

# INTEL

## BRIDGE COURSE

**SCHOLARSHIP TEST**



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**Full Marks: (100×1) = 100**

**General Science**

1. Dimension of which are same?
  - a) Work and moment of force
  - b) Torque and force
  - c) Velocity and velocity gradient
  - d) All
  
2. What is the maximum magnitude of  $(\vec{A} - \vec{B})$  ?
  - a)  $A + B$
  - b)  $A - B$
  - c)  $\sqrt{A^2 + B^2}$
  - d)  $\sqrt{A^2 - B^2}$
  
3. The slope of velocity-time graph gives:
  - a) Acceleration
  - b) Displacement
  - c) Uniform speed
  - d) Stationary object
  
4. A person on a moving train throws upwards a coin, and if it falls behind him, then train is:
  - a) Accelerating
  - b) Decelerating
  - c) Moving with constant velocity
  - d) Any of the above
  
5. If the external force applied is zero, then which of the following is conserved?
  - a) Linear momentum
  - b) Angular momentum
  - c) Torque
  - d) Time period
  
6. A 5kg stone falls from height of 100m and penetrates 2m in a layer of sand. The force applied by ground is:
  - a) 2500 N
  - b) 1500 N
  - c) 1000 N
  - d) 3000 N
  
7. A body 2 kg is accelerated from zero to 72 km/hr. The work done on the body is:
  - a) 400 J
  - b) 200 J
  - c) 250 J
  - d) 100 J
  
8. At what height from earth, g becomes  $g/2$ ?
  - a)  $R/2$
  - b)  $0.414R$







- c) Meiosis  
d) Amitosis
35. Which of the following is not an autotroph?  
a) Lyano bacteria  
b) Fern  
c) Mushroom  
d) Pinus
36. Phycology is the study of:  
a) Algae  
b) Fungi  
c) Bacteria  
d) All the above
37. Plants lacking seed and vascular system but forming spores and embryo are:  
a) Bryophytes  
b) Pleridophytes  
c) Thallophtyes  
d) Gymnosperm
38. Frord is a term given to leaves of:  
a) A moss  
b) A fern  
c) A coniter  
d) Angiosperm
39. Which is most stable ecosystem?  
a) Mountain  
b) Desert  
c) Forest  
d) Ocean
40. Ozone depleting power is maximum for:  
a) W rays  
b) CFCs  
c)  $NX_3$   
d)  $CO_2$
41. Charles Darwin's theory of evolution is based on:  
a) Environment  
b) Mutation  
c) Chromosome pairing  
d) Natural selection
42. Paramecium moves by:  
a) Cilia  
b) Flagella  
c) Pseudophodha  
d) None
43. Radial symmetry is found in:  
a) Porifera  
b) Coelenterate



- a)  $\{1, 4, 5\}$   
 c)  $\{1, 2\}$
- b)  $\{1, 2, 4, 5\}$   
 d)  $\{4, 5\}$
52. If  $n(U) = 125$ ,  $n(A) = 80$ ,  $n(B) = 65$ , what is the greatest value of  $n(A \cup B)$ ?
- a) 125  
 c) 100
- b) 80  
 d) 110
53. A function  $f: A \rightarrow B$  is onto if:
- a)  $f(A)$  is equal to  $B$   
 c)  $A$  is equal to  $B$
- b)  $f(A)$  is proper subset of  $B$   
 d)  $A$  is subset of  $B$
54. In how many ways can 6 books be distributed among 5 students?
- a)  $6^5$   
 c)  $6! 5!$
- b)  $6 \times 5$   
 d)  $5^6$
55. If  $|\bar{a}| = 3$ ,  $|\bar{b}| = 4$  and  $|\bar{a} + \bar{b}| = 5$  then  $|\bar{a} - \bar{b}| = \text{-----}$
- a) 6  
 c) 4
- b) 5  
 d) 3
56. If  $f(x - 1) = x + 2$  then  $f(x^2) = \text{-----}$
- a)  $x^2 + 3$   
 c)  $x^2 + x + 1$
- b)  $x - 3$   
 d)  $x^2 - 5$
57. If  $A^2 - A + I = 0$  then  $A^{-1} = \text{-----}$
- a)  $\frac{I}{A^2}$   
 c)  $I - A$
- b)  $A + I$   
 d)  $A - I$
58. If  $p^{\text{th}}$  term of A.P. is  $q$  and  $q^{\text{th}}$  term is  $p$ , then  $(p + q)^{\text{th}}$  term is:
- a)  $pq$   
 c) 0
- b)  $p^2q$   
 d) 1
59. A dealer gains a selling price of 4 watches by selling 20 watches. What is the profit percentage?
- a) 15%  
 c) 30%
- b) 20%  
 d) 25%





c)  $k = -3$

d)  $k = \frac{1}{2}$

68. The circle  $x^2 + y^2 - 3x - 4y + 2 = 0$  cuts the x-axis at the point.

a) (3, 0)

b)  $(\frac{1}{2}, 0)$ , (-3, 0)

c) (1, 0), (4, 0)

d) (2, 0), (1, 0)

69. The value of  $\sin^{-1}x + \cos^{-1}x = \text{-----}$

a)  $\pi$

b)  $\frac{\pi}{2}$

c) 1

d) 0

70. If the price of petrol increases by 25% and Ram intends to spend only 15% more on petrol, by how much % should he reduce the quantity of petrol that he buys?

a) 5%

b) 8%

c) 9%

d) 10%

71. An area diagram is:

a) Histogram

b) Frequency polygon

c) Ogive

d) None of these

72. The value of:  $2^{23} - 2^{22} - 2^{21} - 2^{20}$  is

a)  $2^{21}$

b)  $2^{\left(\frac{23}{912}\right)}$

c)  $2^{20}$

d)  $2^{22}$

73. A dishonest dealer professing to sell his goods at cost price, uses 900 gm weight for 1 kg. What gain % is:

a) 11%

b)  $11\frac{1}{2}\%$

c)  $11\frac{1}{9}\%$

d) 12%

74. If £1 = Rs. 140, £0.5 = 3.52 marks, 3.91 marks = \$1 and \$1 = 4.8 Francs, how many Francs are equal to Rs. 26,000?

a) 1505

b) 1405

c) 1605

d) 1600

75. In what time a sum of money trebles itself at 5% p.a. at a simple interest?

a) 20 years

b) 30 years

c) 40 years

d) 10 years

76. If the circumference of a circle I is equal to the diameter of the circle II, the ratio of the area of circle II to area of circle I is:

a)  $\frac{1}{\pi^2}$

b)  $\sqrt{\pi}$

c)  $\pi$

d)  $\pi^2$

77. What is the probability that a leap year has 53 Sunday?

a)  $\frac{1}{4}$

b)  $\frac{1}{3}$

c)  $\frac{1}{7}$

d)  $\frac{2}{7}$

78. If  $-7 \leq x \leq 7$  and  $0 \leq y \leq 12$ , what is the greatest possible value of  $y - x$  ?

a) -19

b) 5

c) 19

d) 17

79. If  $10a + 10b = 35$ , what is the average of a and b?

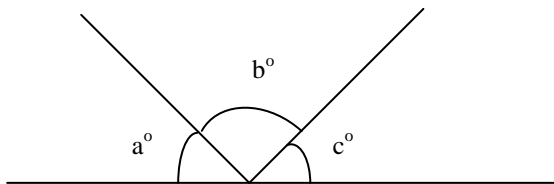
a) 3.5

b) 7

c) 1.75

d) 10

80. In the figure below,  $a:b = 3:5$  and  $c:b = 2:1$  what is the measure of the largest angle?



a)  $30^\circ$

b)  $45^\circ$

c)  $50^\circ$

d)  $100^\circ$

### English

81. She is ..... of the two sisters.

- a) prettier  
c) pretty
- b) the prettier  
d) the prettiest
82. .... the finish first, the runner gave up.  
a) Having failed to reach  
b) Having failed reaching  
c) He failed to reach  
d) That he failed reaching
83. Let this be a secret between you and .....
- a) I  
c) myself
- b) me  
d) mine
84. I am disgusted and .....
- a) you too are  
c) you are so
- b) are you too  
d) so are you
85. You've done well,.....?
- a) don't you  
c) haven't you
- b) has it you  
d) do you
86. ....his repeated failure, he is still optimistic.  
a) In spite  
c) Although
- b) Despite  
d) Even though
87. John is used to ..... to FM everyday.  
a) listen  
c) listening
- b) listens  
d) listened
88. Past participle form of seek is:  
a) Seeked  
c) Sook
- b) Seeken  
d) Sought
89. He dislikes being talked .....
- a) about  
c) on
- b) for  
d) into

90. Air pollution ..... almost every major city in the world.  
a) that now afflicts                      b) if now afflicts  
c) now afflicts                              d) what now afflicts
91. Correct antonym for the word **audacious** is:  
a) Venture                                      b) Daring  
c) Cowardly                                    d) Obvious
92. We are accustomed ..... doing hard work.  
a) in    b) of  
c) to    d) with
93. It is time you ..... your face.  
a) wash    b) washed  
c) would wash                                d) will wash
94. It is fourteen years since I ..... him.  
a) seen    b) see  
c) saw    d) have seen
95. We must keep one's head while dealing with a complicated problem. The meaning of underlined idiom in the given sentence is:  
a) To be agile and active                  b) To keep calm  
c) To think coherently                      d) Start a fight

*In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, four words are suggested, one of which fits the blank appropriately. Find out the appropriate words.*

In human life, there's always a feeling of want. It is this which makes man (96) ..... Man yearns for things which he cannot get and feels sad looking back upon the past and looking forward (97) ..... future. This preoccupation with the past and future does not

allow man to live (98) ..... in the present. Thus there's always a pain in man's laughter, always a sense of (99) .....in the moment of enjoyments. That's why the poetry of man is the poetry of sorrow. 'Our sweetest songs are those that tell of (100) ..... thoughts', has been rightly said.

96. a) sad            b) disappointed    c) unhappy        d) mundane  
97. a) into           b) to                c) the              d) for  
98. a) carelessly    b) blissfully       c) happily         d) honorably  
99. a) want           b) loss              c) fulfillment     d) scarcity  
100. a) saddest      b) loftiest         c) happiest         d) sorrowful

