SVCE - 3rd Yr Quants

Quantitative Test Paper

# Response

Score **37 / 40**

Percentage **92.5%**

**YOUR ANSWER'S**

**1 .) A five-digit number is formed using digits 1, 3, 5, 7 and 9 without repeating any one of them. What is the sum of all such possible numbers?**

Answer : 6666600

**2 .) A man has 9 friends, 4 boys and 5 girls. In how many ways can he invite them, if there to be exactly 3 girls in the invitees?**

Answer : 160

**3 .) How many numbers can be formed from 1, 2, 3, 4, 5 (without repetition), when digit at the unit's place must be greater than that in the ten's place?**

Answer : 60

**4 .) How many numbers can be made with digits 0, 7, 8 which are greater than 0 and less than a million?**

Answer : 728

**non zero. The code, handwritten on a slip, can however potentially create confusion, when read upside-down-for example, the code 91 may appear as 16. How many codes are there for which no such confusion can arise?**

Answer : 71

**6 .) There are 5 doors to a lecture room. In how many ways can a student enter the room through and leave the room by a different door?**

Answer : 20

**7 .) In how many ways can 3 students be selected from a group of 12 students to represent a school in the inter school essay competition**

Answer : 220

**8 .) What is the probability that two squares (smallest dimension) selected randomly from a chess board will have only one common corner?**

Answer : 7/144

**9 .) One ticket is selected at random from 50 tickets numbered 0, 01, 02, ……..49. Then, the probability that the sum of the digits on the selected ticket is 8, given that the product of these digits is zero, equals**

Answer : 1/14

**10 .) It is given that the events A and B are such that P(A) = 1/4, P(A|B) = 1/2 and P(B|A) = 2/3. Then P(B) is**

Answer : 1/3

**11 .) A pair of fair dice is thrown independently three times. The**

Answer : 8/729

**12 .) Two aeroplanes I and II bomb at a target in succession. The probabilities of I and II scoring a hit correctly are 0.3 and 0.2, respectively. The second plane will bomb only if the first misses the target. The probability that the target is hit by the second plane, is**

Answer : 0.32

**13 .) A bag contains 10 balls numbered from 0 to 9. The balls are such that the person picking a ball out of the bag is equally likely to pick anyone of them. A person picked a ball and replaced it in the bag after noting its number. He repeated this process 2 more times. What is the probability that the ball picked first is numbered higher than the ball picked second and the ball picked second is numbered higher than the ball picked third?**

Answer : 3/25

**14 .) There are three similar boxes, containing (i) 6 black and 4 white balls (ii) 3 black and 7 white balls (iii) 5 black and 5 white balls, respectively. If you choose one of the three boxes at random and from that particular box picks up a ball at random, and find that to be black, what is the probability that the ball picked up from the second box?**

Answer : 7/14

**15 .) If log 2 = 0.3010 and log 3 = 0.4771, the values of log5 512 is**

Answer : 3.875

**16 .) If log 27 = 1.431, then the value of log 9 is**

**logarithm of 0.0000134?**

Answer : -5

**18 .) Which of the following statements is not correct?**

Answer : log (2 + 3) = log (2 x 3)

**19 .) If sec x = 2x + 1/8x, then evaluate sec x + tan x**

Answer : 4x

**20 .) Evaluate the expression tan(24) x tan(66) x tan(35) x tan(55)**

Answer : 1

**21 .) Find the maximum value of the expression 21 sin x + 220 cos x**

Answer : 221

**22 .) Find the sum of all the angles (in degrees) if the polygon has 5 sides.**

Answer : 540

**23 .) Given five concentric squares. If the area if the circle inside the smallest square is 77 square units and the distance between the corresponding corners of consecutive squares is 1.5 units, find the difference in the areas of the outermost and innermost squares.**

Answer : 240 sq units

**24 .) A wooden door wedge is in the shape of a sector of a circle of radius 10 cm with angle 24degree and constant thickness 3 cm. Find the volume of wood used in making the wedge.**

Answer : 62.83 cm3

**major segment.**

Answer : 84 cm2

**26 .) A cone and a hemisphere have equal volumes. Find the ratio of their heights.**

Answer : 2:1

**27 .) How many tiles whose length and breadth are 12 cm and 5 cm respectively will be needed to fit in a rectangular region whose length and breadth are respectively 144 cm and 100 cm.**

Answer : 240

**28 .) The perimeter of an equilateral △ is 723–√723 meters.**

Answer : 36 meters

**29 .) Four equal sized maximum circular plates are cut off from a square paper sheet of area 784 cm2. The circumference of each plate is:**

Answer : 44 cm

**30 .) A cone and sphere have the same radius of 12 cm. Find the height of the cone if the cone and sphere have the same volume.**

Answer : 48 cm

**31 .) Two mutually perpendicular chords AB and CD meet at a point P inside the circle such that AP = 6 cms, PB = 4 units and DP = 3 units. What is the area of the circle?**

Answer : 125π/4 sq cms

**32 .) Cylindrical cans of cricket balls are to be packed in a box. Each can has a**

**number of cans that can fit in the box?**

Answer : 21

**33 .) An inverted right circular cone has a radius of 9 cm. This cone is partly filled with oil which is dipping from a hole in the tip at a rate of 1cm3 /hour. Currently the level of oil 3 cm from top and surface area is 36 π cm2. How long will it take the cone to be completely empty?**

Answer : 72π hours

**34 .) Vipin's and Javes's salaries are in the proportion of 4:3 respectively. What is Vipin's salary? I. Javed's salary is 75% that of Vipin's salary. II. Javed's salary is Rs.4500.**

Answer : if the data either in I or II alone are sufficient to answer the question

**35 .) At what time did Sonali Leave her home for office? I. Sonali received a phone call at 9.15 a.m. at her home. II. Sonali's car reached office at 10.15 a.m., 45 minutes after she left her residence.**

Answer : If the data in statement II alone are sufficient answer the question.

**36 .) How many sons does D have? I. A's father has three children. II. B is A's brother and son of D.**

Answer : If the data even in both the statements together are not sufficient to answer the question

**37 .) What is the monthly salary of Praveen? I. Praveen gets 15% more than Sumit while Sumit gets 10% less than Lokesh. II. Lokesh's monthly salary is Rs.2500.**

**38 .) How many pages of the book X did Robert read on Sunday? I. The book has 300 pages out of which two-third were read by him before Sunday. II. Robert read the last 40 pages of the book on the morning of Monday.**

Answer : If the data in both the statements together are needed

**39 .) In the last month the company decided to increase the cost of its mixer by 10%. What is the present price of the mixer? I. The cost of mixer and juicer together was Rs.2850 a month ago. II. The amount of 10% increase on the mixer comes to Rs.220.**

Answer : If the data in statement II alone are sufficient answer the question;

**40 .) Two students appeared at an examination. One of them secured 9 marks more than the other and his marks was 56% of the sum of their marks. The marks obtained by them are:**

Answer : 42, 33