Applied mechanics (ST-2)

Total points 10/10

The respondent's email (**rohansharma.ug20@nsut.ac.in**) was recorded on submission of this form.

0 of 0 points

Name of the student *

Rohan Sharma

Enrollment No *

2020UMV7616

Test 10 of 10 points

✓ Pick the incorrect statement * 1/1

- ○ Shear stress is zero on the plane which carries maximum normal stress
- ○ Principal planes are mutually orthogonal
- ◉ Normal stress is zero on the plane which carries maximum shear stress ✓
- ○ Mohr's circle can be used for finding out principal stresses.

✓ If an element of a body is in a state of pure shear with magnitude of 80 N/mm2, the maximum principal stress will be 1/1

- ◉ 80 N/mm2 ✓
- ○ 113.14 N/mm2
- ○ 120 N/mm2
- ○ 56.57 N/mm2

✓ A tensile stress of 1.5 N/mm2 and a shear stress of 1.2 N/mm2 acting on a lamina is causing cracking of concrete. then tensile strength of the concrete (in N/mm2) is 2/2

- 1.5
- 2.08
- (●) 2.17 ✓
- 2.29

✓ Find out σx and σy (in MPa) for a given lamina in which normal stress and tangential stress on an inclined plane is given as 120 MPa and 70 MPa respectively. Angle of inclination of the plane is tan-1(3/4). 3/3

- 26.7 and 172.5
- 54 and 128
- (●) 67.5 and 213.3 ✓
- 16 and 138

✓ If principal stress are given as 20 MPa (tensile) and 20 MPa (compressive), find out maximum shear stress (in MPa) 1/1

- ○ 10
- ◉ 15 ✓
- ○ 20
- ○ 30

✓ Which condition is true for principal plane 1/1

- ○ No stress acting on it
- ○ No tensile stress acting on it
- ◉ no shear stress acting on it ✓
- ○ No point on it should be under any stress

✓ If both the maximum and the minimum principal stress are 30 MPa. The center and radius of Mohr's circle will be 1/1

- ○ center at (0,0) and radius as 30 MPa
- ○ center at (0,0) and radius as 60 MPa
- ○ center at (30,0) and radius as 30 MPa
- ◉ center at (30,0) and zero radius ✓

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