Question Booklet and Answer Key

For Recruitment Test Held on

22.11.2015 (EVENING)

Post: Junior Engineer (Civil/PH)

1. ਨਾਂਵ ਕਿੰਨੇ ਪ੍ਰਕਾਰ ਦੇ ਹੁੰਦੇ ਹਨ?

(A) ਛੇ (B) ਪੰਜ (C) ਸੱਤ (D) ਅੱਠ

2. 'ਦੀਵੇ ਬੱਲੇ..... ਮੁਹਾਵਰਾ ਪੂਰਾ ਕਰੋ:

(A) ਪਲੇਟ (B) ਚਾਨਣ (C) ਤੇਲ (D) ਹਨੇਰਾ

3. ਸਮਾਸੀ ਸ਼ਬਦ ਲਈ ਕਿਹੜਾ ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹ ਵਰਤਿਆ ਜਾਂਦਾ ਹੈ:

(A) ਛੁੱਟ ਮਰੋੜੀ (B) ਜੋੜਨੀ (C) ਦੋ ਬਿੰਦੀ ਡੈਸ਼ (D) ਪੁੱਠੇ ਕਾਮੇ

4. 'ਪੁਆਧੀ' ਕਿਸ ਖੇਤਰ ਦੀ ਭਾਸ਼ਾ ਹੈ?

(A) ਰਾਜਪੁਰਾ (B) ਜਲੰਧਰ (C) ਲਾਹੌਰ (D) ਅਮ੍ਰਿਤਸਰ

5. ਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜ ਚੁਣੋ:

(A) ਬੌਹਤ (B) ਬਹੁਤ (C) ਬਹੂਤ (D) ਬਹਾਉਤ

Directions (Q. No. 6-7) : Mark the correct preposition to be filled in the blanks of the following sentences:

6. Shami is bereft _____ reason.

A) of B) in C) off D) with

7. She is vain _____ her beauty.

A) at B) in C) of D) on

Directions (Q. No. 8-9) : Mark the correctly spelt word out of the four given options:

8. A) chaperone B) cheporane C) chaparone D) chaperon

9. A) fellacious B) fallecious C) fallacious D) fellecious

10. Mark the correct sentence out of the four options:

A) You and he were seen by us. B) You and he has been seen by us.

C) You and he is seen by us. D) You and he seems to be friends.

11. The 2015 Nobel Prize in Literature was awarded to :

A) Alice Munro B) Chinua Achebe

C) Doris Lessing D) Svetlana Alexievich

12. Cabinet Minister for Minority Affairs, Govt. of India is :

A) Najma Heptullah B) Mukhtar Abbas Naqvi

C) Shahnawaj Hussain D) Akbar Ahmad

13. The Interim charge of FIFA was recently given to :

A) Sepp Blatter B) Michel Platini

C) Isaac Hayatou D) Chung Mong-Joon

14. The man responsible for bringing White Revolution in India and founder of India's dairy company Amul is:

A) Ashok Kumar B) Verghese Kurien C) Antony Kurien D) Samuel Kurien

15. Rajatarangini was written by:
A) Mammata B) Rajshekhar C) Kalhana D) Anandavardhana

16. "USTTAD" stands for:
A) Upliftment of Skills and Training in Traditional Arts/Crafts for Development
B) Upgrading the Skills and Training in Traditional Arts/ Crafts for Development
C) Upliftment of Short Training in Traditional Arts/Crafts for Development
D) Upgrading the Services and Teaching in Traditional Arts/ Crafts for Development

17. World's least peaceful nation as per the Global Peace Index-2014 is :
A) Afghanistan B) Bangladesh C) Syria D) Israel

18. Which of the following is observed as World Intellectual Property Day ?
A) 26 April B) 30 April C) 20 August D) 30 September

19. Which of the following States became the first Nirmal State of India as per an official statement released on Feb 10, 2014?
A) Andhra Pradesh B) Kerala C) Sikkim D) Gujarat

20. Which of the following languages became the sixth classical language of India ?
A) Odia B) Malayalam C) Bangla D) Telugu

21. In April 1, 2014, India became the only country in the world with:
A) legislated population – control policy
B) legislated provision of the Knowledge – Commission
C) legislated corporate social responsibility
D) legislated corporate pollution control policy

22. The number of global goals that comprise the Sustainable Development Goals as established recently by the United Nations is:
A) 12 B) 13 C) 14 D) 17

23. First Asian Woman to cross English Channel in 1959 (from France to England) was:
A) Arati Saha B) Lakshmi Kanan C) Sarita Devi D) K. Devi

24. The Chief Executive Officer of Google Inc. is:
A) Rajesh Pichai B) Satya Nadella
C) Sunderarajan Pichai D) Suresh Pichai

25. "***On Liberty***" is written by:
A) J.S. Mill B) Henry Miller C) J.M. Keynes D) J. Bentham

26. Norman Ernest Borlaug is known for his contribution to:
A) the field of nuclear medicine B) the field of cardiac surgery
C) what is known as Green Revolution D) the invention of new vaccines

27. According to the Rangarajan Committee Report (2014), which of the following criterion has been fixed to measure the rural as well as urban poverty in India for the year 2011 -12?
A) Rs. 32 per capita per day expenditure in rural areas and Rs.47 in urban areas
B) Rs.45 per capita per day expenditure in urban areas and Rs.25 per capita per day in rural areas
C) Rs.42 per capita per day expenditure in rural areas and Rs.53 in urban areas
D) Rs.38 per capita per day expenditure in rural areas and Rs.48 in urban areas

28. National Policy on Education 1986 was revised in the year :
A) 1999 B) 2001 C) 1992 D) 1998

29. Which of the following is not a Rabi crop ?
A) Rice B) Wheat C) Gram D) Mustard

30. The doctrine of Panch Sheel was jointly agreed to and proclaimed by the Late Indian Prime Minister J.L.Nehru and the late Chinese Prime Minister Chou En-lai in :
A) 1960 B) 1959 C) 1954 D) 1957

31. Internet was invented by :
A) Tim Burners-Lee B) C.S.Cockerell C) C.C.Magee D) J.Schick

32. Aga Khan Cup is associated with:
A) Cricket B) Polo C) Golf D) Hockey

33. The words "Satyameva Jayate" inscribed on the State emblem of India have been taken from
A) Isha Upanishada B) Mundaka Upanishada
C) Kena Upanishada D) Chhandogya Upanishada

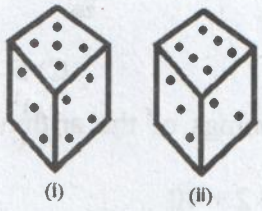
34. The Flag Code of India took effect from :
A) 26 January 1949 B) 26 January 1950
C) 26 January 2002 D) 26 January 1992

35. The National song "Vande Mataram" is a part of Bankim Chandra Chatterji's novel:
A) Ananda Math B) Rajasimha C) Kapal Kundala D) Durgesh Nandini

36. Three dice with their upper faces erased are

The sum of the numbers of dots on the opposite faces is 7. If the dice I, II and III have even number of dots on their bottom faces, then what will be the total number of dots on their top faces?
A) 7 B) 9 C) 12 D) 21

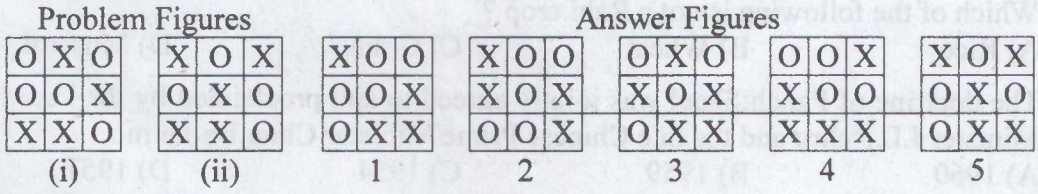
37. Two positions of a dice are shown below. If the face with one dot is at the bottom, then the number of dots on the top is:



A) 2 B) 3 C) 4 D) 6

38. Which one of the following words does not have water-image identical to the word itself ?
(i) KICK (ii) HIKE (iii) CHICK (iv) DOG (v) OXE
A) (v) B) (i) C) (iii) D) (iv)

39. Find the Figure from Answer Figures that does not show the similar characteristics as shown by the Problem Figures:

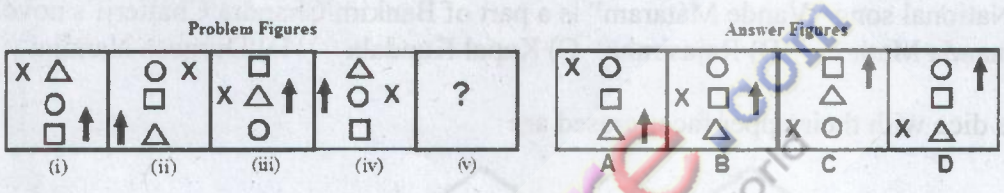


A) 5 B) 4 C) 2 D) 1

40. Find the number of triangles in the Figure:

A) 22 B) 24 C) 28 D) None of these

41. Find the Figure from the Answer Figures that will continue the series established by four problem figures.



42. Choose the best alternative:
Danger always involves
A) Enemy B) Attack C) Fear D) Help

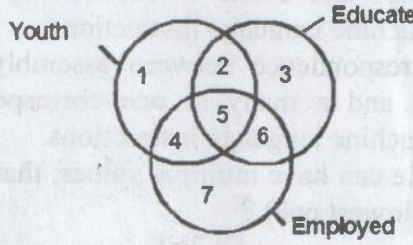
43. Find the missing number:

A) 3 B) 4 C) 5 D) 6

44. Which of the following meanings of the arithmetical signs will yield the value zero for expression given below ?
200 x 100 + 300 x 200 – 10 ÷ 2 + 40
A) + means - , - means x, x means ÷, ÷ means +
B) + means - , - means ÷, x means +, ÷ means x
C) + means x , - means -, x means ÷, ÷ means +
D) + means ÷ , - means +, x means -, ÷ means x

45. Study the following arrangement and answer the questions:
W 1 R % 4 J E # 7 M T 2 I 9 B H 3 A $ 9 F Q 5 D G 6 U S P
Four of the following five are alike in certain way on the basis of above arrangement and hence form a group. Which one does not belong to that group ?
(i) RW4 (ii) 5FG (iii) 9QA (iv) 3B$ (v) 7ET
A) (iii) B) (ii) C) (v) D) (i)

46. On the basis of following Venn Diagram, answer the question



Which region represents youth who are employed but not educated ?
A) 5,6 B) 1,4,7 C) 4,7 D) 4 only

47. The post office is to the east of the school while my house is to the south of the school. The market is to the north of the post office. If the distance of market from the post office is equal to the distance of my house from the school, in which direction is the market with respect to my school?
A) North B) East C) North-East D) South-West

48. A, B, C, D, E and F are cousins. No two cousins are of the same age, but all have birthdays on the same date. The youngest is 17 years old and the oldest is 22. F is somewhere between B and D in age. A is older than B, C is older than D.
Which of the following could be the ages of D and C respectively, if B is 17 years old?
A) 18 and 19 B) 19 and 21 C) 18 and 20 D) 18 and 21

49. Study the following information and answer the question:
(i) 'A$B' means 'A is mother of B' (ii) 'A#B' means 'A is father of B'
(iii) 'A@B' means 'A is husband of B' (iv) 'A%B' means 'A is daughter of B'
Which one of the following expressions indicates 'H is the brother of N'?
A) H#RDN B) N%F@D$H#R
C) N%F@D$H D) N%F@D%H

50. In a certain code language:
(i) 'pit na sa' means 'you are welcome'
(ii) 'na ho pa la' means 'they are very good'
(iii) 'ka da la' means 'who is good'
(iv) 'od ho pit la' means 'they welcome good people'

Which of the following means 'very' in that code language?
A) pa B) na C) da D) la

51. Which of the following is true?
A) There is one to one correspondence between assembly language instructions and machine language instructions and a one to many correspondences between high-level language instructions and machine language instructions.
B) There is one to one correspondence between assembly language instructions and machine language instructions and a one to one correspondence between high-level language instructions and machine language instructions.
C) There is many to one correspondence between assembly language instructions and machine language instructions and a one to one correspondence between high-level language instructions and machine language instructions.
D) There is many to one correspondence between assembly language instructions and machine level instructions, and a many to one correspondence between high-level language instructions and machine language instructions.

52. If an attribute of a database table can have multiple values, that table automatically violates which normal form (choose the lowest one) ?
A) 4NF B) 3NF C) 2NF D) 1NF

53. In the relational database model, cardinality is termed as:
A) Number of tuples
B) Number of attributes
C) Number of tables
D) Number of constraints

54. What does TCP/IP stand for?
A) Transmission Control Protocol/ Internet Protocol
B) Transport Capture Protocol/ Inside Packet
C) Transmission Control Protocol/ Internet Packet
D) Telecommunications Connection Protocol/ Internet Partitions

55. What does ISP stand for?
A) International Service Protocol
B) Internal Service Port
C) Internet Service Provider
D) Internet Search Program

56. The _____ logic family has the lowest propagation delay and thus comprises the fastest logic circuits available.
A) TTL B) ECL C) CMOS D) LSI

57. In MS-WORD, what is gutter margin?
A) Margin that is added to the left margin when printing
B) Margin that is added to right margin when printing
C) Margin that is added to the binding side of page when printing
D) Margin that is added to the outside of the page when printing

58. In CPU scheduling, "aging" is a technique:
A) To phase out old devices in computer system
B) Of gradually increasing the priority of jobs that wait in the system for a long time
C) Used in evaluating normal tear and wear of mechanical devices
D) Of gradually decreasing the priority of jobs that wait in the system for a long time

59. Consider the following code segment:

```
if (Y < 0)
    {
        X = -X;
        Y = -Y;
    }
Z = 0;
While (Y > 0)
    {
        Z = Z + X;
        Y = Y – 1;
    }
```

Assume that X, Y, and Z are integer variables, and that X and Y have been initialized. Which of the following best describes what this code segment does?

A) Sets Z to be the sum X + Y
B) Sets Z to be the absolute value of X
C) Sets Z to be the value of Y
D) Sets Z to be the product X * Y

60. Which of the following views is the best view to use when setting transition effects for all slides in a presentation?
A) Slide sorter view B) Notes pages view C) Slide view D) Outline view

61. One kg force is equal to :
A) 7.8N B) 8.9N C) 9.8N D) 12N

62. The resultant of two forces each equal to P and acting at right angles is :
A) $P/\sqrt{2}$ B) P/2 C) $P/\sqrt[2]{2}$ D) $\sqrt{2}$ P

63. The friction experienced by a body, when at rest, is known as
A) Static friction B) Dynamic friction C) Limiting friction D) Coefficient of friction

64. When a body falls freely under gravitational force, it possesses _____ weight.
A) No B) Minimum C) Maximum D) None of the above

65. Hook's law holds good up to :
A) Yield point B) Elastic limit C) Plastic limit D) Breaking point

66. The ratio of lateral strain to linear strain is called :
A) Modulus of elasticity
B) Modulus of rigidity
C) Bulk modulus
D) Poisson's ratio

67. The bending moment on a section is maximum where shear force is :
A) minimum B) maximum C) changing sign D) zero

68. The bending moment at the free end of a cantilever beam is :
A) zero B) minimum C) maximum D) none of the above

69. The section modulus of a rectangular section about an axis through its C.G. is :
A) $\frac{b}{2}$ B) $\frac{d}{2}$ C) $\frac{bd^2}{2}$ D) $\frac{bd^2}{6}$

70. Barometer is used to measure :
A) velocity of liquid
B) atmospheric pressure
C) pressure in pipes and channels
D) difference of pressure between two points in a pipe

71. A channel is said to be of most economical cross-section, if :
A) it gives maximum discharge for a given cross-sectional area and bed slope
B) it has minimum wetted perimeter
C) it involves lesser excavation for the designed amount of discharge
D) all of the above

72. The working from whole to part is done in surveying in order to ensure that :
A) survey work is completed more quickly
B) number of errors is minimum
C) plotting is done more quickly
D) errors and mistakes of one portion do not affect the remaining portion

73. Chain surveying is most suitable when :
A) area to be surveyed is small
B) ground is fairly level and open with simple details
C) plans are required on a large scale
D) all of the above

74. A tie line in a chain surveying :
A) checks the accuracy of the framework
B) enables the surveyor to locate the interior details which are far away from the main chain lines
C) fixes up the directions of all other lines
D) all of the above

75. The optical square is used to measure angles by :
A) refraction
B) reflection
C) double refraction
D) double reflection

76. If the fore bearing of a line is N 26° 35′ W, its back bearing will be :
A) S 26° 35′ E
B) S 26° 35′ W
C) N 26° 35′ E
D) N 53° 25′ W

77. The height of instrument is equal to :
A) Reduced level of bench mark + back sight
B) Reduced level of bench mark + fore sight
C) Reduced level of bench mark + intermediate sight
D) Back sight + fore sight

78. The line joining the points having the same elevation above the datum surface, is called a :
A) Contour surface
B) Contour line
C) Contour interval
D) Contour gradient

79. The method of surveying in which field work and plotting work are done simultaneously is known as :
A) Compass surveying
B) Levelling
C) Plane tabling
D) Chain surveying

80. The frog of a brick is normally made on its :
A) Longer face
B) Shorter face
C) Bottom face
D) Top face

81. The 3-day compressive strength of OPC cement of 43 grade is :
A) 16 N/mm^2 B) 22 N/mm^2 C) 33 N/mm^2 D) 43 N/mm^2

82. Le-Chatlier's apparatus is used to test the following physical property of cement :
A) Initial and final setting time of cement B) Soundness of cement
C) Compressive strength of cement D) Fineness of cement

83. Slump test is used for testing :
A) Workability of concrete B) Strength of concrete
C) Permeability of concrete D) None of the above

84. With increasing water, bulking of sand :
A) increases B) decreases C) no change D) none of the above

85. The irrigation is necessary in an area :
A) where there is scanty rainfall B) where the rainfall is non-uniform
C) where commercial crops require more water D) all of the above

86. A pipe sunk into the ground to tap the underground water is called :
A) open well B) tube well C) artesian well D) infiltration well

87. When the pH value of water is _____ the water is said to be acidic.
A) equal to 7 B) less than 7 C) more than 7 D) none of the above

88. The most commonly used disinfectant for drinking water throughout the world is :
A) Alum B) Nitrogen C) Lime D) Chlorine

89. Manholes on sewer lines are provided for :
A) periodic cleaning B) providing air for oxidation
C) removal of part of sewerage D) all of these

90. A septic tank is a :
A) Sedimentation tank B) Digestion tank
C) Combination of sedimentation and digestion tank D) Aeration tank

91. The portion of a road surface which is used by vehicular traffic, is known as :
A) Carriage way B) Shoulder C) Expressway D) All of these

92. The roads connecting capital cities of states is called :
A) national highway B) expressway C) state highway D) capital highway

93. The top of the ground on which the foundation of road rests, is called :
A) subgrade B) soling C) base D) wearing course

94. The inward tilt given to the cross-section of the road surface, throughout the length of the horizontal curve, is known as :
A) super-elevation B) cant C) banking D) all of these

95. The gradient of a road depends upon the :
A) nature of traffic B) nature of ground
C) rainfall of the locality D) all of these

96. Cohesionless soils are :
A) sands B) clays C) silts D) silts and clays

97. A fine grained soil :
A) has low permeability B) has high compressibility
C) may or may not be plastic D) all of these

98. The maximum size of the particles of clay is about :
A) 0.0002 mm B) 0.002 mm C) 0.02 mm D) 0.2 mm

99. The ratio of the volume of voids to the total volume of soil mass is called :
A) Water content ratio B) porosity C) void ratio D) degree of saturation

100. If 'w' is the water content and 'γ' is the unit weight of soil mass, then the unit weight of dry soil (γ_d) is equal to :
A) $\frac{w}{\gamma}+1$ B) $\frac{\gamma}{w}+1$ C) $\frac{\gamma}{1+w}$ D) $\frac{1+w}{\gamma}$

101. In a free vortex, velocity
A) increases with radius B) decreases with radius
C) is constant D) None of these

102. The maximum bearing capacity of soil is that of :
A) hard rocks B) black cotton soil
C) dry, coarse sandy soil D) fine sandy soil

103. For a rectangular foundation of width b, the eccentricity of the load should not be greater than :
A) b/3 B) b/4 C) b/5 D) b/6

104. The cavity wall is generally provided for :
A) preventing dampness B) heat insulation
C) sound insulation D) all of these

105. The arrangement of supports provided underneath the existing structure without disturbing its stability, is known as :
A) underpinning B) scaffolding
C) shoring D) jacking

106. The total horizontal pressure at the retaining wall acts at ---------- from the base.
A) $\frac{h}{2}$ B) $\frac{h}{3}$ C) $\frac{h}{4}$ D) $\frac{2}{3}h$

107. Gypsum is added to the cement for :
A) providing high strength to the cement
B) controlling the initial setting time of cement
C) lowering the clinkering temperature of cement
D) all of the above

108. The pressure of dicalcium silicate in cement :
A) hydrates the cement slowly B) generates low heat of hydration
C) has more resistance to sulphate attack D) all of these

109. The bulk density of aggregate depends upon its :
A) shape B) grading C) compaction D) all of these

110. For an over-reinforced (singly reinforced) rectangular reinforced concrete section :
A) the lever arm will be less than that for a balanced section
B) the maximum stress developed by steel will be equal to the allowable stress in steel
C) the maximum stress developed by concrete will be equal to the allowable stress in concrete
D) none of the above

111. The strength of a beam section depends upon :
A) its sectional area B) its sectional modulus
C) distance of its base from N.A D) its length

112. The term "bond" is used to describe the means by which _____ between steel and concrete is provided.
A) resistance B) crack C) slip D) none of these

113. When a slab is continuous over several spans, negative (i.e. hogging) bending moment is induced over the :
A) end supports B) intermediate supports
C) both (A) and (B) D) none of these

114. A buttress in a wall is intended to provide :
A) lateral support to roof slab only B) lateral support to wall
C) to resist vertical loads only D) lateral support to roof beams only

115. The shear stress on principal plane is :
A) Maximum B) Minimum C) Zero D) None of these

116. Desalination is usually done for :
A) Well-water B) Lake water C) River water D) Sea water

117. Specific gravity of ordinary Portland cement is generally taken as :
A) 3.00 B) 3.15 C) 2.98 D) 2.99

118. The PI of ML-CL soil is between :
A) 2-4 B) 4-7 C) 7-9 D) None of these

119. Which test is performed in laboratory for determination of quality of subgrade soil used for design of flexible pavement ?
A) CBR B) Plate load test C) Atterberg limits D) Shear strength tests

120. Which of the following shapes is preferred in a valley curve ?
A) Simple parabola B) Cubic parabola C) spiral D) none of the above

PUDA
Junior Engineer (Civil/PH)
Answer Key: 22.11.2015 (Evening)

Q.No.	Ans.	Q.No.	Ans.	Q.No.	Ans.	Q.No.	Ans.
1	B	31	A	61	C	91	A
2	D	32	D	62	D	92	C
3	B	33	B	63	A	93	A
4	A	34	C	64	A	94	D
5	B	35	A	65	B	95	D
6	A	36	A	66	D	96	A
7	C	37	B	67	C	97	D
8	A	38	D	68	A	98	B
9	C	39	B	69	D	99	B
10	A	40	C	70	B	100	C
11	D	41	D	71	D	101	A
12	A	42	C	72	D	102	A
13	C	43	B	73	D	103	D
14	B	44	B	74	B	104	D
15	C	45	A	75	B	105	A
16	B	46	D	76	A	106	B
17	C	47	C	77	A	107	B
18	A	48	B	78	B	108	D
19	C	49	B	79	C	109	D
20	A	50	A	80	D	110	C
21	C	51	A	81	B	111	B
22	D	52	D	82	B	112	C
23	A	53	A	83	A	113	B
24	C	54	A	84	A	114	B
25	A	55	C	85	D	115	C
26	C	56	B	86	B	116	D
27	A	57	C	87	B	117	B
28	C	58	B	88	D	118	B
29	A	59	D	89	A	119	A
30	C	60	A	90	C	120	B