

**P.G. ETC**  
**PART - A**

1. The L.C.M. of two numbers is 495 and their H.C.F. is 5. If the sum of the numbers is 100, then their difference is;  
(A) 10                      (B) 46                      (C) 70                      (D) 90
2. Three numbers are in the ratio 1 : 2 : 3 and their HCF is 12. The numbers are;  
(A) 4, 8, 12                      (B) 5, 10, 15  
(C) 10, 20, 30                      (D) 12, 24, 36
3. Which of the following has the most number of divisors ?  
(A) 99                      (B) 101                      (C) 176                      (D) 182
4. The greatest possible length which can be used to measure exactly the length 7 m, 3 m, 85 cm, 12 m, 95 cm is  
(A) 15 c.m                      (B) 25 c.m                      (C) 35 c.m                      (D) 42 c.m
5. The average runs of a cricket player of 10 innings was 32. How many runs must he make in his next innings so as to increase his average of runs by 4.  
(A) 76                      (B) 79                      (C) 85                      (D) 87
6. The average of 20 numbers is zero. Of them at the most, how many may be greater than zero ?  
(A) 0                      (B) - 1  
(C) 1                      (D) None of the above
7. Arrange the words given below in a meaningful sequence  
1. Word 2. Paragraph 3. Sentence 4. Letters 5. Phrase  
(A) 4, 1, 5, 2, 3                      (B) 4, 1, 3, 5, 2  
(C) 4, 2, 5, 1, 3                      (D) 4, 1, 5, 3, 2



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8. Pointing to a photograph of a boy Mohan said, "He is the son of the only son of my mother." How Mohan is related to that boy ?

- (A) Brother (B) Uncle (C) Cousin (D) Father

9. Complete the series

3, 10, 101, ?

- (A) 10101 (B) 10201  
(C) 10202 (D) 11012

10. 6, 13, 25, 51, 101, ?

- (A) 201 (B) 202 (C) 203 (D) 205

11. An institute organised a fest and  $\frac{1}{5}$  of the girls and  $\frac{1}{8}$  of the boys participated in the same. What fraction of the total number of students took part in the fest ?

- (A)  $\frac{2}{13}$  (B)  $\frac{13}{40}$   
(C) Data inadequate (D) None of the above

12. There are deer and peacocks in a zoo. By counting heads they are 80. The number of their legs is 200. How many peacocks are there ?

- (A) 20 (B) 30 (C) 50 (D) 60

13. Which of the following diagrams indicate the best relation between Author, Lawyer and Singer ?

- (A)  (B)  (C)  (D) 

14. A person crosses a 600 m long street in 5 minutes. What is his speed in km per hour ?

- (A) 3.6 (B) 7.2 (C) 8.4 (D) 10



15. If 20% of  $a = b$ , then  $b\%$  of 20 is the same as :

- (A) 4% of  $a$  (B) 5% of  $a$   
(C) 20% of  $a$  (D) None of the above

16. Choose one word substitution :

One who abandons his religious faith :

- (A) Apostate (B) Prostate (C) Profane (D) Agnostic

17. Choose most appropriate :

There are \_\_\_\_\_ views on the issue of giving bonus to the employees.

- (A) independent (B) divergent (C) modest (D) adverse

18. There is a \_\_\_\_\_ on his character.

- (A) blot (B) blur  
(C) slur (D) spot  
(E) mark

19. Choose the correct word that is most nearly same meaning to 'LATITUDE'

- (A) Eligibility (B) Freedom  
(C) Coercion (D) Meticulous

20. Choose the correct sentence formation :

1. do  
2. today  
3. you  
4. must  
5. it

- (A) 34152 (B) 25413 (C) 51324 (D) 45213



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**21. Choose the correct meaning of proverb/idiom :**

To keep one's Temper

(A) To become hungry

(C) To preserve one's energy

(B) To be in good mood

(D) None of the above

**22. To end in smoke**

(A) To make completely understand

(B) To ruin oneself

(C) To excite great applause

(D) To overcome someone

**23. Change to indirect speech**

I asked him, "why are you working so hard" ?

(A) I asked him why he was working so hard

(B) I asked him he working so hard

(C) I asked him why had he been working so hard

(D) None of the above

**24. Find out common errors :**

As our room was/upstairs, so we/didn't hear him

(A) As our room

(C) didn't hear him

(B) Upstairs so we

(D) No error

**25. Everyone knows / that the leopard's is / faster / of all animals.**

(A) Every one knows

(C) faster

(B) that the leopards is

(D) off all animals



26. Who called Subash Bose as Desh Nayak ?  
(A) Lala Lajpat Rai (B) R. N. Tagore  
(C) M. K. Gandhi (D) None of the above
27. Vivekananda established Ramkrishna Mission :  
(A) In 1982 (B) In 1897  
(C) In 1937 (D) In 1939
28. The East India Company was set up in  
(A) 1866 (B) 1857 (C) 1836 (D) 1885
29. Mohan Bagan is associated with the game of  
(A) Cricket (B) Football  
(C) Hockey (D) Lawn Tennis
30. Which of the following books is written by Salman Rusdie ?  
(A) Freedom at Midnight (B) Suitable boy  
(C) Islamic bomb (D) Satanic Venses
31. The great Victoria desert is located  
(A) South Africa (B) India  
(C) Australia (D) West Africa
32. Electric bulb filament is made of  
(A) Copper (B) Alluminium (C) Lead (D) Tungsten
33. The book "Wings of Fire" an autobiography written by  
(A) Dr. S. Radhakrishna (B) Dr. A. P. J. Abdul Kalam  
(C) Sunil Gavaskar (D) None of the above



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34. Name the Indian first astronaut who landed at moon;
- (A) Satis Sharma (B) Kalpana Chawla  
(C) Sunita Willium (D) Rakesh Sharma
35. Who got Dada Saheb Phalke award for film in 2017 Posthumously ?
- (A) Binod Khana & Kasinathuni Viswanath  
(B) Ashok Kumar  
(C) Sri Debi  
(D) None of the above
36. "Bharat Natyam" is the famous dance of
- (A) Bihar (B) South India  
(C) North East (D) Keral
37. Brahma Samaj was founded by
- (A) Kesab Chandra Sen (B) Raja Rammohan Roy  
(C) Ramanuj (D) Swami Vivekananda
38. January 15 is celebrated as the
- (A) Republic day (B) Ugadhi  
(C) Teacher's day (D) Army day
39. When the World Population Day observed ?
- (A) May 31 (B) October 4  
(C) December 10 (D) July 11
40. Aam Admi Bina Jojana was launched on :
- (A) November 14, 2011 (B) March 5, 2009  
(C) March 10, 2008 (D) October 2, 2007



41. The Mid Day Meal scheme was launched on  
(A) August 15, 2000 (B) August 15, 1992  
(C) August 15, 1995 (D) None of the above
42. State earn maximum revenue through  
(A) Land revenue (B) Custom revenue  
(C) Commercial taxes (D) Excise duties on intoxicants
43. Where is the Railway Staff College located ?  
(A) Pune (B) Allahabad  
(C) Vadodara (D) None of the above
44. The largest country of the world by geographical area is  
(A) Russia (B) China (C) Australia (D) U.S.A.
45. Which of the following is not a member of BRICS ?  
(A) India (B) Canada (C) South Africa (D) Brazil
46. The first Indian University opened in 1857 was in  
(A) Chennai (B) Bihar  
(C) Kolkata (D) None of the above
47. Which is the oldest monuments ?  
(A) Qutub Minar (B) Ajanta Caves  
(C) Khajurah (D) Taj Mahal
48. The disease Night blindness is caused due to deficiency of  
(A) Vitamin A (B) Vitamin B  
(C) Vitamin C (D) Vitamin D



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49. The 'Char Minar' is in

- (A) Ahmedabad      (B) Hyderabad      (C) Delhi      (D) Sikri

50. Sun Temple is situated at

- (A) Konark      (B) Bangalore      (C) Haridwar      (D) Kerala

**PART – B**

51. Central Processing Unit is a combination of

- (A) Control & Storage Unit      (B) Control & Output Unit  
(C) ALU & Control Unit      (D) None of the above

52. Stored instructions and data in a digital computer consists of

- (A) alphabets      (B) numerals      (C) characters      (D) bits

53. The sequence of instructions that tell the computer how to process the data is called

- (A) Flow chart      (B) Control unit  
(C) Program      (D) Address

54. A hybrid computer consists of

- (A) Analog M/C      (B) Digitals M/C  
(C) Both analog & digital      (D) None of the above

55. Integrated circuits, solid state technology was used in following generation of computers :

- (A) First      (B) Second  
(C) Third      (D) None of the above



56. The differential equations are solved by  
(A) Boolean algebra (B) Logic equations  
(C) Both analog & digital (D) All of the above
57. Computers that deal with discrete data are called  
(A) discrete computers (B) digital computers  
(C) hybrid computer (D) None of the above
58. The different memory locations are identified by hexadecimal numbers called  
(A) Address (B) BCD Numbers  
(C) ASCII Code (D) None of the above
59. Microprocessor is based on  
(A) Transistors (B) Integrated circuits  
(C) Single integrated circuits or chip (D) None of the above
60. Which of the following is not a hardware ?  
(A) Compiler (B) CPU  
(C) Memory Unit (D) Chip
61. Register is a  
(A) Temporary storage unit within CPU  
(B) Part of the auxiliary memory  
(C) H/W used to link the control unit with I/O unit  
(D) NOTA
62. According to Boolean algebra  $x + 1 =$   
(A) 0 (B) 1 (C)  $x$  (D)  $\bar{x}$



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63. The octal system has the radix of  
(A) 2 (B) 4 (C) 8 (D) 10
64. According to De Morgan's theorem  $\overline{ABCD} =$   
(A)  $\overline{A} + \overline{B} + \overline{C} + \overline{D}$  (B)  $\overline{A + B + C + D}$   
(C)  $A + B + C + D$  (D)  $\overline{AB} \cdot \overline{CD}$
65. PROM is memory  
(A) To write only  
(B) To read & write  
(C) To read only  
(D) In which data can be altered occasionally
66. What is the base of  $F4C3_{16}$  numbers ?  
(A) 2 (B) 4 (C) 8 (D) 16
67. What is the decimal equivalent of  $2^{10}$  ?  
(A) 4096 (B) 1024 (C) 1000 (D) 16
68. A GATE is a logic circuit with one or more input signals but \_\_\_\_\_ output signal.  
(A) Two (B) Double  
(C) One (D) More than one
69. An inverter is also called a \_\_\_\_\_ GATE.  
(A) NOT (B) OR (C) AND (D) NAND
70. The \_\_\_\_\_ GATE has two or more input signals but only one output signal.  
(A) AND (B) NOR  
(C) EX-NOR (D) None of the above



71. Which of the following is a universal gate ?  
(A) AND (B) OR (C) XOR (D) NAND
72. Semiconductor Memory is :  
(A) Somewhat slower than Magnetic Core Memory  
(B) Volatile Memory  
(C) Both (A) & (B)  
(D) All of the above
73. A demultiplexer is also known as  
(A) Data selector (B) Data distributor  
(C) Multiplexer (D) Encoder
74. A Flip-Flop can store  
(A) One bit of data (B) Two bits of data  
(C) Both (A) & (B) (D) None of the above
75. X-OR (Exclusive-OR) Gate is otherwise known as;  
(A) EX-OR gate (B) AND gate  
(C) OR gate (D) Not-Equivalent (NEQ Gate)
76. Hold Time : Minimum time period during which data must be stable \_\_\_\_\_ the clock has made a valid transition.  
(A) before (B) after  
(C) simultaneously (D) None of the above
77. Memory elements are capable of storing \_\_\_\_\_ information.  
(A) binary (B) decimal (C) hexadecimal (D) octal




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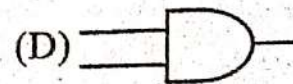
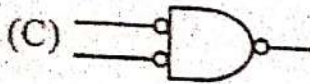
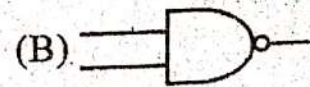
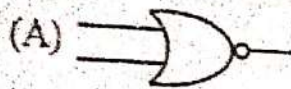
78. RS Latch have two inputs, S & T. S is called set and R is called  
(A) reset (B) restart (C) renew (D) revoke
79. Which of the following logic expression is incorrect ?  
(A)  $1 \oplus 0 = 1$  (B)  $1 \oplus 1 \oplus 0 = 1$   
(C)  $1 \oplus 1 \oplus 1 = 1$  (D)  $1 \oplus 1 = 0$
80. The main difference between J-K and R-S flip-flop is that;  
(A) J-K flip-flop does not need a clock pulse  
(B) J-K flip-flop accepts both input as 1  
(C) Both (A) & (B)  
(D) None of the above
81. The number of full and half adders required to add 16-bit numbers are;  
(A) 8 half adders, 8 full adders  
(B) 1 half adders, 5 full adders  
(C) 4 half adders & 12 full adders  
(D) None of the above
82. What is the binary equivalent of the decimal number 368 ?  
(A) 101110000 (B) 110110000  
(C) 111010000 (D) 111100000
83. The decimal equivalent of hex number (1A53) is  
(A) 6793 (B) 6739 (C) 6973 (D) 6379
84. How many flip-flops are required for mod-16 counter ?  
(A) 5 (B) 6 (C) 3 (D) 4



85. Data can be changed from special code to temporal code by using  
(A) Shift registers (B) Counters  
(C) Combinational circuit (D) None of the above
86. A ring counter consisting of five flip-flops will have  
(A) 5 states (B) 10 states  
(C) 32 states (D) infinite state
87. Which of the following memories is volatile memory ?  
(A) ROM (B) RAM (C) PROM (D) EEPROM
88. The device which changes from serial data to parallel data is  
(A) counter (B) multiplexer  
(C) demultiplexer (D) None of the above
89. A device which converts BCD to seven segment, is called  
(A) encoder (B) decoder  
(C) multiplexer (D) None of the above
90. CMOS circuits consume power  
(A) Equal to TTL (B) Less than TTL  
(C) Twice to TTL (D) None of the above
91. Upto how many variables, can a Karnaugh Map is used ?  
(A) 3 (B) 4 (C) 5 (D) 6
92. Magnetic tape can serve as  
(A) input media (B) output media  
(C) secondary storage (D) None of the above



93. The circuit   
is equivalent to



94. Advantage of synchronous sequential circuits over asynchronous ones is

(A) factor operation

(B) lower H/W requirement

(C) better noise immunity

(D) Both (A) & (C)

95. The ASCII code is a 7-bit code for

(A) numbers

(B) letters

(C) alphanumerics

(D) other symbol

96. What is the 1's complement of 0000 1111 0010 1101 number ?

(A) 1111 0000 0010 1101

(B) 1111 1100 1010 1100

(C) 1111 0000 1101 0010

(D) 1001 0010 1010 1100

97. Digital design often starts by constructing a \_\_\_\_\_ table.

(A) standard

(B) truth

(C) two-stage

(D) two-dimensional

98. The bus is a group of \_\_\_\_\_ carrying digital signals.

(A) wires

(B) transistors

(C) gates

(D) registers



99. The memory cell of a dynamic RAM is simpler and smaller than the memory cell of a \_\_\_\_\_ RAM.

(A) volatile

(B) semiconductor

(C) static

(D) None of the above

100. The noise generated by a resistor depends upon

(A) its resistance value

(B) its operating temperature

(C) Both (A) & (B)

(D) None of the above

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