

Unit 4 MCQ QB

Analysis of Structures

* Required

1. Email *

2. What is your Name? *

3. What is your roll number? *

4. All members of plane truss lie in *

1 point

Mark only one oval.

- ☒ One Plane
- ☐ Two Planes
- ☐ Different Planes
- ☐ All of the above

5. The members of truss are connected by frictionless.....

1 point

Mark only one oval.

- ☐ a. Pin joint
- ☐ b. Hinge Joints
- ☐ c. Roller Joints
- ☐ d. Both a and b

6. The members of truss are essentially

1 point

Mark only one oval.

- ☐ Two force members
- ☐ One force members
- ☐ Three force members
- ☐ Multi force members

7. All the loads acting on the truss are applied at the....

1 point

Mark only one oval.

- ☐ middle of the member
- ☐ joints only
- ☐ anywhere on the member
- ☐ none of these

8. Member of the truss will be having.....force only.

1 point

Mark only one oval.

- ☐ a. Axial tension
- ☐ b. Axial compression
- ☐ c Radial forces
- ☐ d. Both a and b

9. If $n \neq 2j - R$, then the truss is known as..... (where n = No. of members, j = no. of joints, R = no. of reactions) 1 point

Mark only one oval.

- ☐ statically determinate truss
- ☐ statically indeterminate truss
- ☐ simple truss
- ☐ triangular truss

10. If $n < 2j - R$, then the truss is known as..... (where n = No. of members, j = no. of joints, R = no. of reactions) 1 point

Mark only one oval.

- ☐ perfect truss
- ☐ redundant truss
- ☐ over rigid truss
- ☐ deficient truss

11. If $n > 2j - R$, then the truss is known as..... (where n = No. of members, j = no. of joints, R = no. of reactions) 1 point

Mark only one oval.

- ☐ perfect truss
☒ redundant truss
☐ over rigid truss
☐ deficient truss

12. If $n = 2j - R$, then the truss is known as..... (where n = No. of members, j = no. of joints, R = no. of reactions) 1 point

Mark only one oval.

- ☒ perfect truss
☐ redundant truss
☐ over rigid truss
☐ deficient truss

13. In the analysis of Truss, Self weight of the members is 1 point

Mark only one oval.

- ☐ Considered
☒ Neglected

14. In section method, the section line can intersect maximum.....members only. 1 point

Mark only one oval.

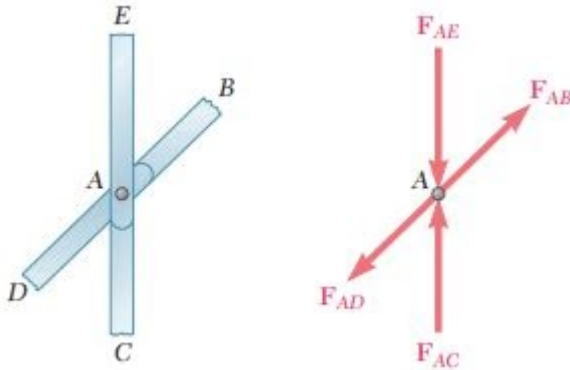
- ☐ two
☒ three
☐ four
☐ one

15. In Joint method, the joint from which we start the analysis should have maximumunknown forces. 1 point

Mark only one oval.

- ☒ two
☐ three
☐ four
☐ one

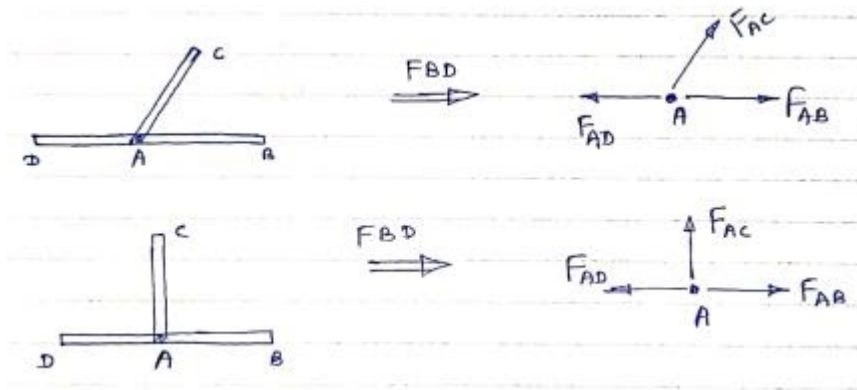
16. When four members are connected at single joint in the truss in such a way that opposite members lie in straight line and there is no external load acting at that joint as shown in the figure, then FORCES IN THE OPPOSITE MEMBERS ARE



Mark only one oval.

- ☒ Equal
- ☐ Unequal
- ☐ Zero
- ☐ one

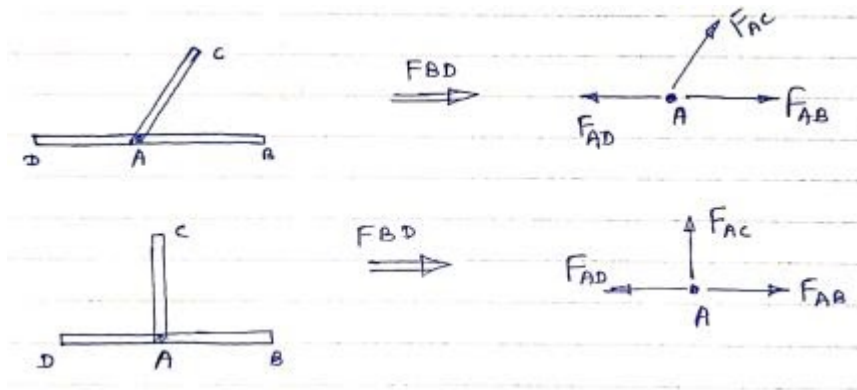
17. When three members are connected at single joint in the truss in such a way that two members are colinear (lie in straight line), one member is inclined or Perpendicular to the first two (which are colinear) and there is no external load acting at that joint as shown in the figure, then FORCES IN THE OPPOSITE MEMBERS ARE



Mark only one oval.

- ☒ Equal
- ☐ Unequal
- ☐ Zero
- ☐ one

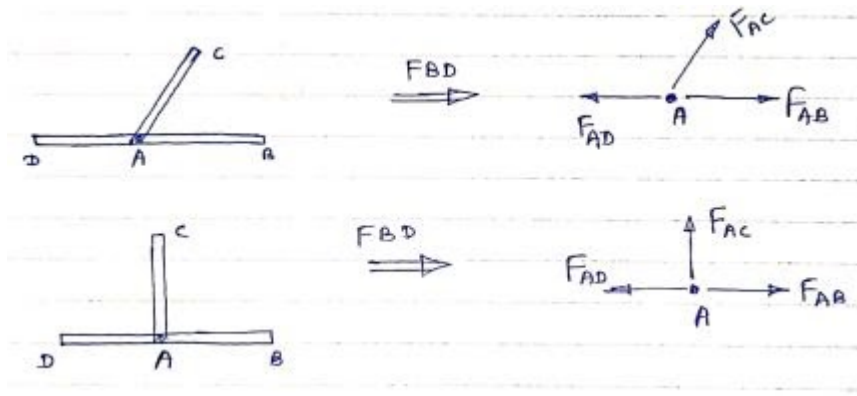
18. When three members are connected at single joint in the truss in such a way that two members are colinear (lie in straight line), one member is inclined or Perpendicular to the first two (which are colinear) and there is no external load acting at that joint as shown in the figure, then FORCE IN THE INCLINED MEMBER is



Mark only one oval.

- ☐ Equal
- ☐ Unequal
- ☒ Zero
- ☐ one

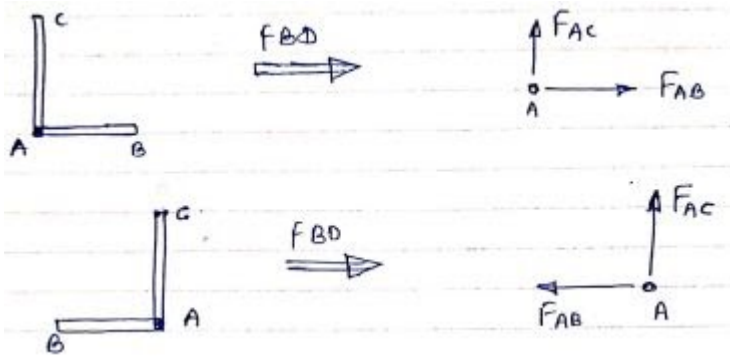
19. When three members are connected at single joint in the truss in such a way that two members are colinear (lie in straight line), one member is inclined or Perpendicular to the first two (which are colinear) and there is no external load acting at that joint as shown in the figure, then FORCE IN THE PERPENDICULAR MEMBER is



Mark only one oval.

- ☐ Equal
- ☐ Unequal
- ☒ Zero
- ☐ one

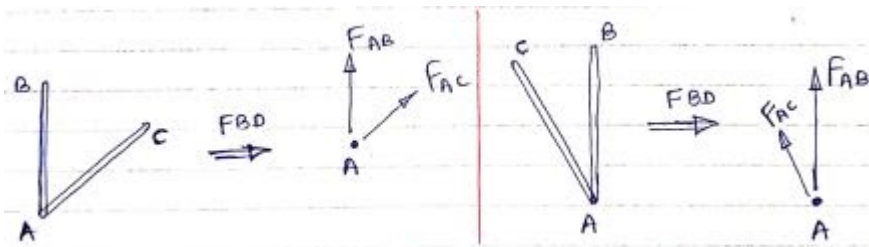
20. When two members are connected at single joint in the truss in such a way that one member is horizontal and other member is vertical (i.e. members are perpendicular to each other) and there is no external load acting at that joint as shown in the figure, then FORCES IN BOTH THE MEMBERS are 1 point



Mark only one oval.

- ☐ Equal
- ☐ Unequal
- ☒ Zero
- ☐ one

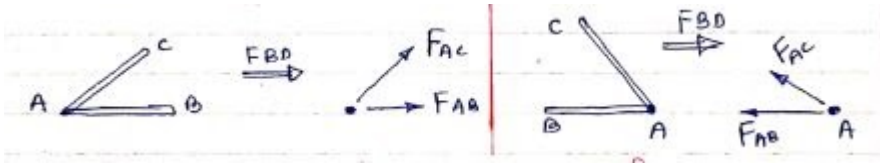
21. When two members are connected at single joint in the truss in such a way that one member is vertical and other member is inclined and there is no external load acting at that joint as shown in the figure, then FORCES IN BOTH THE MEMBERS are 1 point



Mark only one oval.

- ☐ Equal
- ☐ Unequal
- ☒ Zero
- ☐ one

22. When two members are connected at single joint in the truss in such a way that one member is horizontal and other member is inclined and there is no external load acting at that joint as shown in the figure, then FORCES IN BOTH THE MEMBERS are



Mark only one oval.

- ☐ Equal
- ☐ Unequal
- ☒ Zero
- ☐ one

23. Which of the following is correct?

Mark only one oval.

- ☒ a) To know the direction of the unknown force we take the assumption of it
- ☐ b) The direction of the unknown force is known to us already
- ☐ c) The direction of the unknown can't be determined
- ☐ d) The direction of the unknown is of no use, it is not founded

24. If the whole truss is in equilibrium then all the joints which are connected to that truss **is** in equilibrium. This is known as:

Mark only one oval.

- ☒ a) Method of joints
- ☐ b) Section method
- ☐ c) Scalar field method
- ☐ d) Vector equilibrium method

25. The free body diagram of which part of the section of the truss is made to make use of method of joints? 1 point

Mark only one oval.

- ☒ a) Joints
- ☐ b) Truss
- ☐ c) The whole structure
- ☐ d) The combination of joint and the whole structure

26. For applying the method of joint at joints the forces need to coplanar. 1 point

Mark only one oval.

- ☒ True
- ☐ False

27. For applying the method of joint at joints the forces need to be concurrent. 1 point

Mark only one oval.

- ☒ True
- ☐ False

28. We use the method of joint to find the net force acting over the entire structure. 1 point

Mark only one oval.

- ☐ True
- ☒ False

29. Zero force members has _____ loadings.

1 point

Mark only one oval.

- ☐ a) Infinite
- ☒ b) No
- ☐ c) Minimum
- ☐ d) Maximum

30. The zero forces are used to improve _____ of the structure.

1 point

Mark only one oval.

- ☒ a) Stability
- ☐ b) Ductility
- ☐ c) Malleability
- ☐ d) Toughness

31. We use the method of joints when the members on which the force to be found are few in number.

1 point

Mark only one oval.

- ☐ True
- ☒ False

32. The method of section cuts the whole structure of trusses into section and then uses the cut out portion for the calculations.

1 point

Mark only one oval.

- ☒ True
- ☐ False

33. Member of the truss will be having.....force only.

1 point

Mark only one oval.

- ☐ a. Axial
- ☐ b. bending
- ☐ c Radial forces
- ☐ d. Both a and b

34. Member of the frame will be having force only.

1 point

Mark only one oval.

- ☐ a. Axial Tension and compression
- ☐ b. bending
- ☐ c Radial forces
- ☐ d. Both a and b

35. Forces in the member of the frame are subjected to

1 point

Mark only one oval.

- ☐ bending
- ☐ simple tension or compression
- ☐ only axial forces
- ☐ bending as well as simple tension or compression

36. All joints in the frames are...

1 point

Mark only one oval.

- ☒ pins
- ☐ simple
- ☐ rollers
- ☐ all of the above

37. In the frames, loads are applied

1 point

Mark only one oval.

- ☐ only at the joints
- ☐ middle part of the member
- ☒ any where on the members
- ☐ none of these

38. In the frames, the members which are used may be

1 point

Mark only one oval.

- ☐ zero force member
- ☐ multi force member
- ☐ two force member
- ☒ All of above

39. In the frames, at least one member must be

1 point

Mark only one oval.

- ☐ zero force member
- ☒ multi force member
- ☐ two force member
- ☐ All of above

40. Which of the following statement is correct? A. In the analysis of frames, FBD of each member is considered separately. B. In the analysis of truss, FBD of each joint is considered separately. 1 point

Mark only one oval.

- ☐ only A
- ☐ only B
- ☒ both A and B
- ☐ none of the above

41. Trusses, frames and cable system are the stationary structure which are used to carry loads only.

1 point

Mark only one oval.

- ☒ Correct
- ☐ Incorrect

42. Cables are members

1 point

Mark only one oval.

- ☐ rigid
- ☒ flexible
- ☐ inelastic
- ☐ all of the above

43. During the analysis, Cables are considered to be

1 point

Mark only one oval.

- ☒ inextensible
- ☐ extensible
- ☐ none of above
- ☐ all of the above

44. During the analysis, self weight of Cables is

1 point

Mark only one oval.

- ☐ considered
- ☒ neglected
- ☐ none of above
- ☐ all of the above

45. During the cable analysis, it is considered that Loads acting on the cable is only 1 point

Mark only one oval.

- ☐ Concentrated / Point load
- ☐ UDL
- ☐ Rectangular Load
- ☐ UVL

46. What is the shape of deflection of cable between the two load points? 1 point

Mark only one oval.

- ☐ Parabolic
- ☐ Straight line
- ☐ Hyperbolic
- ☐ None of above

47. The nature of forces in cable is always... 1 point

Mark only one oval.

- ☐ bending
- ☐ compressive
- ☐ twisting
- ☐ tensile.

48. In the cable system, both the end supports must be

1 point

Mark only one oval.

- ☒ Hinged / Pined
- ☐ Roller
- ☐ One hinge, other roller
- ☐ Permanent

49. The cable and the supporting loads are always in..

1 point

Mark only one oval.

- ☐ one plane
- ☐ different planes

50. The tension in the cable is maximum where the cable makes inclination with the horizontal.

1 point

Mark only one oval.

- ☐ minimum
- ☒ maximum
- ☐ 45 °
- ☐ less than 45 °

51. The tension in the cable is minimum where the cable makes inclination with the horizontal. 1 point

Mark only one oval.

- ☒ minimum
☐ maximum
☐ 45 °
☐ less than 45 °

52. Horizontal reactions in cable supports are always 1 point

Mark only one oval.

- ☒ Equal
☐ Zero
☐ Maximum
☐ Minimum

53. Tension in cable parts nearest to both hinge support depends on 1 point

Mark only one oval.

- ☐ Horizontal reaction at the support
☒ Vertical reaction at the support
☐ Resultant reaction at the support
☐ None of above