K26FY1148 Pages: 3 Reg No:.....
Name:.....

Second Semester FYUGP Degree (Reg/Sup/Imp) Examination April 2026

KU2MDCMAT101 - MATHEMATICAL REASONING

2024 Admission onwards

Time : 1.5 hours Maximum Marks : 50

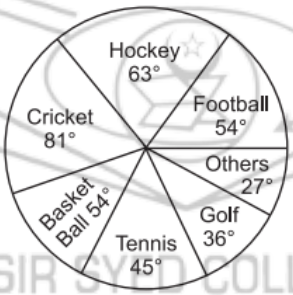
Section A

Answer any 6 questions. Each carry 2 marks.

1. If in a certain code, RAIN is written as 8€*6 and MORE is written as 7¥8@. How is REMAIN written in that code?

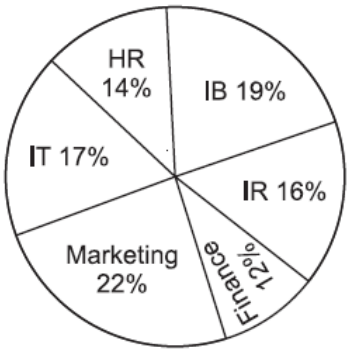
2. If ARUN is coded as 54,then how will VARUN is coded as?

3. The circle graph given below shows the spending of a state on various sports during a particular year. Study the graph carefully and answer the given question. What



percent of the total spending is spent on Tennis?

4. Percentage-wise break up of students in terms of specialization in MBA is given in the following pie chart. Total Number of students is 8000. What is the total



number of students having specialisation in IR, Marketing and IT ?

5. How many 6s are there in the following number sequence each of which is immediately followed by 3 or 9?

   2 6 3 7 5 6 4 2 9 6 1 3 4 1 6 3 9 1 5 6 9 2 3 1 6 5 4 3 2 1 9 6 7 1 6 3

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6. Sam ranked ninth from the top and thirty-eighth from the bottom in a class. How many students are there in the class?

7. Find out the wrong term in the number series:

   $1, 5, 11, 19, 29, 55$

8. Which number is like the given set $\{363, 489, 579\}$? Also write the relationship with the given group of numbers.

   a) 562 b) 471 c) 382 d) 281

Section B

Answer any 4 questions. Each carry 6 marks.

9. How many numbers from 11 to 50 are there which exactly divisible by 7 but bot 3?

10. If the first and second digits in the sequence 5 9 8 1 3 2 7 4 3 8 are interchanged, also the third and fourth digit, the fifth and sixth digit and so on, which digit would be the seventh counting to your left?

11. In a class of 60, where girls are twice that of boys. Kamal ranked seventeenth from the top. If there are 9 girls ahead of Kamal, how many boys are after him in rank?

12. (a) Find the missing number in the sequence:
    $1, 4, 27, 16, ?, 36, 343$

    (b) Find the missing number in the sequence:
    $4, 8, 28, 80, 244, ?$

13. Which number is like the given set $\{282, 354, 444\}$? Also explain the relationship with the given group of numbers.
    a) 453 b) 417 c) 336 d) 255

14. Choose a number from the following and give the relationship with the given pair of numbers. $49 : 81 :: 100 : ?$
    a) 64 b) 144 c) 169 d) None of these

Section C

Answer any 1 questions. Each carry 14 marks.

15. (a) If in a certain code, TWENTY is written as 863985 and ELEVEN is written as 323039, how is TWELVE written in that code?

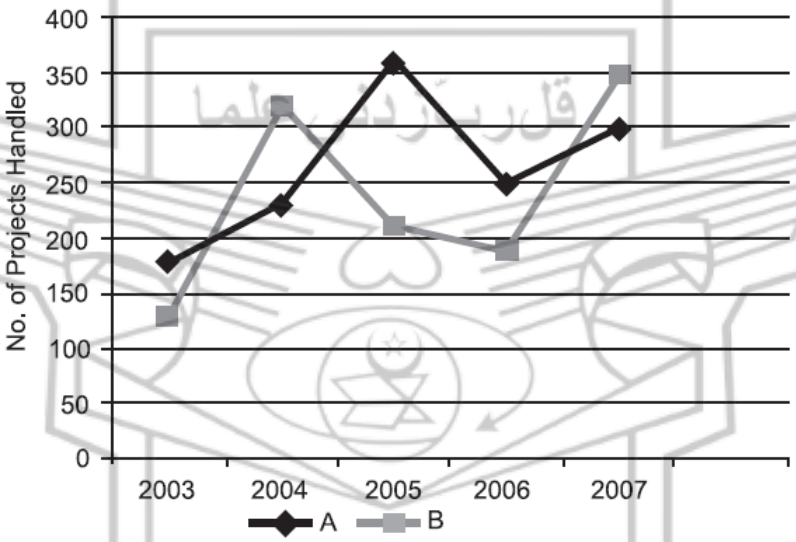
    (b) If one item belong to the class of second and the third item is partly related to the second, then how they are represented as a Venn diagram ?

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(c) Draw the Venn diagram which best illustrates the given classes.
i. Citizens, Educated Citizens, Men
ii. Sun, Moon, Stars
iii. Animals, Men, Plants
iv. Doctors, Lawyers, Professionals
v. Honesty, Intelligence, Aptitude
vi. Yak, Zebra, Deer

16. Refer to the graph and answer the given questions:

Data related to the number of projects handled by two companies A and B over 5 years.



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(a) Out of the total number of projects handled by Company A in 2005 and 2006 together, 20% were governmental projects. What was the total number of governmental projects handled by Company A in 2005 and 2006 together?

(b) The number of projects handled by Company B decreased by what per cent from 2004 to 2006?

(c) If the number of projects handled by company A increased by 20% from 2007 to 2008 and by 5% from 2008 to 2009, what was the number of projects handled by Company A in 2009?

(d) What is the difference between the total number of projects handled by company A in 2003 and 2004 together and the total number of projects handled by Company B in 2005 and 2007 together?