Question Booklet and Answer-Key

Recruitment Test of SDE (Civil), Local Govt. Punjab Held on 29.3.2014.

Directions Q. No.1-3:- Mark the correct antonyms, out of the four choices given, of the following words :-

1. Slick
   A) Clumsy B) Outrageous C) Awakened D) Inaudible

2. Truculent
   A) Defiant B) Amiable C) Snobbish D) Ruthless

3. Tenuous
   A) Visible B) Brittle C) Strong D) Scattered

Directions Q. No. 4-7:- Mark, out of the four given choices, the correct meaning of the italicized idioms/phrases used in the following sentences:-

4. Both of them knew that they were *under the harrow*:-
   A) successful B) ambitious C) abusing each other D) in distress

5. It is clear that *the jury is out* on the Kashmir-issue.
   A) no decision has yet been reached B) decision has been reached
   C) decision has been affirmed D) decision has been revoked.

6. In this tricky situation, we have to *lance the boil.*
   A) seek support from others
   B) take decisive action to put an end to an undesirable situation
   C) kill others for our survival
   D) stay calm.

7. India managed to *shoot Pakistan's fox* on the Kashmir-issue in the UN :
   A) criticized Pakistan for its policies
   B) neutralized Pakistan's propaganda
   C) thwarted Pakistan's plans by pre-empting them
   D) deplored Pakistan's record of human rights.

Directions Q. No. 8-10:- Choose the correct preposition, out of four options, to be filled in the blanks of the following sentences:-

8. Rohit Sharma's performance is not consistent ____his technical brilliance.
   A) of B) for C) at D) with

9. Heedless____my timely advice, Hari is sure to court disaster soon.
   A) of B) for C) with D) about

10. One should not be covetous ___ others' riches.
    A) about B) of C) with D) for

11. The element common to all acids is
    A) carbon B) hydrogen C) oxygen D) sulphur

12. The Saliva helps in the digestion of
    A) proteins B) fats C) fibres D) starch

13. Uncontrolled industrialisation leads to acid rain. It is mainly contributed by
    A) Carbon dioxide B) methane gas
    C) Chlorofluro carbons D) nitrous and sulphur dioxide

14. Which of the following is the science dealing with tumor?
    A) Concology B) Serology C) Oncology D) Chronology

15. Fertility of soil can be improved by
    A) adding dead earthworms
    B) removing dead earthworms
    C) adding living earthworms
    D) removing living earthworms and adding dead earthworms

16. The East India Company was founded in India during the reign of
A) Jahangir B) Akbar C) Shah jahan D) Aurangzeb

17. Before the rise of Ranjit Singh, Punjab was under the control of
A) Maratha commanders B) raider groups C) tribal chiefs D) Sikh Misls

18. Vande Mataram was first sung at the session of the Indian National Congress in
A) 1886 B) 1892 C) 1896 D) 1904

19. Who was the first Indian to pass the Indian Civil Service?
A) Dadabhai Naoroji B) Surendranath Banerjee
C) Bal Gangadhat Tilak D) D.N. Wacha

20. Which of the following is not a part of the Preamble to the Indian Constitution?
A) Secularism B) Socialism C) Democratic Republic D) Federalism

21. The first woman Governor of a state in free India was
A) Mrs. Sarojini Naidu B) Mrs. Sucheta Kripalani
C) Mrs. Indira Gandhi D) Mrs. Vijaya Laxmi Pandit

22. Fiscal Policy is concerned with
A) Public revenue B) Public expenditure and debt
C) Bank rate policy D) Both (a) and (b)

23. When was Consumer Protection Act (COPRA) passed?
A) 1984 B) 1980 C) 1986 D) 1995

24. Consider the following taxes
1. Corporation Tax 2. Value Added Tax 3. Wealth Tax 4. Import Duty
Which of these is/are Indirect taxes?
A) Only 1 B) 2 and 4 C) 1 and 3 D) 1, 2 and 4

25. National Education Day is observed on November 11 every year. Who, among the following leaders is remembered on this occasion?
A) Dr. Rajendra Prasad B) Swami Vivekanand
C) Dr. Sarvapalli Radhakrishnan D) Maulana Abdul Kalam Azad

26. The book titled '1283' is about of the career illustration of which football legend?
A) David Beckam B) Pele C) Diego Maradona D) Lionel Messi

27. Which day is celebrated as 'National Technology Day':
A) May 11 B) Feb. 28 C) May 17 D) Sept. 16

28. Which of the following personalities was awarded the Gandhi Peace Prize for 2013:
A) M.S. Swaminathan B) Amartya Sen C) Chandi Prasad Bhatt D) Medha Patekar

29. Which of the following states did win the Ranji Trophy 2014:
A) Karnataka B) Maharastra C) Delhi D) Tamil Nadu

30. Who among the following has written the book 'Emergency Alert'
A) Vali Nasr B) Kuldeep Nayar C) Khuswant Singh D) George Fernandes

31. 'Ship' is related to 'Captain' in the same way as 'Newspaper' is related to
A) Reader B) Printer C) Publisher D) Editor

32. Choose the word from the given alternatives that shows the same relationship as is found between the two words to the right of the sign ::
West : North-East :: South : ?
A) North-West B) South-East C) North D) East

33. Which of the following does not fit in the letter number series given below?
G4T, J10R, M20P, P43N
A) J10R B) G4T C) P43N D) M20P

34. In the following, three out of the four alternatives have same relationship. You have to choose the one which does not belong to the group.
A) 22 : 0 B) 24 : 12 C) 23 : 5 D) 24 : 18

35. If TEMPLE is coded as VHQNIA, how would you code CHURCH?
A) EKYWI B) EKYQZD C) EKYPZD D) EKYQWD

36. In a certain language 'si po re' means 'book is thick', 'ti na re' means 'bag is heavy', 'ka si' means 'interesting book' and 'de ti' means 'that bag'. Which of the following means 'that is interesting' in that code language?
A) ka re na B) de si re C) ti po ka D) ka de re

Directions Q.No. 37 to 39: Read the pattern of words/numbers and find the missing term from the given alternatives:

37. XAF, WBG, VCH, UDI, ?,
A) TAJ B) TEJ C) JEJ D) TEK

38. 135, 258, 345, ?
A) 430 B) 432 C) 434 D) 436

39. 6, 4, 18, 6, ?, 9
A) 32 B) 34 C) 36 D) 38

40. Karan takes a cab and goes 20 km south. He gets down and walks 5 km to the East to reach a shop. After shopping, he takes an autorickshaw and travels 25 km left from the shop to reach his friend's house. How far is he from the starting point now?
A) $5\sqrt{2}$ km North-East B) 5 km North-East
C) 45 km South D) 25 km South-West

41. If 'A+B' means that A is the brother of B, 'A ÷ B' means that A is the father of B and 'A x B' means that A is the sister of B. Which of the following means 'M' is the uncle of 'P'?
A) M ÷ N x P B) N x P ÷ M C) M + S ÷ R x P D) M + K ÷ T x P

42. Neha says, Amrita's father Raj is the only son of my father-in-law Mahesh. Then how is Bindu, who is the sister of Amrita related to Mahesh.
A) Daughter-in-law B) Daughter C) Wife D) Grand-daughter

43. In the following series, some letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative.
ef – h – gfe – hef – ehgefg –
A) ehhfg B) ggfhe C) ghgfh D) egffh

Directions Q. No.44 to 46: Read the following information and answer the questions given below:

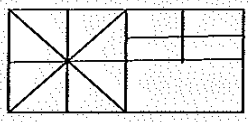
(i) A, B, C D, E, F, G and H are sitting in a row facing North.
(ii) A is fourth to the right of E.
(iii) H is fourth to the left of D.
(iv) C and F, which are not at the ends, are neighbours of B and E, respectively.
(v) H is next to the left of A and A is the neighbour of B.

44. What is the position of F?
A) Next to the right of E B) Next to the right of G
C) Sixth to the right of D D) Between G and H

45. Which of the following statements is not true?
A) G is the neighbour of H and F B) B is next to the right of A
C) E is at left end D) D is next to right of B

46. Who is/are the neighbour/(s) of D?
A) F alone B) C alone C) B and C D) None of these

47. How many squares are there in the following figure?

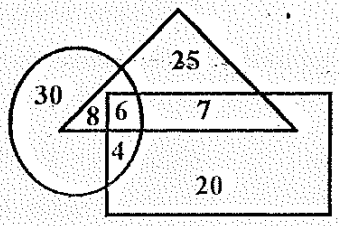


A) 9 B) 12 C) 16 D) 15

48. The age of father 10 year ago was thrice the age of his son. Ten years hence, father's age will be twice that of his son. The ratio of their present ages is
A) 5:2 B) 7:3 C) 9:2 D) 13:4

49. A painter is given a task to paint a cubical box with six different colours for different faces of the cube. The details are:
(i) Red face should lie between yellow and brown faces.
(ii) Green face should be adjacent to the silver face.
(iii) Pink face should lie adjacent to the green face.
(iv) Brown face should have face down.
(v) Silver and pink faces should lie opposite to each other.
The face opposite to red is
A) Yellow B) Green C) Pink D) Silver

50. In the following diagram, triangle shows persons earning by working in offices; square depicts earning by working in factories and the circle depicts persons earning by running own business:



Find the number of persons who have atleast two sources of earning.
A) 19 B) 21 C) 25 D) none of above

51. The unit of kinematic viscosity is
A) gm/cm-sec^2 B) dyne – sec/cm^2 C) gm/cm^2 – sec D) cm^2/sec

52. Surface tension of water
A) increases with decrease in temperature B) decreases with decrease in temperature
C) is independent of temperature D) none of the above

53. A floating body is said to be in a state of stable equlibrium
A) when its metacentric height is zero
B) when the metacentre is above the centre of gravity
C) when the metacentre is below the centre of gravity
D) only when its centre of gravity is below its centre of buoyancy

54. The eddy viscosity for turbulent flow is
A) a function of temperature only B) a physical property of the fluid
C) dependent on the flow D) independent of the flow

55. Equation of continuity is based on the principle of conservation of
A) mass B) energy C) momentum D) none of the above

56. Which of the following scale is the largest one?
A) 1cm = 50m B) 1: 50,000 C) 1cm = 50 km D) All are same

57. The error due to bad ranging is
A) cumulative ; positive B) cumulative ; negative
C) compensating D) cumulative; positive or negative

58. The position of a point can be fixed more accurately by
A) cross staff B) optical square C) oblique offsets D) perpendicular offsets

59. The principle of working from 'whole to part' is used in surveying because
A) plotting becomes easy B) survey work can be completed quickly
C) accumulation of errors is prevented D) all of the above

60. The following bearings were observed while traversing with a compass

Line	Fore Bearing	Back Bearing
AB	104^0 30'	284^0 30'
BC	48^0 15'	226^0 00'
CD	290^0 30'	115^0 15'
DA	180^0 15'	357^0 15'

Which stations were affected by local attraction?
A) A & B B) B & C C) C & D D) A & D

61. The water utilizable by plants is available in soils mainly in the form of
A) gravity water B) capillary water C) hydroscopic water D) chemical water

62. The major resisting force in a gravity dam is
A) water pressure B) wave pressure C) self weight of dam D) uplift pressure

63. According to Khosla's theory, the exit gradient in the absence of a downstream cutoff is
A) zero B) unity C) infinity D) very large

64. Wetted perimeter of a regime channel for a discharge of 64 cumecs as per Lacey's theory will be
A) 19m B) 38m C) 57m D) 76m

65. If 'D' is the depth of scour below original bed, then the width of launching apron is generally taken as
A) 1.2 D B) 1.5 D C) 2.0 D D) 2.5 D

66. Which of the following does not represent an activity?
A) site located B) foundation is being dug
C) the office area is being cleaned D) the invitations are being sent

67. Total float for any activity is defined as the difference between
A) its latest finish time and earliest start time for its successor activity
B) its latest start time and earliest start time
C) its latest start time and earliest finish time
D) its earliest finish time and earliest start time for its successor activity

68. Critical path
A) is always longest B) is always shortest C) may be longest D) may be shortest

69. Slack time in PERT analysis
A) can never be greater than zero B) is always zero for critical activities
C) can never be less than zero D) is minimum for critical events

70. In resource levelling
A) total duration of project is reduced B) total duration of project is increased
C) uniform demand of resources is achieved D) cost of project is controlled

71. A fully saturated soil is said to be
A) one phase system B) two phase system with soil and air
C) two phase system with soil and water D) three phase system

72. If the volume of voids is equal to the volume of solids in a soil mass, then the values of porosity and voids ratio respectively are
A) 1.0 and 0 B) 0 and 1.0 C) 0.5 and 1.0 D) 1.0 and 0.5

73. The hydraulic head that would produce a quick condition in a sand stratum of thickness 1.5 m, specific gravity 2.67 and voids ratio 0.67 is equal to
A) 1.0 m B) 1.5 m C) 2.0 m D) 3.0 m

74. If the permeability of a soil is 0.8mm/sec, the type of soil is
A) Gravel B) sand C) silt D) clay

75. For sand of uniform spherical particles, the ratio of void ratio in the loosest and the densest states is
A) 2.6 B) 3.5 C) 4.6 D) 3.0

76. In which of the following directions, the strength of timber is maximum
A) parallel to grains B) 45^0 to grains
C) perpendicular to grains D) same in all directions

77. The moisture content in a well-seasoned timber is
A) 4 to 6% B) 10 to 12% C) 15 to 20% D) 100%

78. Which of the following cements is suitable for use in mass concreting works such as large dams?
A) Ordinary Portland cement B) Low heat cement
C) Rapid hardening cement D) Sulphate resisting cement

79. Paints with white lead base are suitable for painting of
A) woodwork B) ironwork C) both woodwork and ironwork D) none of the above

80. The maximum total settlement for raft foundation on clayey soils should be limited to
A) 25 mm B) 25 to 40 mm C) 40 to 65 mm D) 65 to 100 mm

81. Neoprene is suitable for use in
A) bearings of bridges B) hard duty rubber coatings of floors
C) joinery works D) floors of dance halls

82. The split tensile strength of M15 grade concrete when expressed as a percentage of its compressive strength is
A) 10 to 15% B) 15 to 20% C) 20 to 25% D) 25 to 30%

83. The wood preservative 'creosote' is derived from
A) wood or coal B) acidic cupric chromate
C) chromate zinc chloride D) pentachlorophenol

84. Tensile strength of concrete is measured by
A) direct tension test in UTM
B) applying compressive load along the diameter of the cylinder
C) applying third point loading on a prism
D) applying tensile load along the diameter of the cylinder

85. High Alumina cement is produced by fusing together a mixture of
A) limestone & Bauxite B) limestone, bauxite and gypsum
C) limestone, gypsum & clay D) limestone, gypsum, bauxite, clay & chalk

86. To make one cubic meter of 1:2:4 by volume concrete, the volume of coarse aggregate required is
A) 0.95 m^3 B) 0.85 m^3 C) 0.75 m^3 D) 0.65 m^3

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

88. A splitting tensile test is performed on a cylinder of diameter 'D' and length 'L'. If the ultimate load is 'P', then the splitting tensile strength of concrete is given by
A) $P/\pi DL$ B) $2P/\pi DL$ C) $4PL/\pi D^3$ D) $2PD/\pi L^3$

89. Increase in fineness of cement
A) reduces the rate of strength development and leads to higher shrinkage
B) increases the rate of strength development and reduces the rate of deterioration
C) decreases the rate of strength development and increases the bleeding of cement
D) increases the rate of strength development and leads to higher shrinkage

90. The diagram showing the variation of axial load along the span is called
A) shear force diagram B) bending moment diagram
C) thrust diagram D) influence line diagram

91. A prismatic beam of length l and fixed at both ends carries a uniformly distributed load. The distance of points of contraflexure from either end is
A) 0.207 l B) 0.211 l C) 0.277 l D) 0.25 l

92. Two beams, one of circular x-section and other of square x-section, have equal areas of x-section. If subjected to bending
A) circular section is more economical B) square section is more economical
C) both sections are equally strong D) both sections are equally stiff

93. Eulers' formula for a mild steel long column hinged at both ends is not valid for slenderness ratio
A) greater than 80 B) less than 80 C) greater than 180 D) greater than 120

94. If a circular shaft is subjected to a torque T and bending moment M, the ratio of maximum bending stress and maximum shear stress is
A) 2M/T B) M/2T C) M/T D) 2T/M

95. Strain energy stored in a member is given by
A) 0.5 x stress x volume B) 0.5 x strain x volume
C) 0.5 x stress x strain x volume D) 0.5 x stress x strain

96. In a strained body, three principal stresses at a point are denoted by σ_1, σ_2, σ_3 such that $\sigma_1 > \sigma_2 > \sigma_3$. If σ_0 denoted yield stress, then according to the maximum shear stress theory
A) $\sigma_1 - \sigma_2 = \sigma_0$ B) $\sigma_1 - \sigma_3 = \sigma_0$ C) $\sigma_2 - \sigma_3 = \sigma_0$ D) $\sigma_1 + \sigma_2 = \sigma_0$

97. The degree of static indeterminacy of a pin-jointed space frame is given by
A) m+ r – 2j B) m+ r -3j C) 3m+ r -3j D) m+ r + 3j
where 'm' is number of unknown member forces, 'r' is unknown reaction components and 'j' is number of joints

98. A symmetrical two-hinged parabolic arch when subjected to a uniformly distributed load on the entire horizontal span, is subject to
A) radial shear alone B) normal thrust alone
C)normal thrust and bending moment D)normal thrust, radial shear and bending moment

99. A symmetrical parabolic arch of span 20 m and rise 5 m is hinged at the springing. It supports a uniformly distributed load of 2t/m run of the span. The horizontal thrust in tonnes at each of the springing is
A) 8 B) 16 C) 20 D) zero

100. Alkali-aggregate reaction can be controlled by
A) use of non-reactive aggregates B) controlling humidity
C) use of low alkali OPC D) all of the above

KEY

Post: SDE Civil (29.03.2014, Evening Session)

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