**Turn Over** 

 $({\rm Pages:}\ 4)$ 

Name:						
Reg.	No:					

# SECOND SEMESTER U.G. DEGREE EXAMINATION, APRIL 2025 (FYUGP) CC24UMAT2FM106(2) - MATHEMATICS FOR COMPETITIVE EXAMINATIONS - PART II

(Mathematics -MDC) ( 2024 Admission - Regular)

Time: 1.5 Hours

Maximum : 50 Marks Credit: 3

## Part A

Answer **all** questions. Each question carries 2 marks.

Level
2
3
2
2
3
2



(1)

7. Choose the odd picture .



8. Complete the following figure series.

> ? **Answer figures** (b) (C) (a) (d)

- 9. Which of the following conclusions logically follows from the below CO4 3 statements? **STATEMENT** All trucks fly. Some scooters fly. CONCLUSIONS All trucks are scooters. Some scooters do not fly.
- 10. Find the volume of a right circular cone if its base radius is 5 cm. CO4 2 and the height is 20 cm.

### (Ceiling: 16 Marks)

#### Part B

Answer **all** questions. Each question carries 6 marks.

(a) Complete the following series. CO1 3 11. Q1F, S2E, U6D, W24C, ? (b) Find the wrong term in the following series. CO1 3 P3C, R5F, T9I, V12L. (c) A is taller than E, B is taller than D, F is taller than C, D is CO13 taller than A and E is taller than F, then who is the tallest among them?

CO3 3

CO3 3

## 24U206

12. (a) A + B means A is the son of B, A - B means A is the wife of B, CO2 3 A x B means A is the brother of B, A / B means A is the mother of B and A = B means A is the sister of B.
(i) What does P x R / Q mean?
(ii) What does P = R / Q mean?

(b) Draw the Venn diagram representing the inter-relationship CO2 3 among Picture, TV, Radio.

13. (a) A man travels 4 km due North, then travels 6 km due East and CO2 3 further travels 4 km due North. How far is he now from his starting point?

(b) Pointing towards a boy Veena said that he is the son of only CO2 3 son of my grand father. How is that boy related to Veena?

14. (a) How many triangles are contained in the given figure? CO3 3



(b) Complete the second pair in the same way as the first pair. CO3 3



Answer figures



15. A field is in the form of a circle. The cost of ploughing the field at C04 3 1.50 rupees per meter square is 5775 rupees. Then what is cost of fencing the field at 8.50 rupees per meter square?

(Ceiling: 24 Marks)

**Turn Over** 

## Part C

Answer any **one** question. The question carries 10 marks.

- 16. (a) In certain code language MINK YOUNG PE means 'fruits are CO1 3 ripe', PE LAO MAY MINK means 'oranges are not ripe' and MAY PE NUE MINK means 'mangoes are not ripe'. Which word in that language means 'mangoes' ?
  - (b) Raja walks slower than Raghu and Raghu walks as fast as Goru CO1 3 and Krishna walks faster than Goru. Who walks the fastest?
  - (c) Choose the odd picture.



17. (a) Consider the following table and answer the questions. CO4 3 Number of students studying in different standards of different schools

Standards Schools	Т	П	ш	IV	v	VI			
A	42	54	48	58	50	38			
В	50	60	58	45	45	46			
С	40	48	58	46	42	54			
D	45	55	46	40	52	50			
E	48	55	44	55	52	48			
F	52	52	54	42	60	54			

(i) What is the average number of students studying in standard I from all schools together?

(ii) What is the respective ratio of students studying in standard III of schools A and B together to those studying in standard VI of schools C and D together?

(b) The ratio of an interior angle to the exterior angle of a regular CO4 2 polygon is 5: 1. the number of sides in the polygon is?

 $(1 \times 10 = 10 \text{ Marks})$ 

 $CO3 \quad 2$ 

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(4)