

January 2019 Sem III

0017083200918

19/A/C/S-3/4/E

D

031/217

PAPER - I
DRAUGHTSMAN (CIVIL)
(THEORY)
SEMESTER - III

Time: 2 Hrs.

Marks: 150

Note: Attempt all the questions. All questions carry equal marks.

Choose the correct answer:

- ✓ 1. What is the overlap length of reinforcement bar in tension if its diameter is 'd'?
a) 30 to 35 d b) 35 to 40 d
c) 40 to 45 d ✓ d) 45 to 50 d
- ✓ 2. What is the name of beam having more than three supports?
a) Fixed Beam b) Continuous Beam ✓
c) Partially Fixed Beam d) Simply Supported Beam
- ✓ 3. What is the tread measurement of a R.C.C stair in public building?
a) 28 to 32 cm ✓ b) 25 to 27 cm
c) 22 to 24 cm d) 18 to 20 cm
- ✓ 4. What is the percentage of reinforcement for a column as a thumb rule?
a) 1 to 5% ✓ b) 5 to 7%
c) 9 to 10% d) 0.75 to 1%
- X 5. What is the maximum ratio value for the effective span to over all depth of a one way simply supported slab?
a) 15 ✓ b) 20
c) 25 d) 30
- ✓ 6. What is the minimum depth of two way slab?
a) $\frac{\text{Span}}{30}$ b) $\frac{\text{Span}}{27}$
c) $\frac{\text{Span}}{24}$ ✓ d) $\frac{\text{Span}}{20}$ ✓
- X 7. What is the ratio of long span and short span of two way slab?
a) 1:1 ✓ b) 1:2
c) 1:3 d) 1:4
- ✓ 8. What is the minimum diameter of stirrups?
a) 6 mm b) 8 mm
c) 10 mm d) 7 mm

Contd....2/-

9. How many types of retaining walls are there?

- a) 3
b) 4 ✓
c) 5
d) 6

10. How much percentage of yield stress can be improved by using twisted bars comparing to the plain ordinary M. S. bars in R.C.C?

- a) 30%
b) 40% ✓
c) 50%
d) 60% ✓

11. What is the spacing distance of lateral ties on long columns in terms of diameter of reinforcement rod?

- a) 10 times
b) 13 times ✓
c) 16 times
d) 20 times

12. How much quantity of water used per cement bag for R.C.C 1:2:4?

- a) 25 litres
b) 28 litres ✓
c) 32 litres
d) 35 litres

13. What is the minimum percentage of main vertical reinforcement in long column?

- a) 0.8 % ✓
b) 1.0 %
c) 1.2 % ✓
d) 1.5 %

14. What is the hook length at the end of the reinforcement?

- a) 3 d
b) 4 d
c) 5 d
d) 6 d ✓

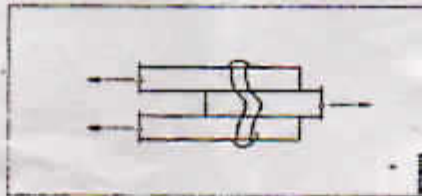
15. What is unwin's formula for dia of rivet?

- a) $d = 5.05 \sqrt{t}$
b) $d = 7.05 \sqrt{t}$
c) $d = 6.05 \sqrt{t}$ ✓
d) $d = 8.05 \sqrt{t}$

16. What is the minimum pitch between the two adjacent rivets?

- a) 3 d ✓
b) 4 d
c) 5 d
d) 6 d

17. What is the name of failure of rivetted joint?



- a) Tension of plate
b) Crushing of plate
c) Shear of rivet ✓
d) Double shear of rivet

18. What is the name of symbol?



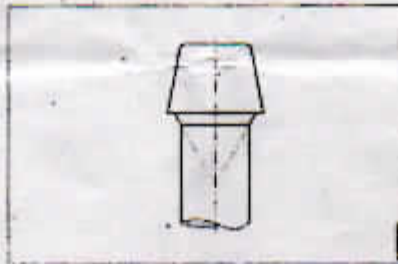
- a) Counter sunk headed screw slot
 b) Counter sunk headed screw cross slot
 c) Cylinder screw pan headed type slot ✓
 d) Oval counter sunk headed screw slot

19. What is the name of steel roof truss?



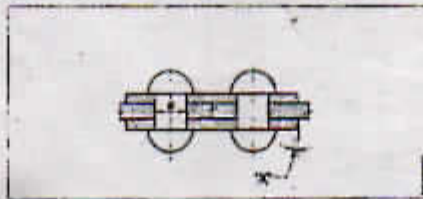
- a) Pratt truss
 b) Fink truss
 c) FAN truss
 d) Cambered fink truss

20. What is the name of rivet head?



- a) Pan Head
 b) Pan Head type 2
 c) Conical head type 2 ✓
 d) Pan Head with tapered neck

21. What is the edge angle marked 'X' in double cover single rivetted butt joint?



- a) 5°
 b) 8°
 c) 10° ✓
 d) 12°

22. What is the portion of pipe having its diameter and wall thickness remain uniform throughout its length?

- a) Drain
 b) Sewer
 c) Barrel
 d) Soil pipe

Contd....4/-

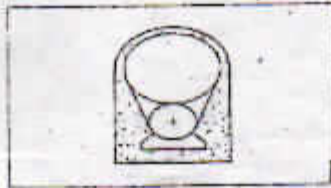
23. What includes all types of house waste and garbage?

- a) Ashes
- b) Sludge
- c) Refuse /
- d) Rubbish

24. What is the rain water of a locality?

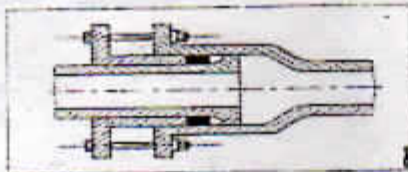
- a) Storm water /
- b) Raw sewage
- c) Outfall sewer
- d) Fresh sewage

25. What is the name of sewer section?



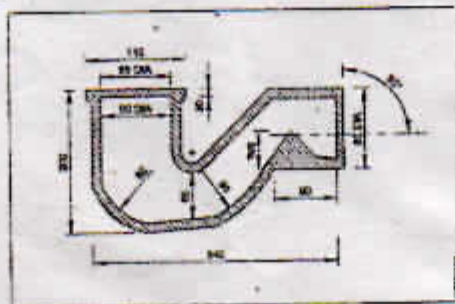
- a) New egg shaped section /
- b) Horse shoe sewer section
- c) Semi circular sewer section
- d) Standard egg shaped section

26. What is the name of underground pipe joint?



- a) Collar joint /
- b) Flexible joint
- c) Flanged joint
- d) Expansion joint

27. What is the name of Trap?



- a) P-trap /
- b) Gully trap
- c) Floor trap
- d) Intercepting trap

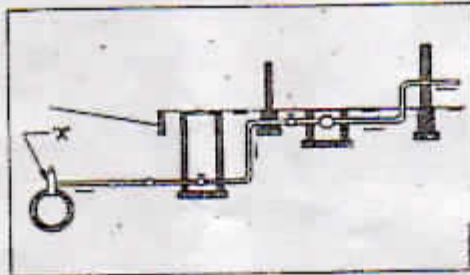
28. What is the name of any vertical line of drainage for soil, waste and vent pipe?

- a) Stack ✓
- b) Fixture drain
- c) Raw sewage
- d) Storm sewer

29. Which impurity is removed while softening water treatment?

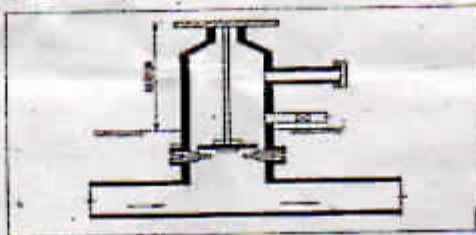
- a) Hardness
- b) Living organism
- c) Floating matters
- d) Dissolved matters

30. What is the name of part marked 'x'?



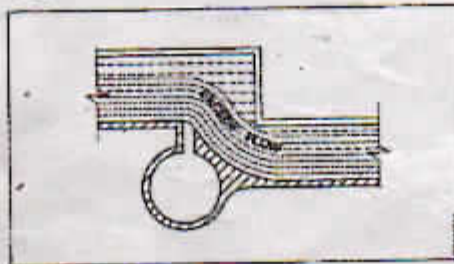
- a) Ferrule ✓
- b) Stop key
- c) Stop valve
- d) Goose neck

31. What is the name of the pipe appurtenance?



- a) Sluice valve ✓
- b) A relief valve
- c) Post fire hydrant
- d) A flush fire hydrant

32. What is the name of pipe appurtenanuce?



- a) Leaping weir
- b) Over flow weir
- c) Combined inlet ✓
- d) Syphon spill way

33. What is the name of top layer or wearing coat of bitumen or concrete in a road?

- a) Slides
b) Carpet
c) Surfacing
d) Road way

34. What is the slope provided to the road surface in transverse direction?

- a) Carpet
b) Camber
c) Gradient
d) Angle of repose

35. What is the distance marked 'X'?



- a) Road way
b) Head way
c) Carriage way
d) Right of way

36. What is the normal recommended land width for the state highways in plain land?

- a) 40 m
b) 45 m
c) 50 m
d) 55 m

37. What is W. B. M?

- a) Water Bond Macadam
b) Water Bond Method
c) Water Brake Method
d) None of these

38. What is the R. C. C road?

- a) Reinforced Cement Concrete
b) Reinforced Coarse Cement
c) Re-stressed Concrete Cement
d) None of these

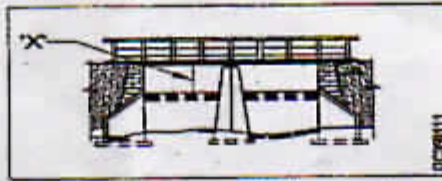
39. What is the rise in level of the river water caused due to the abstruption by the bridge?

- a) Afflux
b) Low water level
c) High flood level
d) Ordinary flood level

40. What is the term for a layer of concrete or masonry stone laid at the entrance or outlet of culvert?

- a) Apron
b) Bearings
c) Scuppers
d) Wing walls

41. What is the name of distance marked 'X'?



- a) Beam
b) Approach
c) Clearance ✓
d) Free board

42. What is the term for a pool of water constructed in down stream side of dam to absorb the impact of falling water?

- a) Cribs
b) Afflux
c) Scuppers
d) Water cushion

43. What is the type of foundation for bridge piers adopted if loose soil extends to a great depth?

- a) Cofferdam
b) Caisson well
c) Pile foundation ✓
d) Spread foundation

44. Which caisson having closed at top and open at bottom?

- a) Box caisson
b) Well caisson
c) Cylinder caisson
d) Pneumatic caisson

45. What is the term for a temporary structure constructed in water logged area to remove water or soil from that area to carry construction?

- a) Cribs
b) Caisson
c) Scuppers
d) Cofferdam ✓

46. What is the narrow gauge distance in railway?

- a) 1.00 m
b) 1.676 m
c) 0.762 m ✓
d) 0.572 m

47. What is the arrangements that allow the train to change from the route to another?

- a) Loop line
b) Turn table ✓
c) Fish plates
d) Point and crossing

48. What is the name of rail head?



- a) Flat footed rail ✓
b) Bull headed rail
c) Double headed rail
d) Point and crossing rail

49. What is the size of broad gauge wooden sleeper?

- a) 150 x 18 x 11.5 cm
- b) 180 x 20 x 11.5 cm ✓
- c) 220 x 20 x 13.0 cm
- d) 275 x 25 x 13.0 cm

50. Which warning signal for the driver gives the indication of the position ahead whether the platform is clear or not?

- a) Disc signal ✓
- b) Outer signal
- c) Home signal
- d) Starter signal
