B.Tech. DEGREE EXAMINATION, DECEMBER 2023
Second Semester

18PDH101T – GENERAL APTITUDE

(For the candidates admitted during the academic year 2020-2021 & 2021-2022)

Time: Two Hours   Max. Marks: 100

Name of the Candidate   :

_____

Register Number   :

Signature of the Candidate :

_____

INSTRUCTIONS TO THE CANDIDATE

1. The Question Booklet contains 80 Questions.

2. **ANSWER ALL** the questions. **This paper contains TWO parts.**

3. **CALCULATORS OR ANY OTHER MATHEMATICAL DEVICES ARE NOT ALLOWED.**

4. Write your **NAME, REGISTER NUMBER** and put your **SIGNATURE** in the places specified on the first page of this Question Booklet.

5. Do not open this Question Booklet until the Hall Superintendent signals the commencement of the examination.

6. Check whether the Answer Sheet and the Question Booklet are in good condition. If not, before writing anything on the Answer Sheet, ask for the replacement of the Question Booklet / Answer Sheet.

7. Write and shade your **REGISTER NUMBER**, in the specified place in the **OMR** coding sheet.

8. Write and shade the question paper version code in the specified place in the **OMR** coding sheet.

9. Answer should be shaded with **BLUE or BLACK BALL PEN** in the Coding Sheet.

10. All instructions given in the **OMR** coding sheet should be strictly followed.

11. Use Answer Sheet carefully. No spare Answer Sheet will be given.

12. The answer should be given only in the Answer Sheet.

13. The last few pages of the Question Booklet are blank, except for the words 'Rough Work'. You can use them for any rough calculations.

PART – A (50 Marks)

Instructions:
Question No. 1 to 10 carries 2 marks each
Question No. 11 to 40 carries 1 mark each

1. Determine the units digit of 9^{123}
   - (A) 1
   - (B) 9
   - (C) 3
   - (D) 6

2. Find the digit * that should replace the question mark in the number 4*371 to make it divisible by 9. What digit should replace?
   - (A) 3
   - (B) 6
   - (C) 0
   - (D) 9

3. If 5^{15} is divided by 5, what is the remainder?
   - (A) 4
   - (B) 0
   - (C) 1
   - (D) 3

4. How many zeros are at the end of 120!?
   - (A) 27
   - (B) 28
   - (C) 29
   - (D) 30

5. The LCM of two numbers is 60, and their HCF is 6. If one of the numbers is 12, what is the other number?
   - (A) 10
   - (B) 15
   - (C) 20
   - (D) 30

6. A teacher has 30 math textbooks and 45 English textbooks. If she wants to distribute these textbooks to her students so that each student receives an equal number of textbooks and no textbook is left, what is the maximum number of students she can distribute the textbooks to?
   - (A) 5
   - (B) 9
   - (C) 15
   - (D) 3

7. If the price of a product is increased by 25%, by what percentage should it be reduced to bring it back to its original price?
   - (A) 15%
   - (B) 17.5%
   - (C) 18%
   - (D) 20%

8. A company's profit increased from Rs. 50,000 to Rs. 60,000 in one year. What is the percentage increase in profit?
   - (A) 10%
   - (B) 15%
   - (C) 20%
   - (D) 25%

9. A store offers a discount of 25% on a pair of shoes. If the original price of the shoes is Rs.80, what is the discounted price?
   - (A) Rs.20
   - (B) Rs. 40
   - (C) Rs. 60
   - (D) Rs.75

10. A smartphone's price decreased from Rs. 400 to Rs. 350. What is the percentage decrease in price?
    (A) 10%
    (B) 12.5%
    (C) 13%
    (D) 15%

11. In a school, the number of students in Class A is 20% more than the number of students in Class B. If there are 200 students in Class B, how many students are there in Class A?
    (A) 240
    (B) 250
    (C) 200
    (D) 260

12. How many employees in the company belong to the support staff category, given that 60% are engineers, and 25% are managers out of a total of 500 employees?
    (A) 75
    (B) 100
    (C) 150
    (D) 90

13. An alloy contains 25 % of copper. What quantity of alloy is required to get 500 g of copper?
    (A) 1000 g
    (B) 1500 g
    (C) 2500 g
    (D) 2000 g

14. A bicycle is sold for Rs. 240, and this represents a profit of 20% on the cost price. What is the cost price of the bicycle?
    (A) Rs. 210
    (B) Rs. 200
    (C) Rs. 220
    (D) Rs. 230

15. Sri deposited Rs. 5,000 into a savings account that pays an annual interest rate of 4%. How much interest will he earn in 3 years?
    (A) Rs. 200
    (B) Rs. 400
    (C) Rs. 600
    (D) Rs. 300

16. If an amount of Rs. 800 earns Rs.160 in interest at a simple interest rate of 4% per annum, how many years was the money invested?
    (A) 7 years
    (B) 10 years
    (C) 9 years
    (D) 5 years

17. Varsha invested Rs. 5000 in a savings account that pays an annual interest rate of 10%, compounded annually. How much money will she have in the account after 2 years year?
    (A) Rs.5000
    (B) Rs. 5400
    (C) Rs. 6050
    (D) Rs.5300

18. Nidhi borrowed Rs. 2,000 from a bank and repaid Rs. 2,600 after 3 years. Find the annual rate of interest per annum?
    (A) 10%
    (B) 12%
    (C) 15%
    (D) 9%

19. The compound interest on Rs. 30,000 at 12% per annum is Rs. 7632. The period (in years) is:
    (A) 2.5 years
    (B) 2 years
    (C) 3 years
    (D) 3.5 years

20. A gets 92 % marks in an examination. If he scores 460 marks, find the maximum marks.
    (A) 400
    (B) 500
    (C) 600
    (D) 300

21. Find the remainder when 12345678910...99100 is divided by 4?
    (A) 3
    (B) 0
    (C) 2
    (D) 1

22. Find x if $\log_5(x-7) = 1$.
    (A) 10
    (B) 15
    (C) 12
    (D) 18

23. The least perfect square number which is divisible by 3, 4, 6 and 8 is

    (A) 900
    (B) 3600
    (C) 2500
    (D) 4900

24. Find the single discount equivalent to two successive discounts of 10% and 20%
    (A) 27%
    (B) 25%
    (C) 30%
    (D) 28%

25. Find the remainder when 16^{89} is divided by 5
    (A) 1
    (B) 16
    (C) 0
    (D) 5

26. Find the value of x, if $\log_{10}(x-10) = 1$.
    (A) 10
    (B) 15
    (C) 20
    (D) 30

27. If $\log_a(ab) = x$, then $\log_b(ab) = $?
    (A) $1/x$
    (B) $x/(x+1)$
    (C) $x/(1-x)$
    (D) $x/(x-1)$

28. The value of $(\log_5(5))(\log_4(9))(\log_3(2))$ is :
    (A) 1
    (B) 3/2
    (C) 2
    (D) 5

29. The value of $\log_{343}(7)$ is
    (A) 1/3
    (B) -3
    (C) -1/3
    (D) 3

30. The sum of four consecutive even numbers is 292. What would be the smallest number?
    (A) 74
    (B) 76
    (C) 70
    (D) 68

31. P, Q and R have Rs.6000 among themselves. R has two-thirds of the total amount with P and Q. Find the amount with R?
    (A) Rs.3000
    (B) Rs.3600
    (C) Rs.2400
    (D) Rs.4000

32. Munna's age 18 years hence will be thrice his age four years ago. Find Munna's present age?
    (A) 15 years   (B) 21 years
    (C) 18 years   (D) 9 years

33. The sum of the digits of a two-digit number is 12. The difference of the digits is 6. Find the number?
    (A) 92   (B) 39
    (C) 75   (D) 48

34. Choose the term that can replace? 2A11, 4D13, 12G17, ?
    (A) 36I19   (B) 36J21
    (C) 48J21   (D) 48J23

35. Find the next term in the series 1, 2, 6, 7, 21, 22, 66, 67, ?
    (A) 201   (B) 134
    (C) 70   (D) 302

36. A is the brother of B. C is the sister of D. B is the son of C. How is A related to C?
    (A) Nephew   (B) Son
    (C) Brother   (D) Cousin

37. P is in the East of Q and Q is in the North of R. S is in the South of R then in which direction of P is S?
    (A) South-East   (B) South
    (C) South-West   (D) North-East

38. Find the wrong term in the series 2,5,10,50,500,5000
    (A) 5000   (B) 500
    (C) 10   (D) 5

39. There are 24 students in a class. Supriya is 9th from the left. What is her position from the right?
    (A) 17   (B) 18
    (C) 16   (D) 15

40. If '249' stands for 'softer than flower', '436' stands for 'sweet flower fragrance' and '621' stands for 'sweet than smile', what would 'fragrance' stand for?
    (A) 6   (B) 4
    (C) 3   (D) 2

PART – B (50 Marks)

Instructions:
Question No. 41 to 50 carries 2 marks each
Question No. 51 to 80 carries 1 mark each

Rearrange the following sentences to form a coherent paragraph:

41. P. The king was not impressed.
    Q. Finally, an elderly person with a glow on his face walked in and said that he was a teacher. The king came down from his throne and bowed to honour the teacher.

R. There is a story about a king in ancient times who wanted to honour a person that made the greatest contribution to the society.

S. All kinds of people came, including doctors and entrepreneurs, and they all presented their cases for receiving the honor.

(A) QPRS

(B) PQRS

(C) SPRQ

(D) RSPQ

42. P. He was so busy with them that he did not get time to eat.

Q. Thousands of people came to him and asked different types of questions.

R. No one cared to see whether he had his food or rest that night.

S. Swami Vivekananda once stayed in a small village.

(A) QRSP

(B) RQPS

(C) SQPR

(D) SQRP

43. P. Mr. Raman's personality sets him apart from the rest.

Q. Nothing is too small for his attention.

R. He has a fanatical devotion to detail.

S. This is what makes him a different guy.

(A) PRQS

(B) PQSR

(C) QSRP

(D) SRQP

44. P. As a result, there was horrendous congestion.

Q. In Kolkata, trams ran down the center of the road.

R. It was the first in South Asia, and the foundation stone was laid in 1972.

S. To ease this, the city decided to build an underground railway line.

(A) PQRS

(B) PRSQ

(C) QPSR

(D) RSPQ

In the question below, four different ways of writing the CAPITALISED part are indicated. Choose the best way of writing the capitalized part:

45. Some **MEMBERS OF THE TRIBE HAS BEEN PROTESTING** against the hunting laws imposed on indigenous populations.

(A) members of the tribe have been protesting

(B) tribe members has been protesting

(C) tribe members will has been protesting

(D) members of the tribe, having protested

46. The intruder stood quietly for **FEW MOMENTS**.

(A) few moment

(B) the few moments

(C) a few moments

(D) an few moment

47. The setting of a story **EFFECTS THE STORY'S PLOT**.

(A) affect the story's plot

(B) affects the story's plot

(C) effect the story's plot

(D) having effected the story's plot

48. If I **WOULD HAVE KNOWN** about the team's objectives, I would have signed up for them.

(A) had known

(B) knows

(C) having been known

(D) will know

49. He disliked the Math exam, **ISN'T HE?**
    (A) didn't he   (B) doesn't he
    (C) hasn't he   (D) does he

50. The man **TO WHO I SOLD** my house was a cheat.
    (A) to whom I sell   (B) to who I sell
    (C) who was sold to   (D) to whom I sold

Choose the SYNONYM of the word in CAPITAL LETTERS:

51. The bullet wound proved to be **FATAL**, and the soldier died immediately.
    (A) deadly   (B) friendly
    (C) lovely   (D) softly

52. Silence is **MANDATORY** for meditation to be effective.
    (A) tertiary   (B) compulsory
    (C) needless   (D) useless

53. The President paid a **BRIEF** visit to Moscow.
    (A) fast   (B) slot
    (C) short   (D) casual

54. The child was **RESCUED** from a burning house.
    (A) lost   (B) missed
    (C) found   (D) saved

55. A **RUPTURE** in the relationship of the two brothers is quite apparent.
    (A) break   (B) bond
    (C) link   (D) union

56. She can **CONVERSE** fluently for hours.
    (A) write   (B) speak
    (C) listen   (D) read

Choose the ANTONYM of the word in CAPITAL LETTERS:

57. Many people try to **RESIST** reforms in society.
    (A) fight   (B) rebel
    (C) accept   (D) withdraw

58. void joking about anything that might be mistaken for an **INSULT**.
    (A) hurt   (B) offence
    (C) abuse   (D) honour

59. No **ARTIFICIAL** sweeteners are used in this product.
    (A) natural   (B) forced
    (C) synthetic   (D) solid

60. The new evidence only **CONFUSED** matters further.
    (A) disturbed
    (B) clarified
    (C) shook
    (D) startled

61. The Chairman **INITIATED** the proceedings with a brief speech.
    (A) started
    (B) progressed
    (C) imitated
    (D) completed

62. Bears lay **DORMANT** in their den in winter.
    (A) asleep
    (B) resting
    (C) active
    (D) inactive

Choose the option that best completes the sentence semantically/grammatically:

63. People who tend to _____ their responsibilities are never successful.
    (A) accept
    (B) complete
    (C) finish
    (D) avoid

64. You must not _____ from the agreed route.
    (A) deviate
    (B) follow
    (C) adhere
    (D) comply

65. I really don't know how to _____ the problem.
    (A) draw
    (B) tackle
    (C) enter
    (D) fit

66. After starting at ____ menu for five minutes, Jane ordered some food.
    (A) the
    (B) a
    (C) an
    (D) no article

67. How _____ oranges did you put in the box?
    (A) some
    (B) a little
    (C) many
    (D) less

68. My uncle decided to take _____ and my sister to the market.
    (A) I
    (B) mine
    (C) me
    (D) myself

Identify the part of the sentence that contains an error. If there is no error, choose the "No Error" option:

69. Students has (A) the responsibility (B) to study well. (C) No Error (D)

70. The teacher said (A) that the earth moves (B) for the sun. (C) No error (D)

71. This exercise (A) are harder than (B) the previous one. (C) No error. (D)

72. Thousands of people (A) came to him and asks (B) different types of questions. (C) No error. (D).

73. My house (A) is better (B) than John. (C) No error (D).

74. One of the questions (A) he asked me was (B) "Who did you travel with?" (C) No error (D).

Choose the pair that has a similar relationship to that of the question pair:

75. Gloves : Hands : :
     (A) Neck : Collar   (B) Tie : Shirt
     (C) Socks : Feet   (D) Coat : Pocket

76. Scales : Fish : :
     (A) Bear : Fur   (B) Woman : Dress
     (C) Skin : Man   (D) Tree : Leaves

77. Elephant : Herbivorous : :
     (A) Tiger: carnivorous   (B) Vegetarian: omnivorous
     (C) Snail: mollusc   (D) Canine: dog

78. Botany : Plants : :
     (A) Geology: earth   (B) Stars: astronomy
     (C) Teacher: class   (D) Disease: etiology

79. Pork : Pig : :
     (A) Rooster: chicken   (B) Mutton: sheep
     (C) Steer: beef   (D) Lobster: crustacean

80. After : Before : :
     (A) First: second   (B) Present: past
     (C) Contemporary: historic   (D) Successor: predecessor

* * * * *

WORK SHEET

14DF2-18PDH101T