

Model Answer

Statics 2023

| No de question | Solution | |
|----------------|----------|--|
| 1 | A | |
| 2 | C | |
| 3 | C | |
| 4 | C | |
| 5 | A | |
| 6 | C | |
| 7 | D | |
| 8 | A | |
| 9 | D | |
| 10 | A | |
| 11 | C | |
| 12 | B | |
| 13 | C | |
| 14 | B | |
| 15 | A | |
| 16 | D | |
| 17 | A | |
| 18 | D | |

$$19) M = \frac{8 \times 2 \text{ area of triangle } ABC}{\text{base}} \quad (1)$$

$$= 8 \times \frac{4\sqrt{5}}{3} \times 2 = \frac{64\sqrt{5}}{3} \quad (1)$$

20) Resultant of the two forces of magnitudes 10 and 15 = 15-10 = 5 N

in the direction of \vec{BC} (1)

Resultant of the two forces of magnitudes 10 and 5 = 10-5 = 5 N

in the direction of \vec{BA} (1)

$$\sqrt{5^2 + 5^2} = 5\sqrt{2} \text{ N in the direction bisecting the angle B upwards } (1)$$