

UNIT 2 SHEAR FLOW IN OPEN SECTION

1. _____ is the product of shear stress and the thickness of the section
 - (a) Shear strain
 - (b) Shear flow
 - (c) Volumetric strain
 - (d) None of these
2. In Lumping of cross section the booms carry only _____
 - (a) Bending
 - (b) Shear
 - (c) Tension
 - (d) Compression
3. In unsymmetrical Bending it is assumed that neutral axis passes through
 - (a) Elastic axis
 - (b) Centroid axis
 - (c) Vertical axis
 - (d) None of these
4. In Lumping of cross section the skin carry only _____
 - (a) Bending
 - (b) Shear
 - (c) Tension
 - (d) Compression
5. The locus of shear centre is called as
 - (a) Elastic axis
 - (b) Reference axis
 - (c) Principle axis
 - (d) None of these
6. Write The Bredt-Batho Formula
 - (a) $T=2Aq$
 - (b) $T=2A$
 - (c) $T=2q$
 - (d) None of the above
7. The unit of stress in S.I units is
 - a) n/mm^2
 - b) kN/mm^2
 - c) N/m^2
 - d) Any one of these
8. The deformation per unit length is called
 - a) Tensile stress
 - b) Compressive stress

- c) Shear stress
- d) Strain

9. The unit of strain is

- a) N-mm
- b) N/mm
- c) mm
- d) No unit

10) Strain is equal to

- a) $l/\delta l$
- b) $\delta l/l$
- c) $l.\delta l$
- d) $l+\delta l$

11) Hook law holds well up to

- a) Yield point
- b) Elastic limit
- c) Plastic limit
- d) Breaking point

12) Whenever material is loaded within elastic limit, stress is.....strain.

- a) Equal to
- b) Directly proportional to
- c) Inversely proportional to.

13) The ratio of linear stress to the linear strain is called.

- a) Modulus of rigidity
- b) Modulus of elasticity
- c) Bulk modulus
- d) Poisson's ratio

14) The unit of modulus of elasticity is same as those of

- a) Stress, strain and pressure
- b) Stress, force and modulus of rigidity
- c) Strain, force and pressure
- d) Stress, pressure and of rigidity

15) When a change in length takes place, the strain is known as

- a) Linear strain
- b) Lateral strain
- c) Volumetric strain
- d) Shear strain

16) The modulus of elasticity for mild steel is approximately equal to

- a) 10 kN/mm^2
- b) 80 kN/mm^2
- c) 100 kN/mm^2
- d) 210 Kn/mm^2

17. Young's modulus may be defined as the ratio of

- a) Linear stress to lateral strain
- b) Lateral strain to linear strain
- c) Linear stress to linear strain
- d) Shear stress to shear strain

18. Modulus of rigidity may be defined as the ratio of

- a) Linear stress to lateral strain
- b) Lateral strain to linear strain
- c) Linear stress to linear strain
- d) shear stress to shear strain

19. The unit of young's modulus is same as that of stress

- a) equal to
- b) less than
- c) more than

20. When a bars of different materials and same size are subjected to the same tensile force. If the bars have unit elongation in ratio of 2:5 then the ratio of modulus of elasticity of the two materials will be

- a) 2:5
- b) 5:2
- c) 4:3
- d) 3:4

21. Strainrosetters are used to) measure

- a)Ultimate tensile shear strain
- b) measure linear strain
- c) Measure volumetric strain
- d) relieve strain

22. The ultimate tensile stress for mild steel is.....the ultimate compressive stress

- a) equal to
- b) less than
- c) more than

23. The maximum stress produced in a bar of tapering section is at

- a) Smaller end
- b) larger end
- c) middle
- d) any where

24. Modular ratio of the two materials is the ratio of

- a) Linear stress to linear strain
- b) shear stress to shear strain
- c) Their modulus of elasticity
- d) their modulus of rigidities

25. The shear modulus of most materials with respect to the modulus of elasticity is

- a) Equal to half
- b) less than half
- c) more than half
- d) none of these

26. a steel bar of 5 mm is heated from 15°C to 40°C and it is free to expand. The bar will induce

- a) No stress
- b) shear stress
- c) tensile stress
- d) compressive stress

27. The maximum shear stress is equal to the radius of Mohr's circle.

- (a) Equal to
- (b) directly proportional to
- (c) inversely proportional
- (d) independent of

28. The energy stored in a body when strained within elastic limit is known as

- a) Resilience
- b) proof resilience
- c) impact energy
- d) modulus of resilience

29. The proof resilience is the maximum strain energy which can be stored in a body.

- a) 400 Mpa
- b) 500 Mpa
- c) 900MPa
- d) 1400 Mpa

30. The proof resilience per unit volume of a material is known as modulus of resilience.

- a) Resilience
- b) proof resilience
- c) impact energy
- d) modulus of resilience

1	2	3	4	5	6	7	8	9	10
b	a	b	b	a	a	d	d	d	b

11	12	13	14	15	16	17	18	19	20
b	b	a	d	c	d	c	d	c	b

21	22	23	24	25	26	27	28	29	30
b	c	A	c	b	a	a	d	a	c