Question Booklet and Answer Key

For Recruitment Test Held on

15.11.2015 (Morning)

Post: Junior Engineer (Civil) and (O & M) Civil

1. ਸ਼ੁੱਧ ਸ਼ਬਦ-ਜੋੜ ਚੁਣੋ:

(A) ਮਨਦਰ (B) ਮੰਦੀਰ (C) ਮੰਦਿਰ (D) ਮੰਦਰੁ

2. ਕਾਰਕ ਕਿੰਨੇ ਪ੍ਰਕਾਰ ਦੇ ਹੁੰਦੇ ਹਨ:

(A) ਸੱਤ (B) ਅੱਠ (C) ਦਸ (D) ਪੰਜ

3. ਉਲਟੀ ਵਾੜ..... ਮੁਹਾਵਰਾ ਪੂਰਾ ਕਰੋ:

(A) ਖੇਤ ਨੂੰ ਵੱਢੇ (B) ਖੇਤ ਨੂੰ ਕੱਟੇ (C) ਖੇਤ ਨੂੰ ਖਾਏ (D) ਖੇਤ ਨੂੰ ਜਾਏ

4. 'ਮਾਝੀ' ਕੀ ਹੈ?

(A) ਭਾਸ਼ਾ (B) ਉਪ-ਭਾਸ਼ਾ (C) ਖੇਤਰ (D) ਟਕਸਾਲੀ ਭਾਸ਼ਾ

5. ਕਿਰਿਆ-ਵਿਸ਼ੇਸ਼ਣ ਦੀਆਂ ਕਿਸਮਾਂ ਹੁੰਦੀਆਂ ਹਨ:

(A) ਅੱਠ (B) ਸੱਤ (C) ਛੇ (D) ਪੰਜ

Directions (Q.No. 6-8): Mark the word that best expresses the meaning conveyed by the given expression.

6. Tending or intended to delay

A) dilatory B) dilettante C) dearth D) dreary

7. Having softening and soothing qualities

A) Trite B) Testy C) Emolument D) Emollient

8. The study of the improvement of human functioning and well-being by adjustment of environment

A) Eugenics B) Euthenics C) Eutropy D) Autarky

Directions (Q. No. 9 & 10): Mark the correct synonym of the given word out of the four options.

9. Shapely

A) Buxom B) Bullion C) Benediction D) Bilious

10. Slender

A) Attentive B) Attendant C) Attenuated D) Attractive

11. Contour Lines join on a map

A) places of equal height above sea level B) places of equal atmospheric pressure
C) places of equal temperature D) places of equal geographical area

12. Which of the following planets is known as the Morning Star or the Evening Star?

A) Mars B) Mercury C) Venus D) Jupiter

13. Which of the following statements about Meteorites is incorrect?

A) Meteorites contain the traces of active life
B) Meteorites are larger meteors that reach the Earth
C) All meteorites were meteors when in flight
D) They become luminous by friction on entering the Earth's atmosphere

14. The new name of Formosa is
A) Tuvalu B) Taiwan C) Kinshasa D) Kollam

15. The Russian or Bolshevik Revolution led by Lenin happened in
A) 1908 B) 1910 C) 1917 D) 1921

16. Magna Carta was an event that happened during the reign of
A) King Richard II of England B) King John of England
C) King Arthur of England D) King Peter of England

17. Which of the following is not a disease caused by bacteria ?
A) Tuberculosis B) Leprosy C) Diphtheria D) Herpes

18. ***Adha Gaon***, the famous Hindi novel is written by
A) Nirmal Verma B) Premchand C) Nagarjuna D) Rahi Masoom Raza

19. ***Kanthapura***, the famous novel on the impact of Gandhian world view on nationalism in India is written by
A) R.K. Narayan B) Mulk Raj Anand C) V.S. Naipaul D) Raja Rao

20. USTTAD scheme was launched by Govt. of India primarily to benefit
A) the women entrepreneurs B) the artisans from minority communities
C) the weavers of Varanasi D) the tribal artisans

21. The 2015 Nobel Prize in Chemistry has been awarded to
A) Thomas Lindahl, Paul Modrich and Aziz Sancar
B) Thomas Gradbury, Paul Muldoon and Rahim Khan
C) Thomas Gradgrind, Paul Murdoch and Dr. Aziz
D) William Forster, D.H. Lawrence and R.H. Raza

22. The tallest dam in the world is
A) Nurek Dam in Tajikistan B) Jinping-I Dam in China
C) Grande Dixence Dam in Switzerland D) Inguri Dam, Georgia

23. Ireland is also known as
A) Great White Way B) Hermit Kingdom
C) Emerald Island D) Land of the Golden Fleece

24. Sudarsan Pattnaik is
A) an internationally acclaimed architect from Odisha
B) an international acclaimed sand artist from Odisha
C) an international acclaimed painter from Odisha
D) an international acclaimed writer from Odisha

25. "Annihilation of Caste" by Dr. B.R.Ambedkar was first published in the year
A) 1927 B) 1947 C) 1949 D) 1936

26. The first and last letters of English alphabet are coded as 1, the 2nd and 2nd last letters are coded as 2. Similarly 3rd and 3rd from last are coded as '3', then what is the code for 'INTERMISSION'?

A) 9737591398913 B) 9137599129891312
C) 9317562357913 D) 9137591398891213

27. In a certain computer process the computation is done as follows:

i) p$q+r means r is subtracted from the product of p and q.
ii) pΔq□r means the product of p and q is divided by r.
iii) p@q÷r means r is divided by the sum of p and q.
iv) p#qxr means q is multiplied by the sum of p and r.
v) pαqβr means p is subtracted from the sum of q and r.

If 17Δ 15 □ 51=p, then what is the value of p@22÷729 ?

A) 29 B) 27 C) 25 D) 51

28. My sister's daughter's grandmother's only child's only son is my

A) nephew B) son C) brother D) cannot be determined

29. Pavani starts from her office for Railway Station. She travels 3 km towards north, then turns left and travels 4 km. Again travels 2 km after turning left. Again turns left and goes 1 km. Finally, turns to her left and travels 4 km to reach the railway station. How far (approximately in km) and in which direction is railway station from her office ?

A) 5 km, south west B) 6 km, north east
C) 6 km, north west D) 6 km, south west

30. A boy observes the reflection of a wall clock in a mirror. The time observed by the boy in the mirror is 4 hours 20 minutes. What is the actual time shown on the clock ?

A) 7 hrs 15 min B) 7 hrs 50 min C) 7 hrs 40 min D) 7 hrs 35 min

31. Out of 265 workers, 150, 160 and 140 are Fitters, Welders and Drillers respectively. 90 are Fitters and Welders, 85 are Welders and Drillers and 75 are Drillers and Fitters and 50 workers are Fitters, Drillers as well as Welders. What is the number of fitters who are not welders?

A) 60 B) 115 C) 130 D) 15

32. 10 persons, a Professor, a Lawyer, a Doctor, a Scientist, an Accountant, a Grocer, two Computer Specialists and two Marketing Executives sit around a round table facing centre. The Professor sits opposite Lawyer. The Scientist and Doctor sit opposite each other. Two Marketing Executives sit opposite to each other with one of them sitting at immediate left of the Scientist. The Professor sits at immediate right of the Scientist.

If the Grocer and the Accountant each have a Marketing Executive as his immediate neighbour, then which of the following statements is definitely **False** ?

A) Two Computer Specialists are opposite each other
B) A Computer Specialist is an immediate neighbour of the Scientist
C) The Grocer is next to a Computer Specialist
D) A Computer Specialist is an immediate neighbour of the Lawyer.

33. A, B, C, D, E, F and G are 7 players to form two teams of two players each and one team of 3 players. A and B cannot be in the same team. B and C cannot be in the same team whereas E and F must be in the same team. G and D cannot be in the same team.
If B, E and F are members of a team, then which of the following cannot be the two teams of two members each ?
A) AD, GC B) AG, CD C) AC, GD D) both A and B

34. Five cities P, Q, R, S and T are connected by different modes of transportation:
i) P and Q are connected by boat as well as by rail (ii) S and R are connected by bus and by boat (iii) Q and T by air only (iv) P and R by boat only (v) T and R are connected by rail and by bus.
If a person visits each of the places starting from P and gets back to P, which of the following places must he visit twice?
A) Q B) R C) S D) T

35. By applying which of the following meanings of signs the value of:
$700 - 10 \div \frac{1}{2} \times 35 + 70$ be zero ?
A) x means ÷, + means x, ÷ means +, – means –
B) x means ÷, + means –, ÷ means x, – means +
C) x means +, + means –, ÷ means x, – means ÷
D) x means ÷, + means –, ÷ means x, – means x

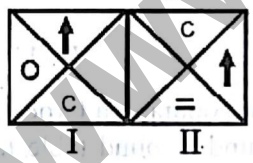
36. Fill in the blank in the given matrix:

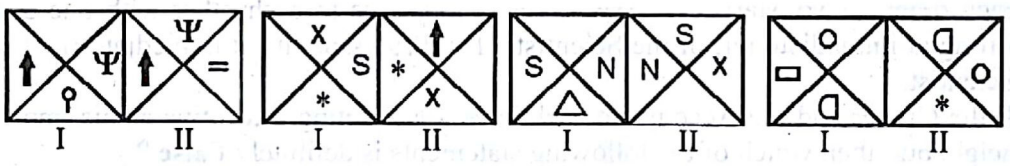
7B	5C	6B
3C	9B	19A
15A	17A	?

A) 10C B) 12C C) 14B D) 16C

37. Figure I and II in the given set are related to each other. Find the set from the sets A, B, C and D that does not have relationship as in given set :

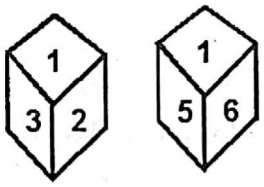
Given Figure





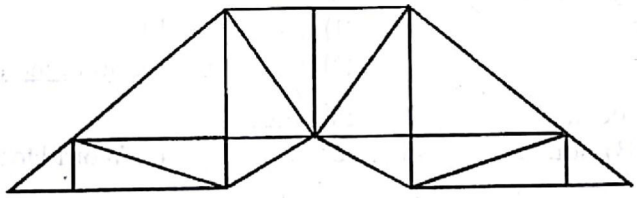
A) B) C) D)

38. Two positions of a dice are given below. If 4 is at bottom, what number will be at top.



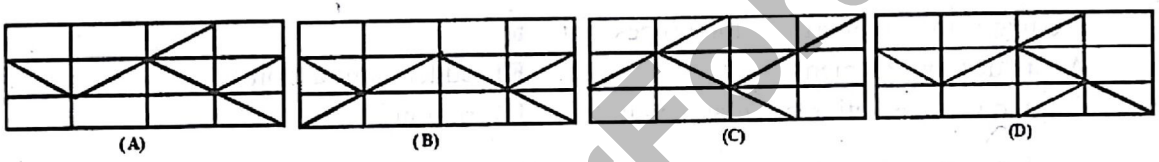
A) 1 B) 2 C) 5 D) 6

39. Find the number of triangles in the given Fig:



A) 23 B) 27 C) 29 D) none of these

40. Find the water image of given Figure (X)



41. In Microsoft PowerPoint, _____ are boxes with dotted borders that contain content and reside within a slide layout.
A) Auto Layout B) Object Holders
C) Placeholders D) Text Holders

42. Members of these sites spend hours surfing pages, checking out other members, and exchanging messages, and they reveal a great deal of information about themselves.
A) business-to-consumer e-commerce B) consumer-to-consumer e-commerce
C) social networking D) online syndicators

43. The purpose of the primary key in a database is to
A) unlock the database B) uniquely identify a record
C) establish constraints on database operations D) provide a map of the data

44. In computer networking, WAN stands for
A) Wire And Network B) Wire Accessible Network
C) Widely Accessible Network D) Wide Area Network

45. In word processing and desktop publishing, the terms portrait and landscape refer to
A) Paragraph Formatting B) Page Orientation
C) Paper Size D) Page Layout

46. In MS-EXCEL, the formulae used to calculate the average of values from the cell C1 to C10 is:
A) =average(C1-C10) B) =average(C1,C10)
C) =average(C1:C10) D) =average(C1+C10)

47. This type of software is designed for users who want to customize the programs they use.
A) Shareware B) Freeware
C) Open-source software D) Macros in Assembly Software

48. In software Engineering, site for alpha testing is
A) Software Company B) Installation Place
C) Anywhere D) www.google.com/alpha/testing/

49. WAV file format is associated with what type of files?
A) Video B) Sound C) Image D) Word Document

50. This technology is used to measure and analyze human body characteristics for authentication purposes.
A) Foot-printing B) Biometrics
C) Optical Character Recognition D) Ergonomics

51. Which of the following is used to measure the discharge?
A) Current meter B) Venturimeter C) Pitot tube D) Hotwire anemometer

52. The major loss of energy in long pipes is due to
A) sudden enlargement B) sudden contraction
C) gradual contraction or enlargement D) friction

53. Local attraction in compass surveying may exist due to
A) incorrect levelling of the magnetic needle
B) loss of magnetism of the needle
C) friction of the needle at the pivot
D) presence of magnetic substances near the instrument

54. If the R.L. of a B.M. is 100.00m, the back-sight is 1.215m and the foresight is 1.870m, the R.L. of the forward station is
A) 99.345m B) 100.345m C) 100.655m D) 101.870m

55. Which of the following methods of contouring is most suitable for a hilly terrain?
A) direct method B) square method
C) cross-sections method D) tacheometric method

56. Select the correct statement
A) contour interval on any map is kept constant.
B) direct method of contouring is cheaper than indirect method.
C) inter-visibility of points on a contour map cannot be ascertained.
D) slope of a hill cannot be determined with the help of contours.

57. For a tacheometer the additive and multiplying constants are respectively
A) 0 and 100 B) 100 and 0 C) 0 and 0 D) 100 and 100

58. Which one of the following instruments is used in plane table surveying for the measurement of horizontal and vertical distance directly?
A) plain alidade B) telescopic alidade
C) tacheometer D) clinometers

59. Hydrograph is the graphical representation of
A) runoff and time B) surface runoff and time
C) ground water flow and time D) rainfall and time

60. When the path travelled along the road surface is more than the circumferential movement of the wheel due to rotation, then it results in
A) slipping B) skidding C) turning D) revolving

61. The ruling design speed on a National Highway in plain terrain as per IRC recommendations is
A) 60 kmph B) 80 kmph C) 100 kmph D) 120 kmph

62. Which of the following represents hardest grade of bitumen?
A) 30/40 B) 60/70 C) 80/100 D) 100/120

63. The main function of a fish plate is
A) to join the two rails together B) to join rails with sleeper
C) to allow rail to expand and contract freely D) none of the above

64. Ground water is usually free from
A) suspended impurities B) dissolved impurities
C) both suspended and dissolved impurities D) none of the above

65. Turbidity is measured on
A) standard silica scale B) standard cobalt scale
C) standard platinum scale D) platinum cobalt scale

66. The treatment of water with bleaching powder is known as
A) prechlorination B) super chlorination
C) dechlorination D) hypochlorination

67. Average rate of water consumption per head per day as per Indian Standard is
A) 100 litres B) 135 litres C) 165 litres D) 200 litres

68. The pipe which is used to carry the discharge from sanitary fittings like bathrooms, kitchens etc. is called
A) waste pipe B) soil pipe C) vent pipe D) antisiphonage pipe

69. Which of the following is a measure of particle size range?
A) effective size B) uniformity coefficient
C) coefficient of curvature D) none of the above

70. A soil having particles of nearly the same size is known as
A) well graded B) uniformly graded
C) poorly graded D) gap graded

71. If the plasticity index of soil mass is zero, the soil is
A) sand B) silt C) clay D) clayey silt

72. Which of the following is a Rock?
A) quartz B) mica C) gypsum D) none of the above

73. Percentage of silica in a good brick earth lies between
A) 5 to 10% B) 20 to 30% C) 50 to 60% D) 70 to 80%

74. The compacting factor test of cement concrete determine its
A) compressive strength B) porosity
C) degree of compaction under loads D) workability

75. If 'p' is the standard consistency of cement, the amount of water used in conducting the initial setting time test on cement is
A) 0.65p B) 0.85p C) 0.80p D) 0.60p

76. King closers are related to
A) doors and windows B) king post truss
C) queen post truss D) brick masonry

77. Before testing setting time of cement one should test for
A) soundness B) strength C) fineness D) consistency

78. Effective throat thickness of a fillet weld is
A) 0.707 x size of weld B) 1.414 x size of weld
C) a function of angle between fusion faces D) equal to the side of the fillet

79. If a shaft of diameter 'd' is subjected to a torque 'T', the maximum shear stress is
A) $\frac{32T}{\pi d^3}$ B) $\frac{16T}{\pi d^2}$ C) $\frac{16T}{\pi d^3}$ D) $\frac{64T}{\pi d^4}$

80. The maximum deflection of fixed beam carrying a central load W is equal to
A) $\frac{WL^3}{48EI}$ B) $\frac{WL^3}{96EI}$ C) $\frac{WL^3}{192EI}$ D) $\frac{5WL^3}{384EI}$

81. The number of independent equations to be satisfied for static equilibrium in a space structure is
A) 2 B) 3 C) 4 D) 6

82. If the thickness of plate to be connected by a rivet is 16mm, then suitable size of rivet as per Unwin's formula will be
A) 16mm B) 20mm C) 24mm D) 27mm

83. The slenderness ratio of a column supported throughout its length by a masonry wall is
A) zero B) L C) 0.65L D) Infinity

84. Generally the purlins are placed at the panel points so as to avoid
A) axial force in rafter B) shear force in rafter
C) deflection of rafter D) bending moment in rafter

85. The least dimension in case of circular column of diameter D is taken as
A) 0.50D B) 0.68D C) 0.88D D) 1.00D

86. A steel plate is 30cm wide and 10mm thick. A rivet of nominal diameter 18mm is driven. The net sectional area of the plate is
A) 18.00 cm^2 B) 28.20 cm^2 C) 28.05 cm^2 D) 32.42 cm^2

87. Admixtures which causes early setting, and hardening of concrete are called
A) workability admixtures B) accelerators
C) retarders D) air entraining agents

88. The fineness modulus of fine aggregate is in the range of
A) 2.0 to 3.5 B) 3.5 to 5.0 C) 5.0 to 7.0 D) 7.0 to 8.5

89. For the design of retaining walls, the minimum factor of safety against over-turning is taken as
A) 1.5 B) 2.0 C) 2.5 D) 3.0

90. A T-shaped retaining wall mainly consists of
A) one cantilever B) two cantilevers C) three cantilevers D) four cantilevers

91. The diameter of needle used in Vicat's apparatus for the determination of initial setting time is prescribed as
A) 0.5mm B) 1.0mm C) 5.0mm D) 10.0mm

92. According to Indian Standards, the pozzolana content in Portland pozzolana cement is
A) 10% to 25% B) 25% to 35% C) 35% to 50% D) more than 50%

93. The main reinforcement of a RC slab consists of 10mm bars at 10 cm spacing. If it is desired to replace 10mm bars by 12mm bars, then the spacing of 12mm bars should be
A) 12.6 cm B) 14 cm C) 14.4 cm D) 16 cm

94. For earthquake resistant masonry buildings, the vertical distance between openings one above the other in a load bearing wall shall be not less than
A) 50cm B) 60cm C) 75cm D) 100cm

95. A joint parallel to the face of the masonry wall is called
A) bed joint B) cross joint C) wall joint D) none of the above

96. The reaction time of a driver
A) increases with increase in speed B) decreases with increase in speed
C) is same for all speeds D) none of the above

97. If the compaction factor of a concrete is 0.90, then the workability according to Indian Standards is

A) very low B) low C) medium D) high

98. If a composite bar of steel and copper is heated, then the copper bar will be under

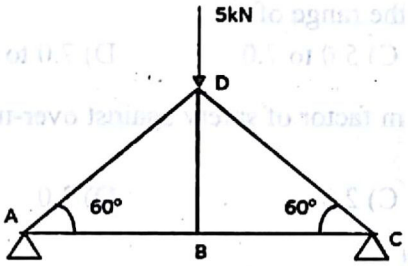
A) tension B) compression C) shear D) torsion

99. A long column has minimum crippling load when its

A) both ends are hinged B) both ends are fixed

C) one end is fixed and other end is hinged D) one end is fixed and other end is free

100. In the pin-jointed plane frame shown in figure, the force in the member BD is



A) 5 kN B) $5\sqrt{2}$ kN C) 10kN D) zero

Answer- Key

Post: Junior Engineer (Civil) and (O & M) Civil -- 15.11.2015 (M) Local Govt. Punjab

Q.	Ans.	Q.	Ans	Q.	Ans.	Q.	Ans.
1	C	26	D	51	B	76	D
2	B	27	B	52	D	77	D
3	C	28	A	53	D	78	C
4	B	29	C	54	A	79	C
5	A	30	C	55	D	80	C
6	A	31	A	56	A	81	D
7	D	32	B	57	A	82	C
8	B	33	C	58	A	83	A
9	A	34	B	59	A	84	D
10	C	35	C	60	B	85	C
11	A	36	D	61	C	86	B
12	C	37	A	62	A	87	B
13	A	38	A	63	A	88	A
14	B	39	C	64	A	89	B
15	C	40	D	65	A	90	C
16	B	41	C	66	A	91	B
17	D	42	C	67	B	92	A
18	D	43	B	68	A	93	C
19	D	44	D	69	B	94	B
20	B	45	B	70	B	95	C
21	A	46	C	71	A	96	B
22	B	47	C	72	C	97	C
23	C	48	A	73	C	98	B
24	B	49	B	74	D	99	D
25	D	50	B	75	B	100	D