

Seat No.	
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**P.G. Entrance Examination, May - 2023****M.C.A. COMPUTER SCIENCE****Sub. Code: 58729****Day and Date : Tuesday, 09-05-2023****Total Marks : 100****Time : 10.30 a.m. to 12.00 noon**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Each question carries 1 mark.
  - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
  - 4) Follow the instructions given on OMR Sheet.
  - 5) Rough work shall be done on the sheet provided at the end of question paper.

- 1) Who among the following wrote Sanskrit grammar?  
A) Kalidasa  
B) Charak  
C) Panini  
D) Aryabhata
- 2) Who received the lifetime achievement award from the University of Texas at Dallas?  
A) Isha Ambani  
B) Geeta Basra  
C) Naveen Jindal  
D) Girish Patel
- 3) World Computer Literacy Day is celebrated annually on  
A) December 1  
B) December 2  
C) December 3  
D) December 4
- 4) Who was announced by Star Sports as its brand ambassador on April 21, 2023?  
A) Hardik Pandya  
B) Rishabh Pant  
C) Ravindra Jadeja  
D) Axel Patel

**P.T.O.**

- 5) Which country developed the first DNA vaccine for dengue?  
A) Australia  
B) India  
C) Netherlands  
D) Denmark
- 6) Which planet is NASA training four people to live on in June 2023?  
A) Venus  
B) Mars  
C) Jupiter  
D) Saturn
- 7) Which country was the first to approve the Oxford malaria vaccine for children?  
A) Germany  
B) Grenada  
C) Greece  
D) Ghana
- 8) Which company launched 'Savdhan Rahein, Safe Rahein' a public awareness campaign on financial fraud risks?  
A) DCB Bank  
B) SBI Capital  
C) ICICI Bank  
D) Bajaj Finserv
- 9) Which country launched the worlds first nationwide 5G mobile network?  
A) Japan  
B) Malaysia  
C) South Korea  
D) China
- 10) The hardest substance available on earth is\_\_\_\_\_  
A) Gold  
B) Iron  
C) Diamond  
D) Platinum

**Direction 11-13: Complete the series using appropriate alternative**

- 11) QPO, SRQ, UTS, WVU,?  
A) XVZ  
B) ZYA  
C) YXW  
D) VWX
- 12) T, R, P, N, L, ?, ?  
A) J, G  
B) J, H  
C) K, H  
D) K, I
- 13) B, E, D, F, ?, H, J, ?, L  
A) I, M  
B) M, I  
C) I, N  
D) J, M

**Direction 14-17:** In each of the following questions a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and fill in the blank spaces.

14) 2, 7, 14, 23, ?, 47

A) 31

B) 28

C) 34

D) 38

15) 4, 6, 12, 14, 28, 30, ?

A) 32

B) 64

C) 62

D) 60

16) 11, 13, 17, 19, 23, 29, 31, 37, 41, ?

A) 43

B) 47

C) 51

D) 53

17) 5, 11, 17, 25, 33, 43, ?

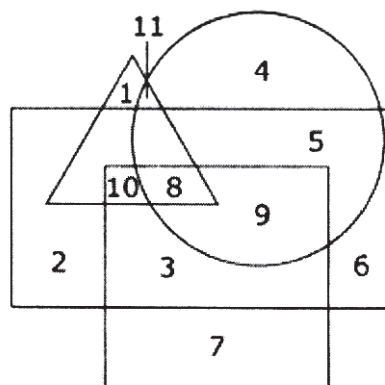
A) 49

B) 51

C) 52

D) 53

**Directions (Qs. 18 to 22):** These questions are based on the figure given below in which (1) Rectangle represents Males, (2) Circle represents the urbans (3) Square represents the educated and (4) Triangle represents the civil servants.



- 18) The number indicating the uneducated urban males is  
 A) 4 B) 5  
 C) 7 D) 11
- 19) The number indicating the educated civil servants who are males but not urbans is  
 A) 7 B) 8  
 C) 9 D) 10
- 20) The number indicating the educated urban males who are not civil servants is  
 A) 8 B) 9  
 C) 10 D) 11
- 21) The number indicating the educated males who are urban civil servants is  
 A) 4 B) 7  
 C) 8 D) 9
- 22) The number indicating the uneducated females who are urban civil servants is  
 A) 6 B) 9  
 C) 10 D) 11
- 23) Bank is related to Money in the same way as Transport is related to  
 A) Traffic B) Goods  
 C) Speed D) Road
- 24) WINDOW : CURTAIN::  
 A) Door : Frame B) Book : Jacket  
 C) CPU : Cabinet D) Casing : Wire
- 25) MIND : BODY::  
 A) Water : Air B) CPU : Hard Disk  
 C) Ship : Oil D) Software : Computer
- 26) If ROBUST is coded as q NATRS in a certain language, which word would be coded as ZXCMP?  
 A) AWDLQ B) AYDNQ  
 C) BZEOR D) YYBNO

## ENT - 10

- 27) Pointing to a man in a photograph, a woman said, 'His brother's father is the only son of my grandfather.' How is the woman related to the man in the photograph?
- A) Sister  
B) Aunt  
C) Grandmother  
D) Daughter
- 28) A told B, "The girl I met yesterday was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to A's friend?
- A) Niece  
B) Cousin  
C) Friend  
D) Daughter
- 29) F is the brother of A, C is the daughter of A, K is the sister of F and G is the brother of C then who is the uncle of G?
- A) C  
B) A  
C) K  
D) None of the above
- 30) A man pointing to a photograph says. "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister?
- A) Mother-in-law  
B) Cousin  
C) Sister-in-law  
D) Mother
- 31) A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?
- A) 40 sec  
B) 42 sec  
C) 45 sec  
D) 48 sec
- 32) A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is:
- A)  $\frac{1}{4}$   
B)  $\frac{1}{10}$   
C)  $\frac{7}{15}$   
D)  $\frac{8}{15}$
- 33) A is thrice as good as workman as B and therefore is able to finish a job in 60 days less than B. Working together, they can do it in:
- A) 20 days  
B)  $22\frac{1}{2}$  days  
C) 25 days  
D) 30 days

- 34) If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:  
 A) 4 days                                    B) 5 days  
 C) 6 days                                    D) 7 days
- 35) The cost price of 20 articles is the same as the selling price of  $x$  articles. If the profit is 25%, then the value of  $x$  is:  
 A) 15                                         B) 16  
 C) 18                                         D) 25
- 36) The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?  
 A) 4 years                                    B) 8 years  
 C) 10 years                                  D) None of these
- 37) A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, the how old is B?  
 A) 7    B) 8  
 C) 9    D) 10
- 38)  $1397 \times 1397 = ?$   
 A) 1951609                                B) 1981709  
 C) 18362619                               D) 2031719
- 39) The ratio between the length and the breadth of a rectangular park is 3 : 2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq. m) is:  
 A) 15360                                    B) 153600  
 C) 30720                                    D) 307200
- 40) 3 pumps, working 8 hours a day, can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?  
 A) 9    B) 10  
 C) 11                                         D) 12

## ENT - 10

- 41) 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work?
- A) 10  
B) 13  
C) 14  
D) 15
- 42) The captain of a cricket team of 11 members is 26 years old and the wicket keeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. What is the average age of the team?
- A) 23 years  
B) 24 years  
C) 25 years  
D) None of these
- 43) The average age of husband, wife and their child 3 years ago was 27 years and that of wife and the child 5 years ago was 20 years. The present age of the husband is:
- A) 35 years  
B) 40 years  
C) 50 years  
D) None of these
- 44) A can contains a mixture of two liquids A and B in the ratio 7:5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7:9. How many litres of liquid A was contained by the can initially?
- A) 10  
B) 20  
C) 21  
D) 25
- 45) In what ratio must a grocer mix two varieties of pulses costing Rs.15 and Rs. 20 per kg respectively so as to get a mixture worth Rs. 16.50 kg?
- A) 3 : 7  
B) 5 : 7  
C) 7 : 3  
D) 7 : 5
- 46) In order to obtain an income of Rs.650 from 10% stock at Rs.96, one must make an investment of:
- A) Rs. 3100  
B) Rs. 6240  
C) Rs. 6500  
D) Rs. 9600
- 47) A man invested Rs.4455 in Rs.10 shares quoted at Rs. 8.25. If the rate of dividend be 12%, his annual income is:
- A) Rs. 207.40  
B) Rs. 534.60  
C) Rs. 648  
D) Rs. 655.60

- 48) A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is:  
A) Rs. 650  
B) Rs. 690  
C) Rs. 698  
D) Rs. 700
- 49) How much time will it take for an amount of Rs.450 to yield Rs. 81 as interest 4.5% per annum of simple interest?  
A) 3.5 years  
B) 4 years  
C) 4.5 years  
D) 5 years
- 50) A and B invest in a business in the ratio 3:2. If 5% of the total profit goes to charity and A's share is Rs. 855, the total profit is:  
A) Rs. 1425  
B) Rs. 1500  
C) Rs. 1537.50  
D) Rs. 1576

**Fill in the blanks with appropriate option.**

- 51) \_\_\_\_\_ Ganges is a sacred river.  
A) An  
B) A  
C) The  
D) None
- 52) Honest men speak \_\_\_\_\_ truth.  
A) an  
B) a  
C) the  
D) none
- 53) I would die before I \_\_\_\_\_.  
A) lied  
B) lie  
C) lies  
D) none
- 54) I would not attempt it, if you \_\_\_\_me.  
A) asked  
B) ask  
C) asking  
D) none
- 55) He ran because he \_\_\_\_\_ in a hurry.  
A) is  
B) was  
C) were  
D) none



**Choose the word that is most nearly opposite in meaning to the word in capital letters**

56) UNSETTLED

- A) indeterminate
- B) straightforward
- C) accurate
- D) conclusive

57) BIASED

- A) inclined
- B) disastrous
- C) neutral
- D) unfair

58) INDIFFERENCE

- A) attraction
- B) splendor
- C) dispassion
- D) obsession

59) BARREN

- A) sterile
- B) wintry
- C) balmy
- D) fertile

60) CONSEQUENTIAL

- A) scanty
- B) dire
- C) trivial
- D) momentous

**Choose the best synonym for the word in capital letters**

61) DECIDE

- A) equivocate
- B) waver
- C) choose
- D) stay

62) ESTABLISH

- A) regret
- B) construct
- C) create
- D) build

63) URGE

- A) encourage
- B) entice
- C) enter
- D) attend

64) REALIZE

- A) take  
 B) steal  
 C) affirm  
 D) grasp

65) ANALYZE

- A) write  
 B) study  
 C) discover  
 D) understand

**Choose the best word(s) to complete each sentence**

66) But I saw him in Frankfurt\_\_\_\_\_

- A) 3 years ago  
 B) for 3 years  
 C) before 3 years  
 D) since 3 years

67) The committee held a \_\_\_\_\_last week.

- A) meeting  
 B) gathering  
 C) session  
 D) sitting

68) I \_\_\_\_\_ the Prime Minister's speech very carefully.

- A) heard to  
 B) heard  
 C) listened to  
 D) overheard

69) He would have known that, if he \_\_\_\_\_the meeting.

- A) had attended  
 B) would have attended  
 C) has attended  
 D) would attend

70) Would you mind\_\_\_\_\_ the door?

- A) open  
 B) to open  
 C) opening  
 D) to opening

71) The proposition  $(p \wedge \sim q) \wedge \sim r$  is given to be true statement. Then the truth values of p, q and r respectively.

- A) TTF  
 B) TFT  
 C) TFF  
 D) FFT



- 79) If the line  $y = x + k$  is a tangent to hyperbola  $9x^2 - 16y^2 = 144$  then the value of  $k$  is
- A)  $+\sqrt{3}$  or  $-\sqrt{3}$                       B)  $+\sqrt{5}$  or  $-\sqrt{5}$   
 C)  $+\sqrt{7}$  or  $-\sqrt{7}$                       D)  $+\sqrt{2}$  or  $-\sqrt{2}$
- 80) The equation of the common tangent to the curves  $y^2 = 8x$  and  $xy = -1$  is
- A)  $3y = 9x + 2$                               B)  $y = 2x + 1$   
 C)  $2y = x + 8$                               D)  $y = x + 2$
- 81) The area of the parallelogram whose diagonals are given by the vectors  $3i + j - 2k$  and  $i - 3j + 4k$  is
- A)  $2\sqrt{3}$                                       B)  $5\sqrt{3}$   
 C)  $3\sqrt{2}$                                       D)  $7\sqrt{5}$
- 82) The equation of the plane through  $(1, 2, 3)$  and parallel to the plane  $2x + 3y - 4z = 0$  is
- A)  $2x + 3y + 4z = 4$                       B)  $2x + 3y + 4z = -4$   
 C)  $2x - 3y + 4z = 4$                       D)  $2x + 3y - 4z = 4$
- 83) If the line through the point  $(3, 1, 2)$  and  $(4, a, 0)$  is parallel to the line through the point  $(1, 2, 1)$  and  $(2, 3, -1)$ , then the value of 'a' is
- A) 1    B) 2  
 C) 3    D) -2
- 84) If  $A(6, 3, 2)$ ,  $B(5, 1, 4)$ ,  $C(3, -4, 7)$ ,  $D(0, 2, 5)$  are four points then projection of CD on AB is
- A)  $13/3$                                       B)  $-13/3$   
 C)  $13/7$                                       D)  $-13/7$
- 85) The equation of the plane passing through points  $(1, -2, 3)$ ,  $(2, -3, 4)$  and parallel to x-axis is
- A)  $y + z - 1 = 0$                               B)  $2y + 3z - 5 = 0$   
 C)  $3y - z + 5 = 0$                               D)  $3y + z - 2 = 0$

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- 86) The maximum value of  $z = 5x + 7y$  subject to the constraints  $3x + 2y \leq 12$ , and  $2x + 3y \leq 13$ ,  $x \geq 0$ ,  $y \geq 0$  is
- A) 11  
B) 31  
C) 21  
D) None of these
- 87) A bag contains 6 white and 4 black balls, if 2 balls are drawn at random from the bag, then the probability of getting both balls of same colour is
- A)  $21/45$   
B)  $44/45$   
C)  $10/45$   
D) None of these
- 88) The probability mass function of a random variable X is given by  $P(x) = k(x^2 - 0.5)$ ,  $x = -1, 0, 1$ . Then the value of  $k$  is
- A)  $1/3$   
B)  $2/3$   
C) 1  
D) Non of these
- 89) If the probability of occurrence of two events A and B is 0.3 and 0.5 respectively and the occurrence of A and B together is 0.2, then the occurrence neither A and nor B is
- A) 0.8  
B) 0.6  
C) 0.4  
D) 0.2
- 90) If  $\lim_{x \rightarrow 2} [(x^n - 2^n) / (x - 2)] = 80$ , then the value of 'n' is
- A) 5  
B) 4  
C) 6  
D) Non of these
- 91) If  $y = \cos^{-1}(\sin x)$ , then  $dy/dx$  is
- A) 0  
B) -1  
C) 1  
D)  $1/2$
- 92) If  $x + y = 10$ , then the maximum value of  $xy$  is
- A) 20  
B) 30  
C) 25  
D) None of these



- 98) CD-ROM stands for\_\_\_\_\_
- A) Compactable Read Only Memory
  - B) Compact Data Read Only Memory
  - C) Compactable Disk Read Only Memory
  - D) Compact Disk Read Only Memory
- 99) Which of the following is not a programming language?
- A) BASIC
  - B) JAVA
  - C) C++
  - D) Turing
- 100) MS-Word is an example of\_\_\_\_\_
- A) operating system
  - B) application software
  - C) processing device
  - D) all of these



**Rough Work**