

RAN-2403000503063002

B.Sc. (NCF-NEP) (Sem.-III) Examination March - 2026
Mathematics For Competitive Examinations (MH-SEC-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.: <table border="1" style="width: 100%; height: 30px; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> Student's Signature						

Q.1. Attempt any five
05

1. Find the value of $2.\overline{136}$ in fraction form.
2. Find L.C.M. of 108 and 2100.
3. Find the value of $256^{\frac{5}{4}}$.
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. What will be the area of a semi-circle of 14 m diameter?
6. If the length of the shadow of a tree is $\sqrt{3}$ times the height of the tree then find the angle of elevation of the sun.

Q.2. Attempt any two
10

1. (i) Find the H.C.F. of $\frac{2}{3}$, $\frac{8}{9}$, $\frac{16}{81}$, and $\frac{10}{27}$.
 (ii) The average of four consecutive even numbers is 27. Find the largest of these numbers.
2. How many words can be formed from the letters of the word 'DIRECTOR' so that the vowels are always together?
3. In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

Q.3. Attempt any two
10

1. The height of a right circular cylinder is 14 cm and its curved surface is 704 sq. cm. then, find the volume of a right circular cylinder.
2. 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?
3. The angle of elevation of the top of a tower at a point on the ground is 30° . On walking 24 m towards the tower, the angle of elevation becomes 60° . Find the height of the tower.