RAMAANYA TALENT SCHOLARSHIP EXAMINATION
रामन्या प्रतिभा छात्रवृत्ति परीक्षा 2021—22

General Instructions:

➢ **All questions are Objective types.**
➢ **All questions are compulsory.**
➢ **Each question carries 1 Marks.**
➢ **Four options are given for each question.**
➢ **No Negative mark for wrong questions.**
➢ **Choose the correct option and indicate it by blackening the appropriate circle [●] in the answer sheet.**

MATH

1. The products of a rational and an irrational numbers is:?

   (A) Always an integer
   (B) Always a rational number
   (C) Always an irrational number
   (D) Sometimes rational and sometimes irrational

2. The coefficient of x^2 in $(7x - 5)(5x^2 - 3x + 1)$ is ?

   (A) 46
   (B) -46
   (C) 16
   (D) -16

3. The equation y = -5, in two variables can be written in the form of ax + by = 0 as ?

   (A) $1.x + 0.y + 5 = 0$
   (B) $0.x + 1.y - 5 = 0$
   (C) $0.x + 1.y + 5 = 0$
   (D) $1.x + o.y - 5 = 0$

4. An exterior angle of a triangle is 80^0 and the interior opposite angles are in the ratio 1:3 measure of interior?

(A) 30^0 , 90^0 (B) 40^0 , 120^0

(C) 20^0 , 60^0 (D) 30^0 ,60^0

5. If we want to construct a triangle, given its perimeter, then we need to know

   a) sum of two side of triangle
   b) difference between two sides of triangle
   c) one base angle
   d) two base angle

6. A triangle and a parallelogram have the same base and the same area. If the sides of the triangle are 26 cm, 28cm and 30cm and the parallelogram stands on base 28 cm, find the height of the parallelogram?

   a) 10 cm
   b) 11 cm
   c) 12 cm
   d) 14 cm

7. The diameter of a roller is 84 cm and its length is 120 cm. It takes 500 complete revolutions to move once over to level a playground. Find the area of the playground in m^2.

   a) 1684 m^2
   b) 1234 m^2
   c) 1584 m^2
   d) 1856 m^2

8. One card is drawn at random from a pack of 52 cards. What is the probability that the card drawn is either a red card or a king?

   a) 6/13
   b) 1/2
   c) 7/13
   d) 27/52

9. The value of $(5)^{0.25 \times}$ $(125)^{0.25}$ $(256)^{0.10}$x $(253)^{0.15}$

(A) 5/4

(B) 25/16

(C) $\sqrt{5}/2$

(D) 25/2

10. Find the coefficient of x^2 in $(3x^2 - 5)\ (4 + 4x^2)$.?

(A) 12

(B) 5

(C) – 8

(D) 3

11. Two intersecting lines cannot be parallel to the same line is stated in the form of ?

(A) an axiom   (B) a definition

(C) a postulate   (D) a proof

12. Parallelogram ABCD and rectangle ABEF are on the same base AB. If AB= 14 cm BC = 12 cm then the possible value for the perimeter of ABEF is ?

(A) 52   (B) 64

(C) 48   (D) 59

13. A line segment drawn perpendicular from the vertex of a triangle to the opposite side is called the

a) Bisector

b) Median

c) Perpendicular

d) Altitude

14. The area of triangle, whose sides are 15 cm, 25cm and 14 cm is

a) $15\sqrt{29}$ cm^2

b) $17\sqrt{23}$ cm^2

c) $18\sqrt{26}$ cm^2

d) $20\sqrt{26}$ cm^2

15. The area of a trapezium is 28cm^2 and one of its parallel side 6cm. If its altitude is 4cm then its other parallel side is

        a) 8cm
        b) 6cm
        c) 4cm
        d) 9cm

16. A card is selected at random from a deck of 52 cards. The probability of its being a red face card is
        a) 3/13
        b) 1/2
        c) 2/13
        d) 3/26

17. If Diagonals AC and BD of a trapezium ABCD with AB , DC intersect each other at
  0 then

      A) ar (AOD) = ar (BOC)
      B) ar (AOD) > ar (BoC)
      C) ar (AOD) < ar (BOC)
      D) None of the above

18. Euclid stated that things which are equal to the same thing are equal to one another in the form of?

    (A) An axiom
    (B) A definition
    (C) A postulate
    (D) A proof

19. Area of a trapezium, whose parallel sides are 9 cm and 6 cm respectively and the distance between these sides 8 cm, is ?

    (A) 80 cm   (B) 30 cm
    (C) 120 cm   (D) 60 cm

20. D.E.F are mid points of the sides BC,CA and AB respectively of ABC than area of BDEF is equal to ?

(A) ½ ar (ABC)   (B) ¼ ar (ABC)
(C) 1/3 ar ABC   (D) 1/3 ar (ABC)

SCIENCE

21. Why a gas does exerts pressure on walls of the container?

   a) because particles of gas are static

   b) because particles of gas hit the walls of the container

   c) because particles of gas react with each other

   d) none of the above

22. Which of the following statement is incorrect about physical changes?

   a) There is no gain or loss of energy

   b) it is permanent and in irreversible

   c) composition of the substance remain same

   d) no new substance is formed

23. Which is non-renewable source of energy?

   (A) Natural gas   (B) Wind energy

   (C) Tidal energy   (D) Mechanical energy

24. The sea water is denser than fresh water due to

   (A)   Mining of sand   (B)   Stagnation

   (C)   Mixing of salts   (D) 10 cm^3

25. How much energy does a 150 w steam iron consume per second?

(A)   15 J   (B)   0.15 J

(C)   150 J   (D)   100 W

26.   In longitudinal waves, how does the particle of medium vibrate compared to the
       direction of propagation of wave?

(A)   Perpendicular   (B)   Parallel

(C)   At 45 $^\circ$ (D)   At 60 $^\circ$

27. Which of the following is a diplablastic organism ?

          (A) Tapeworm   (B) Sea anemone
          (C) Earthworm   (D) Planaria

28. Which mode of nutrition is seen in Bryophytes?

          (A) Saprophytic   (B) Autotrophic

          (C) Heterotrophic   (D) Parasitic

29. Which of the following phloem element is supportive in function?

(a) Phloem Parenchyma   (b)   Companion cells

(c) Phloem fibers   (d)   Sieve tube

30. Which of the following substances are not stored in vacuoles?

(a) Amino acids   (b)   Sugars

(c) DNA   (d)   Proteins

31.   Plasma membrane acts as

(a) A barrier to external environment which allow entry and exist of some materials.

(b) A barrier to external environment providing complete freedom of entry and exist to all materials

(c) A rigid barrier to external environment, that does not allow entry of any material

(d) A covering separating various part of the same cell.

32. Who gave the law of constant proportions?

    a) Cavendish

    b) Proust

    c) Datton

    d) Lavoisier

33. Valency of hydrogen is 1 and that of sulphur is 2. What should be the formula of hydrogen sulphide?

    a) HS

    b) H_2S_2

    c) HS_2

    d) H_2S

34. Which is the best technique to separate coffee gains from coffee solution?

    a) Distillation

    b) Evaporation

    c) Filtration

d) Chromatography

35. Which of the following statement is true for elements?

    a) They are pure substances

    b) They cannot be broken down into simpler substances

    c) They are classified into metals, non metals and metalloids

    d) All of the above

36.   Arenchyma is richly found in

(a) Hydrophytes   (b)   Xerophytes

(c) Helophythes   (d)   None of these

37. A single long conducting fiber extending form a neuron is called.

(a) Nerve cell   (b)   Cell body

(c) Axum   (d)   Dendrites

38. Which of the following organism comes under the category of spiny skinned organisms?

(A) Pile   (B) Prawn

(C) Sea urchin   (D) Cockroach

39. Minimum time interval for hearing a distinct eco is.

(A)   2.0s   (B)   0.1s

(C)   0.2s   (D)   1.5 s

40. A ship sends sonar and receives an echo after 2 second if the speed of sound waves in water is 1500 m/s, then the depth of the sea is

(A)   1500 m   (B)   500 m

(C)   750 m   (D)   1000 m

ENGLISH

41. Who is the author of 'The Fun they Had'?

    a)   Charles Dickens   c)   Isac Asimor

    c)   Molton   d)   None

42. Who Played Shahmayi at king's palace?

    a)   A barber   b)   A musician

    c)   A courts man   d)   A singer

43. In which family A.P.J Abdul Kalam belong to ?

    a) Madras family   b)   Gujrat family

    c) Tamil family   d)   Punjabi family

44. When did Santosh fight the system of the society ?

    a)   When she turned 18
    b)   When she turned 17
    c)   When she turned 16
    d)   When she turned 19

45. Who is Writer of the Bond of the Love?

    a) Douglas James   b)   Vikram Seth

c) Kenneth Anderson   d)   A.P.J Abdul Kalam

46.Which famous Hindu temple is Situated in Puri ?

a) Jagannath   b)   Kedarnath

c) Pashupatinath   d)   Deenanath

47.What was Gerrard's full name?

a) Bill Gerrard   b)   William Gerrard

c) Henry Gerrard   d)   Vincent Charles Gerrard

48.Who is the Poet of the poem " The Duck and The Kangaroo "?

a) Edward Lear   b)   Grieve Patel

c) W. Ross   d)   William Words

49. What did the child want to eat at the fair?

a) Burfi   b)   Pastry

c) Ladoo   d)   Jalebi

50. Toto's hands looked ……………. as if they had been Picked in the sun.

a) dried up   b)   coiled up

c) screwed up   d)   nailed up

51. It surprised the guru and his disciple to see that everything in the shops of the

town………………..

a) cost a rupee   b)   cost a duddu

c) cost too much   d)   cost five rupees.

52. Where did the cyclone hit in October 1999?

a) Orissa   b)   Haryana

c) Kerala   d)   Punjab

53. What was Johnsy looking at out of the window?

    a) An ivy Creeper   b)   A mango tree

    c) A rose Plant   d)   A banana tree

54. How long time did it take to blow out the fire?

    a) Two hour's   b)   Five hours

    c) Ten hours   d)   Six hours

55. Who was along with Bill Bryson when he discharged all the thing on the road?

    a) Boston Airways   b)   French Airways

    c) British Airways   d)   American Airways

56. Who was Olga?

    a) A beggar   b)   Segei's cook

    c) An advocate   d)   A wood chopper

57. Two-Thirds of the food supply _____ for the month.

     a)   has been used

     b)   were used

     c)   have been using

     d)   has been using

58. We are the organizers. We -------------- welcome the guests.

     a)   should

     b)   Could

     c)   ought

     d)   might

59. What was Lushkoff doing before begging?

    a) Dancing   b)   Singing

    c) Teaching   d)   None of these

60. After how many years Prashant's mother death, he had gone to the block headquater of Ersama?

    a) Five years   b)   Four years

c) Six years   d)   None of these

GENERAL KNOWLEDGE

61. Which one is the largest district of Jharkhand by area wise?

   (a) Palamu   (b) Ranchi   (c) Giridih   (d) Pashchimi singhbhum

62. What is the name of the festival of flowers of the adivasis in Jharkhand ?

   (a) Tusu   (b) Baha   (c) Sarhul   (d) Karma

63. In which year the santhal rebellion started ?

   (a) 1852   (b) 1855   (c) 1858   (d) 1867

64. The Prasanath Hill is situated in which district?

   (a) Deoghar   (b) Koderma   (c) Giridih   (d) Jamtara

65. When did the Wilkinson Law come into existence in Chotanagpur ?

   (a) 1834   (b) 1835   (c) 1836   (d) 1837

66. In which year national games was held in Jharkhand?

   (a) 2009   (b) 2010   (c) 2011   (d) 2012

67. Which of the following mineral is not produced in Jharkhand?

   (a) Thorium   (b) Uranium   (c) Petroleum   (d) None of these

68. Who is the author of Jharkhand: Castle Victor Graves?

   (a) Victor   (b) Shibbu Soren   (c) Shailendra Mehento   (d) None of these

70. Which is the following is main tribal caste living in the state?

   (a) Munda   (b) Hoo   (c) Asur   (d) Gond

71. Palako sanctuary is situated in which district of Jharkhand?

   (a) Khunti   (b) Chatara (c) Bokaro   (d) Latehar

72. Which is the following Tribe is known as "Yuva Ghar Ghatora" in Jharkhand ?

   (a) Santhal   (b) Oraon   (c) Munda   (d) Kharia

73. When was the first railway route made in Jharkhand?

   (a) In 1845 AD   (b) In 1880 AD   (c) In 1945 AD   (d) None of these

74. When the Aundi song sung?

    (a) At the time of spring   (b) At the time of sowing Dhan

    (c) At the time of marriage   (d) None of these

75. An effective hand sanitizer contains all least this percentage of alcohol to kill the corona
    virus and other germs?

   (a) 60%   (b) 70%   (c) 75%   (d) 80%

76. Who invented the FM radio?

   (a) Edwin Howard Armstrong   (b) Edward Henrik Amstrong

   (c) Louis Theroux   (d) Adam Anter

77. Which plateau is known as the "Roof of the world?"

   (a) Andes   (b) Himalaya   (c) Karakoram   (d) Pamir

78. Milky way galaxy was first seen by

   (a) Martin Schmidt   (b) Marconi   (c) Galileo   (d) Newton

79. Which of the following plants is known as Earth's twin?

   (a) Mars   (b) Saturn   (c) Uranus   (d) Venus

80. Anthophobia is fear of which of the following?

   (a) Boss   (b) Fire   (c) Flowers   (d) Dogs.