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PREP BY: SUNNY SINGH

THDCIL

JUNIOR ENGINEER(CIVIL)

SAMPLE PAPER-I

1. Wrought iron contains carbon about
 - A. 1.5% to 5.5%
 - B. 0.5% to 1.75%
 - C. 0.1% to 0.25%
 - D. none to these.
2. The main constituent of fly-ash, is
 - A. aluminium oxide
 - B. silica
 - C. ferrous oxide.
 - D. All of these.
3. Bitumen in
 - A. solid state, is called asphalt
 - B. semi fluid state, is called mineral tar
 - C. fluid state, is called petroleum.
 - D. all the above.
4. The plastics made from cellulose resin
 - A. are as clear as glass
 - B. are tough and strong
 - C. possess excellent electrical properties
 - D. All the above.
5. Kaolin is chemically classified as
 - A. metamorphic rock
 - B. argillaceous rock
 - C. calcareous rock
 - D. silicious rock.
6. Which one of the following is acid resistant asbestos:.
 - A. actinolite asbestos
 - B. amosite asbestos
 - C. anthophyllite asbestos
 - D. crocidolite asbestos
 - E. All the above.
7. Due to attack of dry rot, the timber
 - A. Crack
 - B. Shrinks
 - C. reduces to powder
 - D. none of these.
8. Brittleness of cold is due to an excess of
 - A. sulphur
 - B. carbon
 - C. phosphorus
 - D. silicon.
9. For the manufacture of Portland cement, the proportions of raw materials used, are
 - A. lime 63% ; silica 22% ; other ingredients 15%
 - B. lime 22% ; silica 63% ; other ingredients 15%
 - C. silica 40% ; lime 40% ; other ingredients 20%
 - D. silica 70% ; lime 20% ; other ingredients 10%.
10. Asbestos cement
 - A. is brittle
 - B. warps due to changes in humidity
 - C. strength is lowered when saturated by water
 - D. all the above.
11. Corrosion of a pipe
 - A. reduces its life span
 - B. reduces its carrying capacity
 - C. adds colour to water
 - D. adds odour to water
 - E. all the above.
12. Most satisfactory formula for an estimate of fire demand Q for a city of population P in thousands for Indian conditions, is
 - A. $Q = 1115 \left(\frac{P}{5} + 20 \right)$
 - B. $Q = 1640P - 0.01P$
 - C. $Q = 3180P$
 - D. None of these
13. Pick up the correct statement from the following :
 - A. Detention period for plain sedimentation tanks ranges between 4 to 8 hours
 - B. Detention period for sedimentation tanks, using coagulants usually ranges between 2 to 4 hours
 - C. The horizontal flow velocity in sedimentation tanks, is generally limited to 0.3 m/minute
 - D. All the above.
14. According to Kuichling's formula, fire demand in litres per minute for a population of P thousands, is
 - A. $3182 P$
 - B. $1136.5 \left[\frac{P}{10} + 10 \right]$
 - C. $4637 P [1 - 0.01 P]$
 - D. $5663 P$.
15. The maximum permissible nitrites in public water supplies, is
 - A. Nil
 - B. 0.5 P.P.M.
 - C. 1.0 P.P.M.
 - D. 1.5 P.P.M.
 - E. 200 P.P.M.
16. A high velocity of wash water is required for
 - A. rapid gravity filter with strainers
 - B. rapid gravity filter without strainers
 - C. slow sand filter with strainers
 - D. slow sand filter without strainers
 - E. none of these.
17. In distribution pipes, drain valves are provided at
 - A. lower point
 - B. higher point

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- C. junction points
D. any where.
18. Corrosion of well pipes may not be reduced by
A. reducing the draw down and the pumping rate
B. reducing the flow velocity
C. using thicker pipes
D. using screens having larger area of openings
E. none of these.
19. Manholes along the mains from the source to a city are provided at 500 m intervals in
A. steel pipes
B. R.C.C. pipes
C. hume steel pipes
D. all the above.
20. The population growth curve is
A. S-shaped curve
B. parabolic curve
C. circular curve
D. straight line
E. none of these.
21. Pick up the correct statement from the following :
A. In treated sewage, 4 PPM of D.O. is essential
B. Only very fresh sewage contains some dissolved oxygen
C. The solubility of oxygen in sewage is 95% that is in distilled water
D. All the above.
22. In olden days the type of section adopted in trunk and out fall sewers was
A. parabolic shaped
B. horse shoe shaped
C. egg shaped
D. circular shaped.
23. For the survival of fish in a river stream, the minimum dissolved oxygen is prescribed
A. 3 PPM
B. 4 PPM
C. 5 PPM
D. 10 ppm.
24. In a fully mechanized composting plant, involves
A. mechanized receipt
B. mechanized segregation
C. mechanized pulverising of refuse
D. all of these.
25. Self-cleansing velocity is
A. velocity at dry weather flow
B. velocity of water at flushing
C. velocity at which no accumulation remains in the drains
D. velocity of water in a pressure filter.
26. Mr. W. Simms, the consulting Engineer to the Government of India recommended the gauge for Indian railways
A. 1.435 m as adopted in England
B. 1.800 m as per Indian conditions
C. 1.676 m as a compromise gauge
D. 1.000 m as a standard gauge
27. An inverted siphon is designed generally for
A. one pipe
B. two pipes
C. three pipe
D. four pipes.
28. A rainfall may be classified as acidic if its pH value is less or equal to
A. 6
B. 7
C. 5
D. 6.5
29. When drainage to sewage ratio is 20, the peak dry weather flow is
A. 20% of the design discharge
B. slightly less than 5% of the design discharge
C. slightly more than 5% of the design discharge
D. none of these.
30. For treating the sewage of a large city, you will recommend
A. a sedimentation tank and an activated sludge treatment plant
B. a plant consisting of Imh off tanks with low rate trickling filters
C. sedimentation tanks with high rate trickling filters
D. none of these.
31. Boxing of ballast is done
A. under rails
B. at the rails
C. in between two rails
D. in between two sleepers.
32. Inside pressure in a hollow soap bubble in the air is : (where d is the diameter of the bubble)
A. $\frac{4\sigma}{d}$
B. $\frac{2\sigma}{d}$
C. $\frac{6\sigma}{d}$
D. $\frac{8\sigma}{d}$
33. The momentum correction factor (β) for the viscous flow through a circular pipe is
A. 1.25
B. 1.33
C. 1.50
D. 1.66
E. 2.00
34. piezometer opening in pipes measures

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- A. velocity head
B. static pressure
C. total pressure
D. negative static pressure.
35. An independent mass of a fluid does not possess
A. elevation energy
B. kinetic energy
C. pressure energy
D. none of these.
36. While applying the Bernoulli's equation $\left[\frac{P}{\omega} + Z + \frac{V^2}{2g} \right]$ any section = total head, the work any section done on the flow system, if any
A. is added on the right side of the equation
B. is added on the left side of the equation
C. is ignored
D. none of these.
37. Discharge Q over a rectangular weir of length L and height H , is given by the equation
A. $Q = 2/3 C_d 2g LH^3/2$
B. $Q = 2/3 C_d L H^2 g H$
C. $Q = 2/3 C_d L \sqrt{2g} H^{3/2}$
D. all the above.
38. A short tube mouthpiece will not run full at its outlet if the head under which the orifice works, is
A. less than 12.2 m of the water
B. more than 12.2 m of the water
C. equal of 12.2 m of water
D. none of these.
39. Hydrostatic pressure on a dam depends upon its
A. length
B. depth
C. shape
D. material
E. both (b) and (c).
40. When two layers of a fluid separated by dy move over the other with a difference of velocity dv , causes a shearing stress $\tau = \mu \frac{dv}{dy}$, where μ is known as
A. coefficient of viscosity
B. absolute viscosity
C. dynamic viscosity
D. viscosity
E. all the above.
41. A district road with a bituminous pavement has a horizontal curve of 1000 m for a design speed of 75 km ph. The super-elevation is
A. 1 in 40
B. 1 in 50
C. 1 in 60
D. 1 in 70
E. none of these.
42. The minimum value of camber provided for thin bituminous surface hill roads, is
A. 2.2%
B. 2.5%
C. 3.0%
D. 3.5%
43. Design of horizontal and vertical alignments, super-elevation, sight distance and grades, is worst affected by
A. width of the vehicle
B. length of the vehicle
C. height of the vehicle
D. speed of the vehicle
44. Thickness of a pavement may be reduced considerably by
A. compaction of soil
B. stabilisation of soil
C. drainage of soil
D. combination of all the above.
45. To design a cross-over between parallel tracks, the required components are :
A. two switch, points, two acute angle crossings and two check rails
B. two switch points, two acute angle crossings and four check rails
C. two switch points, two acute angle crossings and six check rails
D. none of these.
46. Traffic engineering only includes
A. planning of regulatory measures
B. design and application of control devices
C. analysis of traffic characteristics
D. traffic operation
E. all the above.
47. For the movement of vehicles at an intersection of two roads, without any interference, the type of grade separate generally preferred to, is
A. delta
B. trumpet
C. diamond interchange
D. clover leaf.
48. If the ruling gradient on any highway is 3%, the gradient provided on the curve of 300 metre radius, is
A. 2.00%
B. 2.25%
C. 2.50%
D. 2.75%
E. 3.00%
49. As per recommendations of I.R.C., traffic volume study is carried out for rural roads for 7 days continuously during

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- A. Harvesting
B. lean season
C. harvesting and lean season
D. none of these.
50. The minimum ratio of the radii of two circular curves of a compound curve, is kept
A. 1.25
B. 1.5
C. 1.75
D. 2.0
51. Borrow pits should preferably be located in
A. field on the left side of the canal
B. field on the right side of the canal
C. fields on both sides of the canal
D. central half width of the section of the canal.
52. Irrigation canals are generally aligned along
A. ridge line
B. contour line
C. valley line
D. straight line.
53. The length of a meander is the distance along the river between the tangent point of one curve to the tangent point of
A. reverse curve
B. next curve of the same order
C. reverse curve plus the width of the river
D. none of these.
54. If B and d are the bed width and depth of a channel in metres, the combined losses due to evaporation and seepage in cumecs per kilometre length of the channel, is
A. $\frac{1}{50} (B + d)^{2/3}$
B. $\frac{1}{100} (B + d)^{2/3}$
C. $\frac{1}{150} (B + d)^{2/3}$
D. $\frac{1}{200} (B + d)^{2/3}$
55. The difference in level between the top of a bank and supply level in a canal, is called
A. berm
B. free board
C. height of bank
D. none of these.
56. F.S.L. of a canal at its head with respect to parent channel is kept
A. at the same level
B. 15 cm lower
C. 15 cm higher
D. none of these.
57. The measure to remove water logging of land, is
A. to reduce percolation from canals and water courses
B. to increase outflow from the ground water reservoir
C. both (a) and (b)
D. neither (a) nor (b)
58. Retrogression of the bed level of a river downstream a weir, occurs due to
A. heavy impact of water
B. increase of the bed level
C. less percentage of silt
D. soft soil strata.
59. Machine P can print one lakh books in 8 hours. Machine Q can print the same number of books in 10 hours while machine R can print the same in 12 hours. All the machines started printing at 9 A.M. Machine P is stopped at 11 A.M. and the remaining two machines complete work. Approximately at what time will the printing of one lakh books be completed?
A. 3 pm
B. 2 pm
C. 1 pm
D. 11 am
60. The average age of a husband and wife was 23 years when they were married 5 years ago. The average age of the husband, the wife and a child who was born during the interval, is 20 years now. How old is the child now?
A. 9 months
B. 1 year
C. 3 years
D. 4 years
61. A path of uniform width runs round the inside of a rectangular field 38 m long and 32 m wide. If the path occupies 600 m^2 , then the width of the path is?
A. 30 m
B. 5 m
C. 18.75 m
D. 10 m
62. P is 30% more efficient than Q. P can complete a work in 23 days. If P and Q work together, how much time will it take to complete the same work?
A. 9
B. 11
C. 13
D. 15
63. A can do a piece of work in 4 hours; B and C together can do it in 3 hours, while A and C together

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- can do it in 2 hours. How long will B alone take to do it?
- A. 8 hours
B. 10 hours
C. 12 hours
D. 24 hours
E. None of these
64. The age of the father 8 years ago was 5 times the age of his son. At present the father's age is 3 times that of his son. Find the present age of father.
- A. 48 years
B. 36 years
C. 46 years
D. 58 years
65. A can do a work in 12 days and B can do it in 24 days, A works for 3 days and then leaves, In how many days will the work be completed?
- A. 18
B. 10
C. 12
D. 24
66. Shani has some birds and dogs. If the ratio of number of heads and numbers of feet is 5:16, find out the ratio of numbers of dogs and number of birds, if the number of heads alone is 30.
- A. 3:2
B. 2:3
C. 4:5
D. 5:4
67. A boy can fill a bucket in $\frac{3}{4}$ min. and a girl can fill bucket $\frac{4}{3}$ min. In how many hour will they fill the tank whose capacity is 225 buckets. If they works only $\frac{3}{5}$ hour in every 1 hour?
- A. 3
B. 12
C. 8
D. 5
68. Weight of two persons A and B are in the ratio of 3:5. A's weight increase by 20% and the total weight of A and B together becomes 80 kg, with an increase of 25%. By what percent did the weight of B increase?
- A. 28%
B. 22%
C. 58%
D. 18%
69. A boat covers 24kms upstream and 36km downstream in 6 hours. While the boat covers 36km upstream and 24 km downstream in 6.5 hours. Speed of the boats is:
- A. 5km/h
B. 6km/h
C. 10km/h
D. 12km/h
70. What least value must be given to K, so that number 72 K 517 is divisible by 11?
- A. 1
B. 6
C. 9
D. 4
71. A number is of two digits. The position of digits is interchanged and new number is added to the original number. The resultant number is always divisible by
- A. 8
B. 9
C. 7
D. 11
72. Ram arrives at a Bank 15 minutes earlier than scheduled time if he drives his car a 42 km/h. If he drives car at 35 km/h he arrives 5 minutes late. The distance of the Bank, from his starting point is
- A. 70 km
B. 210 km
C. 72 km
D. 60 km
73. A car and a jeep were sold for Rs. 121000 each. The car was sold at a loss of 20% while the jeep at a gain of 20%. The entire transaction resulted in
- A. neither loss nor gain
B. gain of Rs. 1000
C. loss of Rs. 1000
D. gain of Rs. 500
74. By selling 144 hens Mahesh suffered a loss equal to the selling price of 6 hens. His loss per cent is
- A. 4
B. 3
C. 9
D. $\frac{41}{2}$
75. A train starts from A at 7 a.m. towards B with speed 50 km/h. Another train from B starts at 8 a.m. with speed 60 km/h towards A. Both of them meet at 10 a.m. at C. The ratio of the distance AC to BC is
- A. 5 : 6
B. 5 : 4
C. 6 : 5
D. 4 : 5
76. The length and breadth of a rectangle are increased by 30% and 20% respectively. The area of the rectangle so formed exceeds the area of the rectangle by :
- A. 46%
B. 66%
C. 42%
D. 56%
77. The length of a train and that of a platform are equal. If with a speed of 90 km/hr the train crosses the platform in one minute, then the length of the

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train (in metres) is :

- A. 500
- B. 600
- C. 750
- D. 900

78. The average age of a class of 35 students is 15 years. If the age of a teacher is also included, the average age increases by 1. What is the teacher's age?

- A. 36 years
- B. 41 year
- C. 51 year
- D. 56 year

79. If the difference between the S.I. and C.I. on a certain amount at 10% per annum for 2 years is Rs. 20, then the sum is :

- A. Rs. 4000
- B. Rs 2000
- C. Rs. 1500
- D. Rs. 3000

80. The diameter of a toy wheel is 14 cm. What is the distance travelled by it in 15 revolutions?

- A. 880 cm
- B. 660 cm
- C. 600 cm
- D. 560 cm

81. Which Indian bank has won the 2017 Golden Peacock Innovative Product / Service Award (GPIPSA)?

- A. Yes Bank
- B. ICICI Bank
- C. State Bank of India (SBI)
- D. Reserve Bank of India (RBI)

82. The National Panchayati Raj Diwas is celebrated on which date in India?

- A. April 23
- B. April 24
- C. April 22
- D. April 25

83. India's first-ever "village of books" will open in which state to promote tourism?

- A. Punjab
- B. Himachal Pradesh
- C. Maharashtra
- D. Tamil Nadu

84. Which country to host 2017 BRICS Film Festival?

- A. Russia
- B. South Africa
- C. China
- D. India

85. The Civil Services Day (CSD) is celebrated on which day in India?

- A. April 18

- B. April 21
- C. April 19
- D. April 20

86. Gayatri Pullela is associated with which sports?

- A. Badminton
- B. Tennis
- C. Hockey
- D. Football

87. Which of the following is the lightest metal ?

- A) Mercury B) Silver
- C) Lithium D) Lead

88. The chemical name of Uria is-

- A) Aneurin B) Chloroetane
- C) Carbamide D) None of these

89. Which of the following is in liquid form at room temperature?

- A) Cerium B) Sodium
- C) Francium D) Lithium

90. The power of a lens is measured in :

- A) diopters B) aeon
- C) lumen D) candela

91. Which of the following substances undergo 'sublimation' on heating?

- 1. Iodine
- 2. Napthalene
- 3. Camphor
- A) 1 and 2 B) 1 and 3
- C) 2 and 3 D) All of them

92. Lightening cause rainfall because-

- A. It cause combination of oxygen and nitrogen
- B. Some of the gas molecules become bigger
- C. It activate H₂O molecule
- D. Photo-electricity reaction starts

93. Brass gets discoloured in air due to the presence of which gas in air-

- A) Carbon dioxide B) Oxygen
- C) Hydrogen Sulphide D) Nitrogen

94. What is the maximum limit of sound intensity in decibel units beyond which a human being cannot hear?

- A. 80 decibel
- B. 85 decibel
- C. 90 decibel
- D. 95 decibel

95. Tripping is associated with

- (a) Snooker
- (b) Football
- (c) Cricket
- (d) Lawn Tennis

96. Average weight of A, B, C is 84 kg., when D is included average weight becomes 80 kg. If E replaces A, then the average weight of B, C, D and E becomes 79 kgs. If E's weight is 3 kg more than that of D. What is A's weight?

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- A. 70 kg
- B. 72 kg
- C. 75 kg
- D. 80 kg

97. The ratio of A's and B's ages is 4 : 5. If the difference between the present age of B and the age of A, 5 years hence is 3, then what is the total of present ages of A and B?

- A. 68 years
- B. 72 years
- C. 50 years
- D. 90 years

98. Profit on selling the watch at Rs. 850 is equal to loss on selling it at Rs. 650. What is the cost-price of the watch?

- A. Rs. 720
- B. Rs. 750
- C. Rs. 800
- D. Rs. 735

Civil THDC Sample Paper-I Answers Key

1.c	31.b	61.b	91.d
2.d	32.d	62.c	92.c
3.d	33.b	63.c	93.c
4.d	34.b	64.a	94.b
5.b	35.c	65.a	95.b
6.e	36.b	66.a	96.c
7.c	37.c	67.a	97.d
8.c	38.b	68.a	98.d
9.a	39.e	69.c	
10.d	40.e	70.b	
11.e	41.a	71.d	
12.c	42.b	72.a	
13.d	43.d	73.c	
14.a	44.d	74.a	
15.a	45.b	75.b	
16.b	46.e	76.d	
17.a	47.d	77.c	
18.d	48.c	78.c	
19.d	49.c	79.b	
20.a	50.b	80.b	
21.d	51.d	81.a	
22.b	52.a	82.b	
23.b	53.b	83.c	
24.d	54.d	84.c	
25.c	55.b	85.b	
26.c	56.b	86.a	
27.c	57.c	87.c	
28.c	58.c	88.c	
29.b	59.c	89.c	
30.a	60.d	90.a	

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