GET-FRESHERS SAMPLE TEST

Duration : 90 Minutes   Maximum Marks : 200

SECTION – 1 : QUESTIONS ON MATHEMATICS

Q.1   In a group of 55 people, 40 like cricket, 10 like both cricket and tennis. How many like tennis only ?

(a) 15   (b) 25   (c) 35   (d) None of these
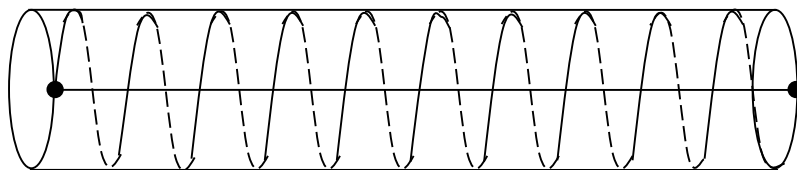
Q.2   Lines $ax + by + d = 0$ and $ax + by + c = 0$ are :

(a) parallel to each other   (b) identical lines
(c) perpendicular lines   (d) Parallel to the line $y = x$

Q.3   The average age of 15 student is 16 years. If teacher's age is included the average increases by 1. Find the teacher's age.

(a) 30 years   (b) 32 years
(c) 58 years   (d) 60 years

Q.4

Ten turns of a wire are helically wrapped around a cylindrical tube with outside circumference 4 inches and length 9 inches. The ends of the wire coincide with ends of the same cylindrical element. Find the length of the wire.

(a) 41 inches   (b) 36 inches
(c) 40 inches   (d) 90 inches

Q.5   A series of books was published at seven – year intervals. When the seventh book was issued, the sum of the publication years was 13,524. When was the first book published ?

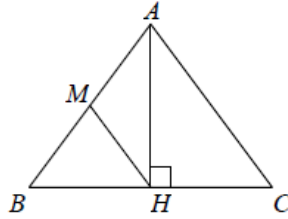(a) 1932   (b) 1911   (c) 1918   (d) 1904

Q.6   If $\cot A = \sqrt{3}$, find the value of $\cos ec A$

(a) 1   (b) - 1   (c) - 2   (d) 2

Q.7   The measure of an angle exceeds three times the measure of its supplement by $20°$. Find its measure:

(a) $90°$ (b) $140°$ (c) $110°$ (d) $60°$

Q.8 In $\triangle ABC$, $AB = 13$, $BC = 14$ and $CA = 15$. Also, M is the midpoint of side AB and H is the foot of the altitude from A to BC. The length of HM is :


(a) 6   (b) 6.5   (c) 7   (d) 7.5

Q.9 If $15x - 17y = 28$ and $17x - 15y = 36$, find (x, y)

(a) 1, 3   (b) 3, −1   (c) 3, 1   (d) none of these

Q.10 In $\triangle ABC$, $AB = 8$, $BC = 7$, $CA = 6$ and side BC is extended, as shown in the figure, to a point P so that $\triangle PAB$ is similar to $\triangle PCA$. The length of PC is :
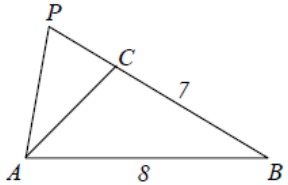
(a) 7   (b) 8   (c) 9   (d) 10

Q.11 In $\triangle ABC$, if AD is perpendicular to BC and $AD^2 = BD \times DC$ then:

(a) $\angle BAC = 40°$ (b) $\angle BAC = 35°$
(c) $\angle BAC = 90°$ (d) $\angle BAC = 60°$

Q.12 In a triangle ABC, $AB = 9$, $BC = 10$, $AC = 13$ if G is centroid. The value of line GB is____

(a) 25   (b) 20   (c) $\dfrac{10}{3}$ (d) $\dfrac{20}{3}$

Q.13 The value of $\sqrt{3}\,\cos 20° - 4\cos 20°$ is ____

(a) 1   (b) −1   (c) 0   (d) none of these

Q.14 If in a $\triangle ABC$ $\cos A = \dfrac{\sin B}{2\sin C}$ then $\triangle ABC$ is ____

(a) equilateral   (b) isosceles
(c) right angled   (d) obtuse angled

Q.15 The value of $\sin\dfrac{\pi}{10} + \sin\dfrac{13\pi}{10}$

(a) $\dfrac{1}{2}$ (b) $\dfrac{\sqrt{3}}{2}$ (c) 1 (d) $-\dfrac{1}{2}$

Q.16 In how many different orders may 5 students be seated in a row ?

(a) 120 (b) 25 (c) 50 (d) 100

Q.17 In a meeting after every one had shaken hands with every one else, it was found that 105 handshakes were exchanged. How many members were present at the meeting?

(a) 12 (b) 13 (c) 14 (d) 15

Q.18 A man has 7 friends. In how many ways can he invite one or more of them to a party?

(a) 128 (b) 127 (c) 49 (d) 70

Q.19 In a quiz program, the ratio of correct answers to incorrect answers is 5 : 2. If 16 incorrect answers are given then the number of correct answers given is:

(a) 80 (b) 40 (c) 20 (d) 30

Q.20 10 Men begin to work together on a job, but after some days, 4 of them left the job. As a result the job which could have been completed in 40 days is completed in 50 days. How many days after the commencement of the work did the 4 men leave?

(a) 25 (b) 30 (c) 10 (d) 15

Q.21 The value of $\cos 15^{o} - \sin 15^{o}$ equal to

(a) $\dfrac{1}{\sqrt{2}}$ (b) $\dfrac{1}{2}$ (c) $\dfrac{-1}{\sqrt{2}}$ (d) Zero

Q.22 If $\tan\theta - \cot\theta = a$ and $\sin\theta + \cos\theta = b$, then $(b^2 - 1)^2(a^2 + 4) =$

(a) 2 (b) -4 (c) ± 4 (d) 4

Q.23 The distance of the line $3x + 4y - 5 = 0$ from the origin is:

(a) 1 unit (b) 5 units (c) 3 units (d) 4 units

Q.24 The factors of $x^2 + xy - 2xz - 2yz$ are

(a) $(x - y)(x + 2z)$ (b) $(x + y)(x - 2z)$ (c) $(x - y)(x - 2z)$ (d) $(x + y)(x + 2z)$

Q.25 The degree of the polynomial $5x^3 - 6x^3 y + 4y^2 - 8$ is
(a) 3   (b) 4
(c) 2   (d) can't be determined

SECTION – 2 : QUESTIONS ON LOGICAL ABILITY

Q.26 Choose the odd one out.

(a) 2460   (b) 4860   (c) 2446   (d) 2144

Q.27 Choose the odd one out :

(a) ZAYBX   (b) XCWDV   (c) VEUFT   (d) RIQJM

Study the number pyramid carefully and find the missing entry in the following questions.

```
                        1
                     2  29 28
                  3  30 49 48 27
               4  31 50 61 60 47 26
            5  32 51 62 63 64 59 46 25
         6  33 52 53 54 55 56 57 58 45 24
      7  34 35 36 37 38 39 40 41 42 43 44 23
   8  9  10 11 12 13 14 15 16 17 18 19 20 21 22
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Q.28 3 50 63 : 63 54 37 : : ? : 63 56 41

(a) 276063   (b) 23050   (c) 284861   (d) 23061

Study the number pyramid carefully and find the missing entry in the following questions.

```
                     1
                  2  3  4
               9  8  7  6  5
            10 11 12 13 14 15 16
         25 24 23 22 21 20 19 18 17
         26 27 28 29 30 31 32 33 34 35 36
      49 48 47 46 45 44 43 42 41 40 39 38 37
   50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
   81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65
82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
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Q.29 77 85 49 : 42 60 18 : : 56 76 28 : ?

(a) 74 54 44   (b) 70 96 38   (c) 70 96 62   (d) 62 70 38

Direction : (Q.No.30) Following question is based on the four Intersecting circles H,F,D and I representing subscribers of Hindustan, Femina, Dharmayug and Illustrated Weekly respectively. Numbers in various regions represent number of subscribers. Study the figure carefully and answer the following question by indicating answer number on the answer sheet.
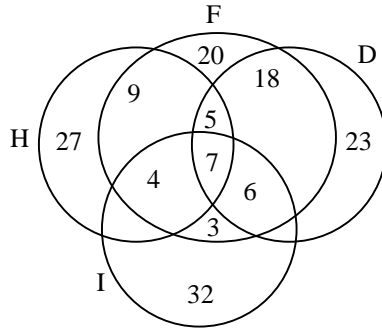
Q.30 How many do subscribe to Dharmayug and Illustrated Weekly; but no other magazine?

(a) 23   (b) 32   (c) 3   (d) 0

Direction (Q.No.31) Following question is based on the following diagrams. Choose the diagram that illustrates the relationship among three given classes described in the following question:
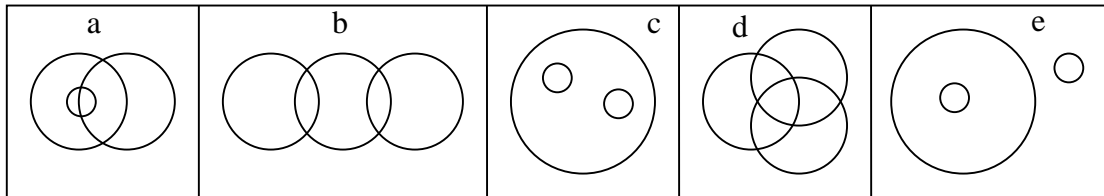
Q.31 Males, Females, Girls.

Direction : (Q.No.32) Observe the two figures given below. Find the correct answer of the following question.
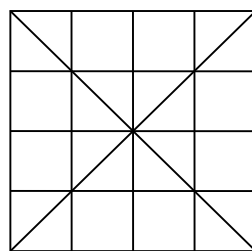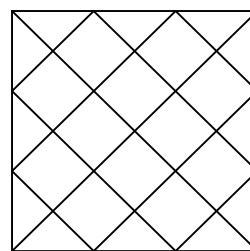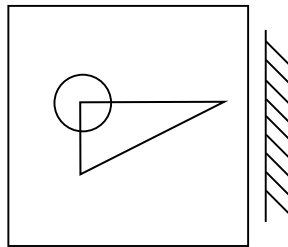

Fig-1   Fig-2

Q.32 What is the number of squares in Figure(1) ?

(a) 16   (b) 20   (c) 21   (d) 30
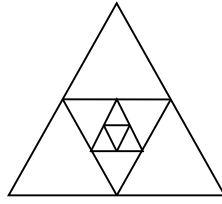
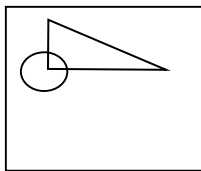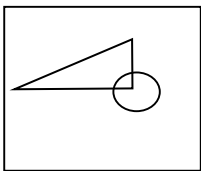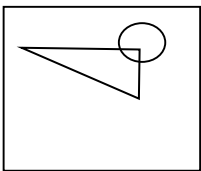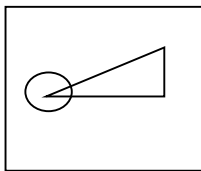Q.33 How many triangles are there in the above figure?

(a) 11   (b) 13   (c) 15   (d) 12

Q.34 The mirror is held in front of the figure, find the mirror of it, from the given four alternatives.


(a)   (b)   (c)   (d)

Q.35 A 3cm cube has been painted red on all its sides. It is cut into one cm cubes. How many cubes will be there with only one side painted red?

(a) 4   (b) 6   (c) 1   (d) 9

Direction - (Q.No.36) : A, B, C and D are standing on four corners of a square field as shown in the figure below. Read the statement in each question carefully and select the correct alternative from amongst the five given under each statement. Cardinal directions as given in the figure are to be noted:
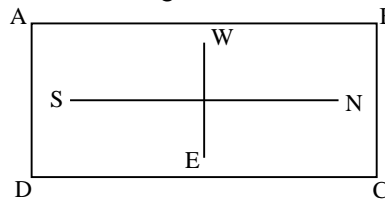

Q.36 From the positions given in the figure A,B, C and D go along the sides in anticlockwise direction and move a distance equal to three sides each. If all move with the same speed and start at the same time, then _____

(a) C is South-West of A   (b) C is South of D
(c) B is South-East of D   (d) D is South of A.

Q.37 Pointing to a lady in the photograph, Manish said, *"She is the daughter of my Grandfather's only son. "* How is Manish related to that lady?

(a) Father   (b) Uncle   (c) Brother   (d) Nephew

Q.38 Pointing to a man in a photograph, a women said, *"His brother's father is the only son of my grandfather."* How is the woman related to the man in the photograph?

(a) Mother   (b) Aunt   (c) Sister   (d) Daughter

Q.39 Pointing to a photograph, a lady tells Pramod, *"I am the only daughter of this lady and her son is your maternal uncle"*. How is the speaker related to Pramod's father?

(a) Sister-in-law   (b) Wife
(c) Either (1) or (2)   (d) Neither (1) nor (2)

Q.40 A boy in rainy season while going to school takes one step forward but he has to take two steps toward his home how can he reach his school ?

(a) By using an umbrella   (b) By means of a cycle
(c) By facing home & walking   (d) By facing the school

Q.41 If you walk three miles north, then turn back and walk four miles. How far are you from the starting point?

(a) 5 miles   (b) 3 miles   (c) 1 mile   (d) 7 miles

Q.42 If 15 November 1993 is going to be Monday. what was 28 July 1991 ?

(a) Tuesday   (b) Saturday   (c) Friday   (d) Sunday.

Q.43 Every person on earth has shaken a certain number of hands. Then, the number of persons who have shaken an odd number of hands is _____

(a) Always Even
(b) Always Odd
(c) Either Even or Odd depending on World Population
(d) Always prime

Q.44 Two cyclists began a training run simultaneously, one starting from Pune, the other from Mumbai. When the riders were 150 km apart, a fly took an interest. Starting on one cyclist's shoulder, the fly flew ahead to meet the other cyclist. On reaching the latter, fly at once turned back. The restless fly continued to shuttle back and forth until the pair met; then it settle on the nose of one of the cyclists. The fly's speed was 30 km per hour. Each cyclist's speed was 15 km per hour. How many km did the fly travel ?

(a) 300 km   (b) 75 km   (c) 150 km   (d) 45 km

Q.45
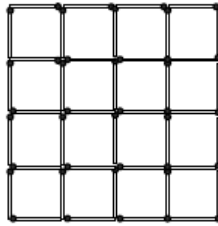
Including the 16 unit squares shown, how many squares are there ?

(a) 29   (b) 30   (c) 16   (d) 17

Q.46   There are 128 players in an elimination – type singles Wimbeldon tennis tournament. How many matches must be played (or defaulted) to determine the winner?

(a) 64   (b) 128   (d) 127   (d) 256

Q.47   In 1937, a man stated that he was x years old in the year x^2. He added, "If the number of my years be added to the number of my month, the result equals the square of the day of the month on which I was born." When was he born ?

(a) May 7, 1892   (b) June 14, 1900
(c) Feb 29, 1936   (d) None of the above

Q.48   Numbers 1, 2, 3……,2009 are written in the natural order. Numbers in odd places are stricken off to obtain a new sequence. Numbers in odd places are stricken off from this sequence to obtain another sequence and so on, until only one term a is left. Then find a

(a) 1004   (b) 1000   (c) 1024   (d) 2008

Q.49   A teacher of mathematics used an unconventional method to measure time for a test lasting 15 minutes. He used just a sand-glass, which spills in 7 minutes and a second sand-glass, which spills in 11 minutes. During the whole time he turned sand-glasses only n times. Find the minimum value of n.

(a) 1   (b) 2   (c) 3   (d) 4

Q.50   "Two days ago, I was 10 years old and will be 13 years old next year". If I am speaking the truth, what is today's date ?

(a) 28 February   (b) 29 February
(c) 31 December   (d) 1 January

-x-x-x-x-x-x-x-x-x-x-