INSTRUCTIONS TO THE CANDIDATES

1. There are total 150 nos of questions. 90 nos are technical, 20 nos Logical reasoning, 20 nos Arithmatic and 20 nos General Awareness.
2. The candidates have to attend all the questions in prescribed time limit.
3. Total time allowed is 120 min.
4. There is no negative marking for wrong answer.
5. Calculator or any electronic device is not allowed in the examination hall.

1 What is curing of concrete.

a) Adding water to concrete
b) Applying water on hard concrete
c) mixing water to cement for making paste
d) None of the above

2 Slump test is done for

a) Sand
b) Cement
c) Clay
d) Concrete

3 Ply wood is made from

a) Teak Wood
b) From Any Wood
c) Asbestos
d) Bamboo fibre

4 As per IR Works Manual, Colony Committees are to be constituted for colonies normally having number of Quarters more than

a) 500 Nos
b) 800 Nos
c) 1200 Nos
d) 1000 Nos

5 The slope to be provided in platforms to drain out water is

a) 1 in 60
b) 1 in 50
c) 1 in 30
d) 1 in 70

6 Demand of water for passengers on railway station is

a) 10 litres per passenger
b) 15 litres per passenger
c) 20 litres per passenger
d) 25 litres per passenger

7 A first class brick should have a minimum crushing strength of

a) 7 MN/m2
b) 10.5 MN/m2
c) 12.5 MN/m2
d) 15 MN/m2

8 The commonly used lime in white washing is

a) quick lime
b) Fat Lime
c) lean lime
d) Hydraulic Lime

9 Who among the following shall not be a member of Colony Committee

a) Assistant Engineer

b) Health Inspectot

c) SSE Pway of the Section

d) Representative of Unions

10 Seasoning of timber is the process of

a) Burning Timber

b) Removing Water from Timber

c) Adding Preservative

d) Adding Glaze

11 Why camber is provided in steel girders ?

a) To compensate deflection under load

b) To reduce corrosion of steel

c) Span of the bridge can be increased

d) None of the above

12 Bearings are provided in bridges to transfer the load to

a) Super structure

b) Track

c) Embankment

d) Sub structure

13 The bearing capacity of a water logged soil can be improved by

a) Compacting the soil

b) Grouting

c) Incresing the depth of foundation

d) Draining of Soil

14 In water bound macadam roads, binding material, is

a) Stone dust

b) Brick dust

c) Sand

d) Cement

15 As per works manual for Ty-IV and above quarter the flooring to be provided is

a) Tiled Flooring

b) Mosaic Flooring

c) Brick Bat Flooring

d) Cement Concrete Flooring

16 The concrete mix of 1 : 2 : 4 means

a) 1 sand, 2 coarse aggregate, 4 cement

b) 1 coarse aggregate, 2sand , 4 cement

c) 1 Cement, 2 coarse aggregate, 4 Sand

d) 1 sand, 2 coarse aggregate, 4 cement

17 The type of valve which allows water to flow in one direction but prevents its flow in the reverse direction is

a) Reflux Valve

b) Air Relief Valve

c) Sluice Valve

d) Pressure Relief Valve

18 Minimum slope of bath room should be provided is

a) 1 in 70

b) 1 in 45

c) 1 in 100

d) 1 in 60

19 Minimum residual chlorine available at the farthest end of distribution shall be

a) 0.3 Mg/Ltr

b) 0.2 Mg/Ltr

c) 0.1 Mg/Ltr

d) 0.5 Mg.Ltr

20 M10 grade of concrete approximates

a) 1 : 3 : 6 mix

b) 1: 1 :2 mix

c) 1 : 1.5 : 3 mix

d) 1: 2 : 4 mix

21 Chlorination of water is done for the removal of

a) Suspended Solid

b) Bacteria

c) Hardness

d) Fungus

22 The soil stability is not so good in which type of soils.

a) Boulder

b) Sandy Soil

c) Gravel

d) Black Cotton Soil

23 The damp proof course (D.P.C.) is measured in

a) Cu.m

b) Meter

c) Sq m

d) None of these

24 According to Indian Standards Institute, the actual size of modular bricks is

a) 20 cm x 10 cm x 10 cm

b) 23 cm x 11.5 cm x 7.5 cm

c) 25 cm x 13 cm x 7.5 cm

d) 19 cm x 9 cm x 9 cm

25 Rebound hammer is used for

a) To break the concrete structures
b) To form rivet heads
c) To find the strength of concrete
d) None of the above

26 Station name boards are to be provided in how many laguages

a) 06 (Six)
b) 02 (Two)
c) 03 (Three)
d) 04 (Four)

27 In a concrete mix of 1: 3: 6 the proportions are in

a) Weight
b) Volume
c) Area
d) None of these

28 High Flood Level of a brdge is painted in which colour

a) White
b) Greem
c) Yellow
d) Red

29 Danger Level of a bridge is painted in which colour

a) Blue
b) Green
c) Purple
d) Red

30 Residual Chlorine is tested by which test.

a) Compaction test
b) Orthotolodine
c) Abbrassion test
d) Specific gravity test

31 Bottom most layer of pavement is known as

a) Sub-Base Course
b) Base Course
c) Subgrade
d) Wearing Course

32 For RCC foundations minimum cover to be provided to the reinforcement is

a) 25 mm
b) 30 mm
c) 40 mm
d) 50 mm

33 Initial setting time of OPC-43 grade cement is

a) 120 min
b) 30 min

c) 60 min d) 100 min

34 Concrete quantity of slab of a building is measured in

a) Sqaure meter b) Kilometer

c) Cubic Meter d) Meter

35 Plywood has the advantage of

a) Same tensile strength in all direction b) Higher tensile strength in long direction

c) Higher tensile strength in shorter direction d) None of the above

36 In a concrete mix of 1: 3: 6 the proportions are in

a) Volume b) Weight

c) Area d) All the of the above

37 Colour washing of offices to be done at what interval

a) Every Five years b) Every one year

c) Every three years d) Every two years

38 The expected output of 12 mm plastering with cement mortar is per mason per day is

a) 2.5 sq m b) 8 sq m

c) 12 sq m d) 6 sq m

39 In India, as per Indian standards, water consumption per capita per day for domestic purpose is

a) 85 Ltrs b) 205 Ltrs

c) 135 Ltrs d) 155 Ltrs

40 The damp proof course (D.P.C.) is measured in

a) At the plint of building b) At the slab of Building

c) Under the Foundation of Building d) At the lintel level

41 The expected output of half brick partition wall per mason per day is

a) 3.0 Cu.m b) 5.0 Cu.m

c) 2.0 Cu.m

d) 2.5 Cu.m

42 Bitumen grade of 80/100 means

a) Its penetration value is 8 to 10 mm

b) Its ductility valueis 8 to 10 mm

c) Its maliability is 8 to 10 mm

d) Its specific gravity is 8 to 10 mm

43 Which of the following test is used to determine the rate of wear of the stones?

a) Crushing Test

b) Attrition Test

c) Impact Test

d) Abbrassion Test

44 Ramp at the end of the platform should not be steeper than

a) 1 in 12

b) 1 in 10

c) 1 in 6

d) 1 in 8

45 Distemper is used for

a) Wood work

b) Inside of the building

c) Rail Fencing

d) Outside of the building

46 Turbidity of water is expressed in

a) PPM

b) PH Value

c) Colour Code

d) None of the above

47 Expansion joints in masonry walls are provided if length exceeds

a) 10 Meters

b) 40 Meters

c) 20 Meters

d) 50 Meters

48 All steel bridges less than 12.2 m are to be inspected by SSE/Works once in

a) Once in 6 months

b) Once in 5 years

c) Once in 1 year

d) Once in 2 years

49 An ideal vertical curve for joining two gradients is

a) Parabolic

b) Circular

c) Eliptical

d) Hyperbolic

50 Petty repair books are maintained at

a) SSE/Works office
b) AEN office
c) Each station
d) HQ office

51 Slump test is done for

a) Concrete
b) Brick
c) Water
d) Stone

52 The pile provided with one or more bulbs in its vertical shaft, is generally known as

a) Bearing Pile
b) Sheat Pile
c) Under Reamed Pile
d) Friction Pile

53 Curing helps in

a) preserves the properties of concrete
b) reduces the shrinkage of concrete
c) prevents the loss of water by evaporation
d) all of the above

54 Camber in the road is provided for which purpose

a) To counter centrifugal force
b) To increase friction
c) Draining out of water
d) Non of the above

55 Who among the following are the members of Colony Committee

a) ADEN
b) ADMO
c) Foreman/Chargeman
d) all of the above

56 Pile foundation is an example of

a) Deep Foundation
b) Raft Foundation
c) Shallow Foundation
d) Open Foundation

57 Vibrator is used in concrete for

a) Consolidation of concrete
b) Remove water from concrete
c) For mixing of cement with other agreegates
d) Compaction of concrete

66 The water obtained from the tube wells is known as

a) Surface Water
b) Stagnant Water
c) Sub-Surface Water
d) Portable Water

67 The bricks should be burnt at temperature from

a) 500 to 700 Deg C
b) 800 t0 1000 Deg C
c) 1500 to 2000 Deg C
d) 1000 t0 1200 Deg C

68 The presence of calcium and magnesium chloride in water causes

a) Softness
b) Turbidity
c) Hardness
d) Bad Taste

69 The moisture content in a well seasoned timber is

a) 10 to 12 %
b) 4 to 5 %
c) 8 to 10 %
d) 7 to 8 %

70 Role of admixture in concrete is to

a) Increase Strength
b) Makes concrete acid proof
c) Accelerate Hydration
d) Makes concrete water proof

71 An aggregate is said to be flaky if its least dimension is less than

a) 1/6th of mean dimension
b) 3/8th of mean dimension
c) 2/5th of mean dimension
d) 3/5th of mean dimension

72 Slump test is done for

a) Clay
b) Concrete
c) Rock
d) Sand

73 The inspection of bridges by Section Engineer (Works) is done

a) After Monsoon
b) During Monsoon
c) Before Monsoon
d) Not done by SE/Works

74 The minimum value of camber provided for thin bituminous surface roads, is

58 By increasing the water, cement ratio in concrete

a) Strength of Concrete Increases
b) Strength of Concrete decreases
c) It has no impact on strength
d) Curing is nor required

59 In slump test, each layer of concrete is compacted by a steel rod 60 cm long and of 16 mm diameter for

a) 25 time
b) 30 times
c) 12 times
d) 45 times

60 The measurement of shuttering is normally done in

a) Kilogram
b) Square Meter
c) Cubic Meter
d) Meter

61 In water distribution pipes, air valves are provided at

a) At the starting
b) higher points
c) Lower Point
d) Middle point

62 Vibratory roller is good for which type of soil

a) Hard Stones
b) Cohesive soil
c) Mixed type soils
d) Sandy Soil

63 Height of high level platform above rail level is

a) 670 mm
b) 760 mm
c) 560 mm
d) 900 mm

64 Closed contours of decreasing values towards their centre, represent

a) Hill
b) River bed
c) Road
d) Depression

65 Which of the below should be avoided in brick masonry

a) Horizontal joints
b) Queen Closer
c) Brick bat
d) Vertical Joint

a) 2.00%

b) 3.50%

c) 2.50%

d) 3.00%

75 AS per works manual in a office building for male person one water-closet is required for how many persons

a) 15

b) 25

c) 35

d) 45

76 The colour of water is expressed in which scale

a) Platinum Cobalt Scale

b) Silica Scale

c) Alumina Scale

d) Iitogen Scale

77 Tiles are measured in which unit

a) Meter

b) Cubic meter

c) Square Meter

d) Kilometer

78 Orthotolidine test is used for determination of

a) Disolved Oxygen

b) Biochemical Oxygen Demand

c) Hardness

d) Residual Chlorine

79 Sand stone is an example of

a) Metamorphic Rock

b) Sedimentary Rock

c) Volcanic Rock

d) Ignious Rock

80 What is the level below window called

a) Pane Level

b) Lintel Level

c) Sill Level

d) Plint Level

81 In a nominal mix of concrete of 1:4:8, what is the ratio of sand.

a) 2

b) 4

c) 8

d) 6

82 The damp proof course (D.P.C.) is measured in

a) Meter

b) Square Meter

c) Cubic Meter

d) None of the above

83 Reinforcement is provided in concrete to withstand

a) Compressive Force

b) Tensile Force

c) Both Tensile and Compressive Force

d) None of the above

84 Which of the following trees yield hard wood.

a) Deodar

b) Chir

c) Shishum

d) Mango

85 To find out the compressive strength of concrete the size of cube prepared is

a) 130 x 130 x 130

b) 180 x 180 x 180

c) 150 x 150 x 150

d) 100 x 100 x 100

86 Weight of 60 kg rail is

a) 52 kg per meter

b) 60 kg per meter

c) 52 kg per feet

d) 60 kg per feet

87 As per IR Works Manual, minimum slope to be provided in roof for effective drainage is

a) 1 in80

b) 1 in 120

c) 1 in 50

d) 1 in 100

88 Which of the following is hardest grade of bitumen

a) 60/70

b) 80/100

c) 50/60

d) 30/40

89 Stainless steel contains

a) 18% of chromuim and 8% nickel

b) 8% of chromium and 18% of nickel

c) 12% of chromium and 36% of nickel

d) 36% of chromium and 12% of nickel.

90 In distribution pipes, drain valves are provided at

a) At Highest point

b) At Lowest Point

c) Any Location

d) Junction points

Q.146. In what time will Rs.1000 become Rs.1331 at 10% per annum compounded annually

a) 2 Years b) 3 Years c) 4 Years d) 5 Years

Q.147 A rectangular field is to be fenced on three sides leaving a side of 20 feet uncovered.If the area of the field is 680 sq.ft, how many feet of fencing will be required ?

a) 88 feet b) 86 feet c) 84 feet d) 82 feet

Q.148 There is a plot which is rectangular in shape and it area is 460 square metres. What will be breadth of the plot if length of plot is 15% more than the breadth of plot ?

a) 8 mtr b)10 mtr c)15 mtr d) 20 mtr

Q.149 Sachin is younger than Rahul by 7 years. If the ratio of their ages is 7:9, find the age of Sachin

a) 23.5 b) 24.5 c)12.5 d)14.5

Q. 150 Find the HCF of 54, 288, 360

a)18 b)36 c)54 d)108