 + 25y^2 - 18x - 100y - 116 = 0$ eccentricity is $\frac{4}{5}$

B: The Ellipse $36x^2 + 144y^2 - 36x - 96y - 119 = 0$ eccentricity is $\frac{\sqrt{3}}{2}$

1. A – true, B – true
2. A – true, B - false
3. A – false, B – false
4. None

94. The length of the latus rectum of the Hyperbola $x^2 - 4y^2 = 4$ is

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

95. $\int \sin^3 x \cdot \cos x \, dx =$

1. $\frac{1}{2} sin^4 x + C$
2. $\frac{1}{4} sin^4 x + C$
3. $\frac{1}{3} sin^4 x + C$
4. None

96. $\int_1^2 \log x \, dx =$

1. $2\, log2 - 1$
2. $log2 - 1$
3. $2\, log2 + 1$
4. $2\, log2 - 2$

97. The area between the parabola $y = x^2$ and the line $y = 2x$ (in Sq. units) is

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

98. A: The area of the Ellipse $9x^2 + 4y^2 = 36$ is 6π sq. units

B: The area of the Ellipse $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$ is πab sq. units

1. A – true, B – true
2. A – true, B - false
3. A – false, B – false
4. None

99. The degree of the differential equation $\left[2+\left(\frac{dy}{dx}\right)^2\right]^{\frac{3}{2}} = a\frac{d^2y}{dx^2}$ is

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

100. The solution of $2xy\frac{dy}{dx} = 1+y^2$ is

1. $1 – y^2 = Cx$
2. $1 + y^2 = Cx$
3. $1 – x^2 = Cy$
4. $1 + x^2 = Cy$