

**B.Tech. DEGREE EXAMINATION, JUNE 2024**

Second Semester

18PDH101T – GENERAL APTITUDE

*(For the candidates admitted during the academic year 2018-2019 to 2021-2022)*

Time: Two Hours

Max. Marks: 100

Name of the Candidate :

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Register Number :

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Signature of the Candidate :

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**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:**

- (i) Question No. 1 to 10 carries 2 marks each  
(ii) Question No. 11 to 40 carries 1 mark each

1. Which of the following is an even prime number?  
(A) 2 (B) 4  
(C) 6 (D) 8
2. Find the units digit of  $(603)^{203}$ .  
(A) 1 (B) 4  
(C) 5 (D) 7
3. Find  $\sqrt{1024} - \sqrt{4^3}$ .  
(A) 22 (B) 24  
(C) 27 (D) 32
4. Convert the recurring decimal 14.2857142857142857 ..... into fraction.  
(A) 100/3 (B) 100/5  
(C) 100/7 (D) 100/9
5. If  $x\%$  of 500 = 250% of 50, then find x.  
(A) 20 (B) 25  
(C) 40 (D) 50
6. If the price of petrol is increased by 25%, then by what percentage the consumption should be decreased so that the total expenditure remains the same?  
(A) 20 (B) 25  
(C) 30 (D) 50
7. Find the discount %, if the marked price of a phone is ₹ 16,000 and it is sold for ₹ 12,800.  
(A) 10 (B) 15  
(C) 20 (D) 25
8. A sum of money of ₹ 40,000 invested for a period of 3 years at the rate of 15% per annum. Find the simple interest at the end of 3 year.  
(A) ₹ 15,000 (B) ₹ 18,000  
(C) ₹ 20,000 (D) ₹ 24,000
9. Find  $\log \log_{93} 27^2$   
(A) 0 (B) 1  
(C) 3 (D) 9
10. A cloth of length 200 cm is cut into two pieces such that the first piece is 40 cm smaller than thrice the second piece. What is the length of the larger piece?  
(A) 60 cm (B) 80 cm  
(C) 100 cm (D) 140 cm

11. The number 18101 is divisible by which number?  
 (A) 3 (B) 11  
 (C) 15 (D) 23
12. Find the LCM of  $\frac{3}{4}$ ,  $\frac{5}{7}$  and  $\frac{1}{2}$   
 (A) 5 (B)  $\frac{10}{7}$   
 (C) 15 (D)  $\frac{20}{7}$
13. The LCM and HCF of two numbers are 54 and 9 respectively. If one of the number is 18 then find the other number.  
 (A) 24 (B) 27  
 (C) 31 (D) 33
14. Find the unit digit of  $34^{7878}$   
 (A) 2 (B) 4  
 (C) 6 (D) 8
15. Find the number of zeros at the end of  $83!$   
 (A) 3 (B) 16  
 (C) 19 (D) 35
16. Find the maximum power of 2 in  $97!$   
 (A) 94 (B) 95  
 (C) 96 (D) 97
17. Evaluate  $\sqrt[3]{1728} - \sqrt[3]{729}$   
 (A) 2 (B) 3  
 (C) 4 (D) 5
18. Find the remainder of  $86^3$  when divided by 17.  
 (A) 0 (B) 1  
 (C) 2 (D) 3
19. Solve:  $(2x + y)(2x - y)$   
 (A)  $2x^2$  (B)  $y^2$   
 (C)  $2x^2 - 2y^2$  (D)  $4x^2 - y^2$
20. Find the number of factors of 48.  
 (A) 4 (B) 8  
 (C) 10 (D) 12

21. Simplify  $3\frac{1}{2} + 7\frac{1}{4} - 2\frac{3}{4}$
- (A)  $10\frac{3}{4}$  (B)  $13\frac{1}{2}$   
 (C) 12 (D) 8
22. Evaluate  $\sqrt{42 + \sqrt{42 + \sqrt{42 + \dots}}}$
- (A) 3 (B) 6  
 (C) 7 (D) 10
23. If  $a\%$  of  $b\%$  of  $c = b\%$  of  $d\%$  of  $a$  then find  $c$ .
- (A)  $a$  (B)  $b$   
 (C)  $c$  (D)  $d$
24. A batsman has an average score of 88 runs in 10 innings and he has scored 50 runs and 30 runs in his last two innings respectively. Find his new average?
- (A) 80 (B) 90  
 (C) 40 (D) 50
25. The length and breadth of a rectangle is increased by 20% and 30% respectively. If so, by what percentage the area of the rectangle gets increased?
- (A) 50 (B) 56  
 (C) 60 (D) 65
26. Find the cost price of a shirt, if its selling price is ₹ 1,800 and its loss is 10%
- (A) ₹ 1,500 (B) ₹ 1,600  
 (C) ₹ 2,000 (D) ₹ 2,100
27. Find the single discount equivalent to successive discounts of 10%, 20% and 25%.
- (A) 30% (B) 45%  
 (C) 55% (D) 46%
28. A coat is sold for ₹ 2,400 with a discount of ₹ 400. Find its marked price
- (A) ₹ 2,800 (B) ₹ 2,000  
 (C) ₹ 2,200 (D) ₹ 2,600
29. Two products are sold for the same price. On one there is a profit of 20% on other there is a loss of 20%. Find the profit or loss in the overall transaction.
- (A) 2% profit (B) 4% loss  
 (C) 4% profit (D) 2% loss
30. Selling price of 8 calculators is same as cost price of 10 calculators. Find its profit percentage.
- (A) 20% (B) 25%  
 (C) 40% (D) 50%
31. A sum of money becomes ₹ 12,000 at the end of 2 years at the rate of 10% per annum simple interest. Find the interest
- (A) ₹ 1,000 (B) ₹ 2,000  
 (C) ₹ 4,000 (D) ₹ 500

32. Find the compound interest on a sum of ₹ 1,000 at 10% p.a for 3 years compounded annually.  
 (A) 1331 (B) 1300  
 (C) 331 (D) 300
33. A sum of money doubles itself in 8 years under simple interest. If so in how many years will it triples itself?  
 (A) 8 (B) 12  
 (C) 14 (D) 16
34. Hari takes a loan of ₹ 45,500 from a bank at the rate of 20% p.a under compound interest. He agrees to pay it in 3 equal installments, one installment at the end of every year. Find the installment.  
 (A) ₹ 18,000 (B) ₹ 20,000  
 (C) ₹ 21,600 (D) ₹ 24,720
35. Find  $\log_7 49$   
 (A) 1 (B) 0  
 (C) 2 (D) 7
36. Find the value of the expression  $\frac{1}{1 + \log_u vw} + \frac{1}{1 + \log_v wu} + \frac{1}{1 + \log_w uv}$   
 (A) 0 (B) 1  
 (C) u (D) uvw
37. Find the number of digits in  $2^{150}$ . (If  $\log 2 = 0.3010$ )  
 (A) 40 (B) 45  
 (C) 46 (D) 50
38. The cost of tickets for a cricket match is ₹ 3,000 for stand C and ₹ 4,000 for stand E. 80 tickets were sold and ₹ 2,70,000 was collected. How many tickets from stand E were sold?  
 (A) 20 (B) 30  
 (C) 40 (D) 50
39. Hemachandran's age is 5 years more than twice Harichandran's age. Sugichandran's age is 13 years less than 10 times Harichandran's age. If Sugichandran's age is 3 times of Hemachandran's age, then how old is Hemachandran?  
 (A) 14 (B) 17  
 (C) 18 (D) 19
40. A number consists of two digits, the sum of the digits is 9. If 45 is subtracted from the number, its digits are interchanged. What is the number?  
 (A) 63 (B) 72  
 (C) 81 (D) 90

**PART – B (50 Marks)**

**Instructions:**

- (i) Question No. 41 to 50 carries 2 marks each
- (ii) Question No. 51 to 80 carries 1 mark each

**Choose the synonym of the question word from the given options:**

- 41. Gratify  
(A) Satisfy (B) Modify  
(C) Require (D) Neglect
- 42. Scholarly  
(A) Unintelligent (B) Dull  
(C) Knowledgeable (D) Stupid
- 43. Enhanced  
(A) Improved (B) Diminished  
(C) Destroyed (D) Reduced
- 44. Cherished  
(A) Digested (B) Rejected  
(C) Avoided (D) Insulted
- 45. Inflexible  
(A) Gentle (B) Adamant  
(C) Soft (D) Friendly

**Choose the antonym of the question word from the given options:**

- 46. Revenge  
(A) Forgive (B) Avenge  
(C) Dedicate (D) Determine
- 47. Thoughtful  
(A) Ruminative (B) Meditative  
(C) Empty-minded (D) Preoccupied
- 48. Created  
(A) Destroyed (B) Manufactured  
(C) Moulded (D) Shaped
- 49. Comic  
(A) Tragic (B) Hilarious  
(C) Laughable (D) Jocular
- 50. Unpleasant  
(A) Unacceptable (B) Nasty  
(C) Decent (D) Unrefined

**Pick the odd word:**

51. (A) Think                      (B) Reflect                      (C) Type                      (D) Consider
52. (A) Warm                      (B) Hot                      (C) Cool                      (D) Sultry
53. (A) Valley                      (B) River                      (C) Mountain                      (D) Tower
54. (A) Lively                      (B) Bubbly                      (C) Happy                      (D) Dull
55. (A) Barbaric                      (B) Savage                      (C) Decent                      (D) Uncivilized

**Choose the pair of words that best express the relationship similar to that of the questions pair:**

56. Sheep : Wool : :  
(A) Fodder : Animal                      (B) Otter : Fur  
(C) Flax : Cotton                      (D) Animal : Vegetable
57. Botany : Plants : :  
(A) Geology : Earth                      (B) Stars : Astronomy  
(C) Teacher : Class                      (D) Disease : Etiology
58. Word : Dictionary : :  
(A) Roe : Fish                      (B) Cell : Body  
(C) Teeth : Mouth                      (D) Hail : Scalp
59. Tyre: Rubber : :  
(A) Oasis : Desert                      (B) House : Roof  
(C) Paper : Wood                      (D) Pebble : Boulder
60. Whale : Fish : :  
(A) Hound : Dog                      (B) Bat : Bird  
(C) Alligator : Crocodile                      (D) Fly : Worm

**Complete the following sentences with the options given below:**

61. An \_\_\_\_\_ study should reveal the influence of environment on man.  
(A) Ecumenical                      (B) Endemic  
(C) Ecological                      (D) Epigraphic
62. It is not reasonable to insult and \_\_\_\_\_ the man simply because you don't agree with him.  
(A) Depict                      (B) Engrave  
(C) Defame                      (D) Distort
63. I \_\_\_\_\_ living in Chennai since 2000.  
(A) Have been                      (B) Has been  
(C) Has                      (D) Have

64. A fruit \_\_\_\_\_ sweet and so are the children to their parents.  
 (A) Taste (B) Tastes  
 (C) Does (D) Do
65. Ramu \_\_\_\_\_ agree with the establishments of life because he is a revolutionary.  
 (A) Does (B) Does not  
 (C) Is (D) Was

**Spot the error in the following sentences:**

66. Raj has gone (A)/ to the library (B)/ and he will return back (C)/ to the class very soon (D)/.
67. She cannot able to (A) / express her love (B) / for me now since there (C)/ are some practical obstacles (D)/.
68. One in (A)/ six people (B)/ suffer from (C) / insomnia (D)/.
69. Lord Nelson (A) / is regarded as (B) one of (C)/ the greatest hero of London (D)/.
70. Manisha have bought (A) / a new car (B)/ for her son (C)/ on his birthday (D)/.

**Choose the exact meaning of the idiomatic expressions given below:**

71. The tortured man decided to take the bull by the horns to be peaceful.  
 (A) To eat heavily (B) To starve  
 (C) To be sand (D) To face a difficulty or danger boldly
72. A rotten apple in the class has been caught by the teacher.  
 (A) A waste of energy (B) A bad person in a group  
 (C) The failure of a plan (D) To be bold
73. Sudha has to turn a new leaf in her life.  
 (A) New beginning (B) Become a vegetarian  
 (C) Plant trees (D) Destroy forest
74. A blue blooded man can easily be identified.  
 (A) Royal (B) Poor  
 (C) Educated (D) Foolish
75. It is raining cats and dogs.  
 (A) Raining heavily (B) Raining gently  
 (C) No rain (D) Raining imperceptibly

**Read the passage and answer the questions that follow:**

Dinosaurs are very interesting not only to children, but also to the people of all age groups. They are a diverse group of reptiles of the clade Dinosauria. There is a theory that the dinosaurs inhabiting the earth were destroyed when a huge heavenly body hit the earth. The impact of the heavenly body when it struck the earth threw a mass of pulverized debris into the atmosphere. This dust created a fog, which blocked the sunlight depleting plant life. This resulted in the perishing of the plant-eating dinosaurs, the meat-eating dinosaurs, which preyed on the plant-eaters, in turn starved to death.



76. This passage is about \_\_\_\_\_.  
(A) The death of dinosaurs (B) The history of dinosaurs  
(C) The power of dinosaurs (D) Natural calamity
77. Dinosaurs are a diverse group of reptiles of the clade \_\_\_\_\_.  
(A) Homosapiens (B) Homoerectus  
(C) Dinosauria (D) Cephalopod
78. The habitat of the dinosaurs was destroyed when \_\_\_\_\_.  
(A) A huge heavenly body hit the earth (B) A mountain was destroyed  
(C) An angel cursed the place (D) There was a fight among them
79. The fog created blocked the \_\_\_\_\_ depleting plant life.  
(A) Sun light (B) Moon light  
(C) Rivers (D) Rain
80. The meat-eating dinosaurs died because \_\_\_\_\_.  
(A) The plant-eating dinosaurs dies (B) Human beings started hunting them  
(C) They were infected with a virus (D) Of a strange disease

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## **WORK SHEET**