

RAN-2403000503063002

B.Sc. (NCF-NEP) (Sem.-III) Examination November - 2025
MH-SEC-Mathematics For Competitive Examinations (302)

Time: 1 Hour]
[Total Marks: 25
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) All questions are compulsory.
- (3) Figures to the right indicate marks of the corresponding question.

Seat No.:

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Student's Signature

Q.1. Attempt any five
5

1. The H.C.F. of two numbers is 11 and their L.C.M. is 693. If one of the numbers is 77 then find the other.
2. Find ${}^{10}C_3$.
3. Find the value of $101 \frac{27}{100000}$ in the decimal form.
4. One side of the parallelogram is 18 cm and its distance from the opposite side is 8 cm. Find the area of the parallelogram
5. Find the volume of a cuboid 16 m long, 14 m broad and 7 m height.
6. If the height of a pole is $2\sqrt{3}$ m and the angle of elevation of the sun is 60° then find the length of the shadow.

Q.2. Attempt any two
10

1. (i) Find the smallest number of five digits exactly divisible by 16, 24, 36 and 54.
(ii) Find the value of $\left(\frac{32}{243}\right)^{-\frac{4}{5}}$
2. A man travelled from the village to the post office at the rate of 25 kmph and walked back at the rate of 4 kmph. If the whole journey took 5 hours 48 minutes, find the distance of the post office from the village.
3. Mr. Jones gave 40% of the money he had, to his wife. He also gave the remaining amount to each of his three sons. Half of the amount now left was spent on miscellaneous items and the remaining amount of Rs. 12000 was deposited in the bank. How much money did Mr. Jones have initially?

Q.3. Attempt any two
10

1. The diameter of the driving wheel of a bus is 140 cm. How many revolutions per minute must the wheel make in order to keep a speed of 66 kmph?

2. A circular swimming pool is surrounded by a concrete wall 4 ft. wide. If the area of the concrete wall surrounding the pool is $\frac{11}{25}$ that of the pool, then find the radius of the pool.
 3. The angle of elevation of the top of a tower at a point on the ground is 30° . If the observer moves 20 m towards the tower, the angle of elevation becomes 45° . Find the height of the tower.
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