

Reg No:.....

K25FY2212

Name :.....

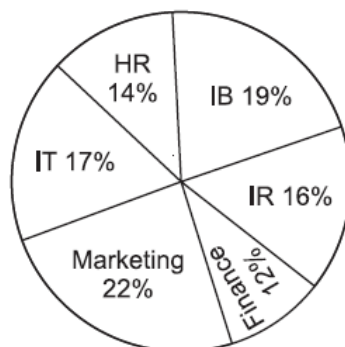
Second Semester FYUGP Mathematics Examination
APRIL 2025 (2024 Admission onwards)
KU2MDCMAT101 (MATHEMATICAL REASONING)
(DATE OF EXAM: 26-4-2025)

Time : 90 min

Maximum Marks : 50

Part A (Answer any 6 questions. Each carries 2 marks)

1. Find out the wrong term in the number series:
5, 10, 40, 80, 320, 550, 2560 2
2. Which number is like the given set $\{3, 17, 31\}$? Also write the relationship with the given group of numbers.
a) 5 b) 15 c) 45 d) 49 2
3. Choose a number from the following and give the relationship with the given pair of numbers. $42 : 20 :: 64 : ?$
a) 31 b) 32 c) 33 d) 34 2
4. In a certain language 35796 is written as 44887. How is 46823 written in that code? 2
5. If B is coded as 8, F is coded as 6, Q is coded as 4, D is coded as 7, T is coded as 2, M is coded as 3 and K is coded as 5, then what is the coded form of QKTBFM? 2
6. Draw the Venn diagram of Tall men, Black haired people, Indians. 2
7. In the series given below, count the number of 9s each of which is not immediately preceded by 5 but is immediately followed by either 2 or 3, how many such 9s are there?
1 9 2 6 5 9 3 8 3 9 3 2 5 9 2 9 3 4 8 2 6 9 8 2
8. 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 ? 2

Part B (Answer any 4 questions. Each carries 6 marks)

9. (a) Find the missing number in the sequence:
4, 12, 36, 108, ?
(b) Find out the wrong term in the number series:
325, 259, 202, 160, 127, 105, 94

6

10. Which number set of numbers is like the given set {14, 23, 32} ? Also explain the relationship with the given group of numbers.

(a) (15, 23, 31) (b) (14, 19, 24) (c) (13, 21, 29) (d) (12, 21, 30) 6

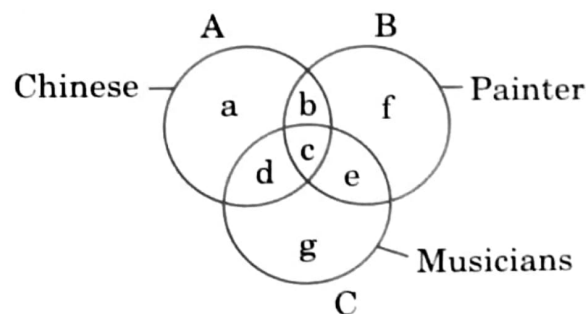
11. If the first digit is an odd number and the last digit is an even number, both are to be coded as X; if the first digit is an even number and the last digit is an odd number, both are to be coded as Y and if either the first or the last digit is 0, is to be coded as W. Find out the correct coded form of the following group of digits as per the given codes and conditions.

- (a) 328469
(b) 631420
(c) 640598
(d) 893561
(e) 743506
(f) 538122

Digit	9	3	2	8	1	5	7	6	4	0
Letter Code	M	E	B	N	K	R	H	T	D	J

6

12. In the figure given below, there are three intersecting circles each representing certain section of people. Read the statements in each of the following questions and choose the letter of the region which represents the statement.

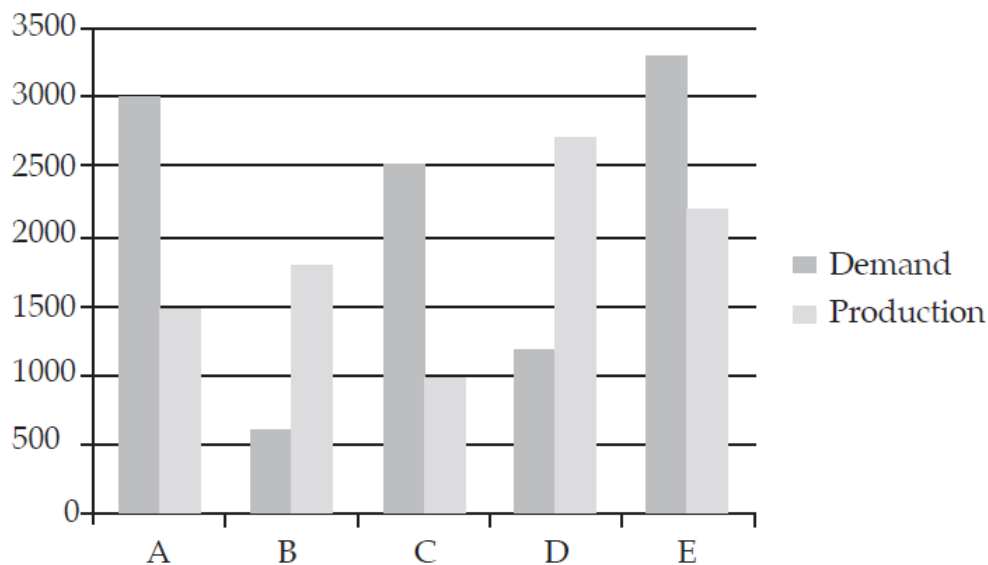


- (a) Chinese who are painters but not musicians?

- (b) Painters who are neither chinese nor musicians?
- (c) Chinese who are musicians but not painters?
- (d) Chinese who are painters as well as musicians?

6

13. 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? 6
14. The following chart represents Demand and Production for 5 companies A,B,C,D and E. On the basis of the graph answer the questions.



- (a) If company A desires to meet the demand by purchasing surplus production of company, then which is the most suitable company?
- (b) If the production of company D is h times of the production of company A. Then h equals?

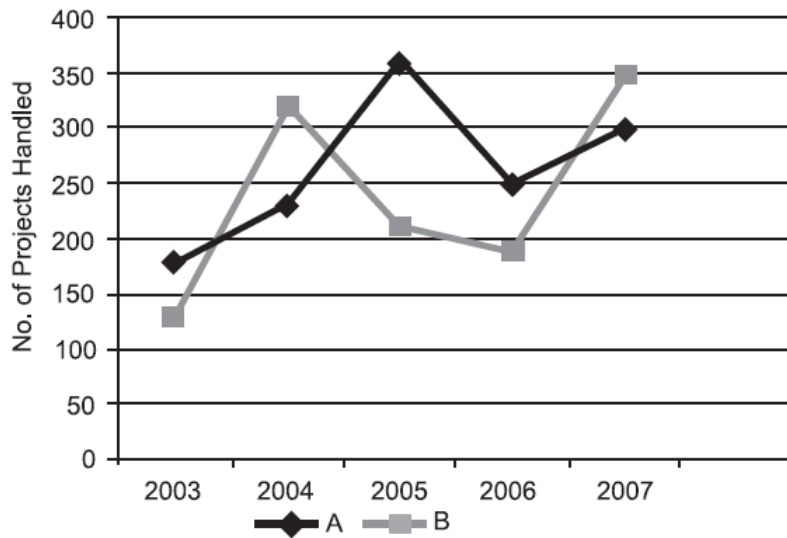
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Part C (Answer any 1 question(s). Each carries 14 marks)

15. Study the following number sequence and answer the questions given below it:
5 1 4 7 3 9 8 5 7 2 6 3 1 5 8 6 3 8 5 2 2 4 3 4 9 6
- (a) How many odd numbers are there in the sequence each of which is immediately followed by an odd number?
 - (b) How many even numbers are there in the sequence which are immediately preceded by an odd number but immediately followed by an even number?
 - (c) How many odd numbers are there in the sequence which are immediately preceded and also immediately followed by an even number?

14

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



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

- (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?