

QUESTION BOOKLET AND ANSWER KEY

For Recruitment Test for the post of

SDE Civil/PH

Code-P-1

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ENGLISH VERSION

1. 'ਸੋਹਲੇ ਗਾਉਣਾ' ਮੁਹਾਵਰੇ ਦਾ ਅਰਥ ਹੈ ?
 (A) ਨਿੰਦਿਆ ਕਰਨੀ (B) ਖੁਸ਼ੀ ਦੇ ਗੀਤ ਗਾਉਣੇ
 (C) ਸਿਫਤਾਂ ਕਰਨੀਆਂ (D) ਚੀਕਣਾ
2. ਪੰਜਾਬੀ ਧੁਨੀਆਂ ਨੂੰ ਕਿੰਨੀਆਂ ਕਿਸਮਾਂ ਵਿੱਚ ਵੰਡਿਆ ਜਾਂਦਾ ਹੈ :
 (A) ਦੋ (B) ਤਿੰਨ (C) ਚਾਰ (D) ਪੰਜ
3. 'ਮਲਵਈ' ਕੀ ਹੈ :
 (A) ਭਾਸ਼ਾ (B) ਵਿਆਕਰਣ (C) ਖੇਤਰ (D) ਉਪ-ਭਾਸ਼ਾ
4. ਵਿਸਮਿਕ ਹੁੰਦੇ ਹਨ :
 (A) ਜਿਹੜੇ ਕੇਵਲ ਖੁਸ਼ੀ ਦੇ ਭਾਵਾਂ ਨੂੰ ਪ੍ਰਗਟ ਕਰਨ
 (B) ਜਿਹੜੇ ਕੇਵਲ ਗਮੀ ਦੇ ਭਾਵਾਂ ਨੂੰ ਪ੍ਰਗਟ ਕਰਨ
 (C) ਜਿਹੜੇ ਖੁਸ਼ੀ, ਗਮੀ, ਹੈਰਾਨੀ ਅਤੇ ਚਿੰਤਾ ਦੇ ਭਾਵ ਪ੍ਰਗਟ ਕਰਨ
 (D) ਜਿਹੜੇ ਚਿੰਤਾ ਦੇ ਹੀ ਭਾਵ ਪ੍ਰਗਟ ਕਰਨ
5. ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਅਨੁਸਾਰ 'ਦਾ' ਸ਼ਬਦ ਕੀ ਹੈ
 (A) ਸੰਬੰਧਕ (B) ਯੋਜਕ (C) ਮਿਸ਼ਰਤ (D) ਪੜਨਾਵ

Directions (Qs. 6- 8):- Choose the opposite of the given word:-

- Q. 6. Literal:-**
 (A) Illiterate (B) Lateral (C) Illiberal (D) Figurative
- Q.7. Base:-**
 (A) Determined (B) Delectable (C) Good (D) Casual
- Q.8. Morbid:-**
 (A) Solicitous (B) Wholesome (C) Melancholic (D) Equivocal

Directions (Qs.9-10) :- Choose the correct preposition to be filled in the blanks :-

- Q.9. Rama is anxious _____ his performance.**
 (A) about (B) at (C) for (D) with
- Q.10. Sania Mirza was knocked _____ in the first round of the Australian Open.**
 (A) for (B) off (C) with (D) out.
- 11. MSP stands for?**
 (A) Minimum selling Price (B) Maximum Support Price
 (C) Maximum Selling Price (D) Minimum Support Price
- 12. The percentage of seats reserved for children from disadvantaged and disability group according to "Right of Children to free and compulsory education" is?**
 (A) 25% (B) 20% (C) 30% (D) 22.5%

13. **The first state in India to constitute the institution of Lokayukta is?**
 (A) Kerala (B) Punjab (C) Orissa (D) Karnataka
14. **Which of the following is a non luminous object?**
 (A) Sun (B) Moon (C) CFL (D) tube light
15. **Which of the following is not the name of a banking organisation?**
 (A) HDFC (B) FICCI (C) IDBI (D) ICICI
16. **What is a closed circuit?**
 (A) a circuit in which current cannot flow (B) an electric cell
 (C) a torch bulb (D) a circuit in which current can flow
17. **A bar magnet when suspended freely always points in the?**
 (A) East west direction (B) North south direction
 (C) vertically upwards (D) vertically downwards
18. **The Halley's comet can be seen after every _____ years.**
 (A) 76 (B) 72 (C) 66 (D) 86
19. **The presidential system of government is characterized by?**
 (A) adult franchise (B) executive
 (C) legislature (D) separation of powers
20. **FIR stands for?**
 (A) First Information Report (B) Formal Intimation Report
 (C) First Investigation Report (D) Formal Investigation Report
21. **International Kite festival in India is held at?**
 (A) Ahmedabad (B) Gandhinagar
 (C) Porbunder (D) Pune
22. **Which country hosted the first cricket world cup?**
 (A) West Indies (B) England
 (C) Australia (D) India
23. **The smallest element of computer storage is?**
 (A) byte (B) bit
 (C) pixel (D) disk
24. **Which is the newly inducted fleet tanker to the Indian navy?**
 (A) INS Virat (B) INS Shakti
 (C) INS Kursura (D) INS Arabia
25. **What is Slinex 2?**
 (A) Fastest super computer (B) India USA joint Naval exercise
 (C) Satellite launched by China (D) India-Sri lanka joint naval exercise
26. **January 25 is observed as?**
 (A) International women's Day (B) National literacy day
 (C) World peace day (D) National Voters day

27. **The fourth state of matter is referred to as?**
 (A) Plasma (B) liquid drop
 (C) Bose-Einstein condensate (D) none of these
28. **Which of the following constitutes the Indian Parliament?**
 (A) Lok Sabha (B) Rajya Sabha
 (C) Lok Sabha and Rajya Sabha (D) Lok Sabha, Rajya Sabha and President
29. **When a Banker talks about CMA, what he is talking about?**
 (A) Credit Monitoring Agreement
 (B) Corporate Monitoring Agreement
 (C) Company Management Accountant
 (D) Commissionate of Municipal Administration
30. **“Top Quark” refers to?**
 (A) A latest medicine (B) latest fundamental particle discovered
 (C) A Hollywood film (D) A super computer
31. **“Psephology” refers to the study of ?**
 (A) Bio-diversity (B) fossils
 (C) election trends (D) human hair
32. **‘Voice of the people’ is the Punch line of?**
 (A) Indian Express (B) The Tribune
 (C) Hindustan times (D) Times of India
33. **Local self government in India was introduced by?**
 (A) Lord Cornwallis (B) Lord Ripon
 (C) Lord Dalhousie (D) Lord Canning
34. **Which of the following is responsible for the depletion of Ozone layer?**
 (A) Carbon dioxide (B) carbon monoxide
 (C) chlorofluorocarbons (D) ultraviolet rays.
35. **Green house effect is caused by high levels of?**
 (A) fog, smoke and oxidants (B) Carbon dioxide and methane
 (C) Carbon dioxide (D) Carbon and aromatic hydrocarbons
36. **Three of the following four pairs have same relation between their elements and hence form a group. Which one does not belong to the group?**
 (A) Plenty : Leptyn (B) Coward : Owcrad
 (C) Alwins : Lwanis (D) Examin : Xaeimn
37. **Which pair of the English letters should be the next in the series of pairs of letters of English alphabet given below? BE, GK, MR, TZ, BI**
 (A) JR (B) KS (C) JS (D) KR
38. **What should come in place of question mark (?) in the following series?**
 A3E, D6H, ?, J12N
 (A) F9J (B) G9L (C) F9K (D) none of these

39. Five friends A, B, C, D and E are staying in the same locality. B's house is to the east of A's house and to the north of C's house. C's house is to the west of D's house. D's house is in which direction with respect to A's house?
(A) South-east (B) North east (C) East (D) none of these
40. If white is called blue, blue is called red, red is called yellow, yellow is called green, green is called black, black is called violet and violet is called orange, what would be the colour of human blood?
(A) red (B) yellow (C) green (D) violet
41. If BOMBAY is written as MYMYMY, how will TAMILNADU be written in that code?
(A) MNUMNUMNU (B) TIATITIA
(C) IATITAT (D) ALDALDALD
42. In a certain code 'open the door' is written 'ka te jo', 'door is closed' is written as 'jo pa ma', and 'this is good' is written as 'la ra pa' What is the code for 'closed'?
(A) pa (B) ma (C) jo (D) ka
43. In certain code language '743' means 'mangoes are good'; '657' means 'eat good food' and '934' means 'mangoes are ripe, which digit means ripe in that language?
(A) 9 (B) 4 (C) 5 (D) 7
44. Pointing to a photograph a man said, "I have no brother or sister but that man's father is my father's son". Whose photograph was it?
(A) his own (B) his son's (C) his father's (D) his nephew's
45. A and B are brothers. C and D are sisters. A's son is D's brother. How is B related to C?
(A) father (B) brother (C) grandfather (D) uncle
46. Arrange the given words in alphabetical order and choose the one that comes second
(A) explosion (B) eager (C) emergency (D) ecstasy
47. How many D's are there in the following series which are immediately followed by W but not immediately preceded by K?
KDCWKDWNKGDWWDHKVDWZDW
(A) Three (B) One (C) Two (D) four
48. Rs.665 was divided among A, B, and C in the proportion of 2/3:4/3:4/5. What is C's share?
(A) Rs.133 (B) Rs.192 (C) Rs.240 (D) Rs.360
49. Physiology is related to Biology in the same way as Metaphysics is related to?
(A) Philosophy (B) Mathematics (C) Statistics (D) Physics

50. Three of the following four are alike in a certain way and so form a group. Which is the one that does not belong to that group?
 (A) Coriander (B) Mustard (C) cumin (D) Cardamom

51 Multimedia can contain

- A) Graphics, animation, video, music, and voice
 B) Only numeric-type data
 C) Numeric, text, and picture data
 D) Databases that in turn, contain other databases, creating massive data collection

52 Which of the following can be used as a primary memory?

- A) Magnetic Tape B) RAM C) Optical Disk D) Hard Disk

53 Which of the following operating system is available in free domain?

- A) Red Hat Linux B) SUN Solaris C) Windows XP D) Mac OS

54 Professionally designed model presentations are called

- A) Animations B) Slide shows C) Templates D) Copy runs

55 Which of the following is an output device?

- A) Web Cam B) Scanner C) Multimedia Projector D) Mouse

56 Which is the default file extension for MS-Word 2007 files :

- A) .doc B) .docx C) .word D) .rtf

57 Buying and Selling goods over Web is known as :

- A) E-commerce B) M-commerce C) Trading D) Hyper Market

58 Basic purpose of Microprocessor is to:

- A) store information B) print data C) compute data D) send an e-mail

59 Portrait and Landscape in Ms-Office are

- A) Page Orientation B) Paper Size C) Page Layout D) All of above

60 Find and Replace utility is available in:

- A) MS-Word B) MS-Excel C) MS-Power Point D) All of the above

61. Di-calcium silicate in cement

- A) Hydrates rapidly B) Generates less heat of hydration
 C) Reacts with water only D) Hardens rapidly

62. The bricks which are extensively used for basic refractories in furnaces are

- A) Chrome bricks B) Sillimarite bricks C) Magnesite bricks D) Fosteric bricks

63. A quick setting cement has original setting time of about

- A) 50 minutes B) 40 minutes C) 15 minutes D) 5 minutes

64. In building construction, the place of providing damp proof course is at the

- A) Basement level B) Window sill level C) Lintel level D) Roof level

65. A wall built to resist the pressure of earth filling is known as
 A) Parapet wall B) Retaining wall C) Buttress D) None of the above
66. The minimum width of a stair in residential building is usually restricted to
 A) 30 cm B) 50 cm C) 75 cm D) 85 cm
67. Which one of the following methods of levelling eliminates the error due to curvature and refraction
 A) Fly leveling
 B) Leveling by equalizing the distances of backsight and foresight
 C) Check leveling
 D) Precise leveling
68. Invar steel tape is used for
 A) Movement of base line in triangulation survey
 B) Measurement of tie lines in translation survey
 C) Measurement of check line in translation survey
 D) None of the above
69. The whole circle bearing of line is $300^{\circ} 15'$. Its quadrant bearing would be
 A) S $300^{\circ} 15'$ F B) S $59^{\circ} 15'$ W C) N $59^{\circ} 15'$ W D) N $59^{\circ} 15'$ E
70. What is the minimum number of satellites required from which signals can be recorded to enable a global positioning system receiver to determine latitude, longitude and altitude?
 A) One B) Two C) Three D) Four
71. The vertical distance between any two consecutive contours is known as
 A) Contour line B) Contour interval
 C) Contour gradient D) Horizontal equivalent
72. The branch of surveying in which measurements of distances is done by computations, is known as
 A) Plane tabling B) Theodolite surveying
 C) Tachometric surveying D) Estimating and costing
73. Which one of the following defects indicates progressive disintegration of bituminous carpet surfacing by loss of aggregates?
 A) Potholes B) Revelling C) Edge breaking D) Rutting
74. Overturning of vehicles on a curve can be avoided by using
 A) Transition curve B) Vertical curve C) Compound curve D) Reverse curve
75. The maximum allowable super elevation
 A) 1 in 12 B) 1 in 18 C) 1 in 15 D) 1 in 30
76. Sinking fund method is useful in
 A) Depreciation B) Obsolescence C) Liquidation D) Scrap value
77. Original cost of property minus depreciation is
 A) Book value B) Salvage value C) Scrap value D) Obsolescence value

78. Generally unit of measurement for partition wall is
 A) Cu.m. B) Sq.m C) Running meter D) Numbers
79. Which one of the following project management techniques is deterministic in nature?
 A) CPM B) PERT C) GERT D) LCES
80. The direct cost of a project with respect to normal time is
 A) Minimum B) Maximum C) Zero D) Infinite
81. For laminar flow in a pipe carrying a given discharge, the height of surface roughness is doubled. In such a case, Danry-Weisbach friction factor will
 A) Remain unchanged B) Be halved C) Be doubled D) Increase fourfold
82. For medium silt whose average grain size is 0.16 mm, lacey's silt factor is likely to be
 A) 0.30 B) 0.45 C) 0.70 D) 1.32
83. Mean precipitation over an area is best obtained from gauged amounts by
 A) Thiessen method B) Linearly interpolated isohyetal method
 C) Arithmetic method D) Graphically weighted isohyetal method
84. At a hydraulic jump, the depth at the two sides are 0.4 m and 1.4 m. The head loss in the jump is nearly
 A) 1.0 m B) 0.9 m C) 0.7 m D) 0.45 m
85. Which of the following are claimed as advantageous in respect of aerobic sludge digestion as compared to anaerobic sludge digestion
 A) Lower BOD concentration in supernatant liquor
 B) Greater Production of methane
 C) Lesser operating cost
 D) None of the above
86. The following data pertain to a sewage sample:
 Initial D.O. = 10 mg/l
 Final D.O. = 2 mg/l
 Dilution to 1%
 The BOD of the given sample is
 A) 8 mg/l B) 800 mg/l C) 10 mg/l D) 100 mg/l
87. Uniformity coefficient of filter sand is given by
 A) D_{50}/D_5 B) D_{50}/D_{10} C) D_{60}/D_5 D) D_{60}/D_{10}
88. The river water is very turbid and polluted, the correct sequence of steps for treating the river water would be
 A) Pre sedimentation---pre chlorination---coagulation--sedimentation
 B) Coagulation---sedimentation---post chlorination
 C) Coagulation---filtanation---sedimentation---post chlorination
 D) Sedimentation---post chlorination

89. The dry density of soil is 1.5 g/cc. If the saturation water content were 50% then its saturation density and submerged density would, respectively, be
 A) 1.5 g/cc and 1 g/cc B) 2.0 g/cc and 1.0 g/cc
 C) 2.25 g/cc and 1.25 g/cc D) 2.50 g/cc and 1.50 g/cc
90. Which one of the following equations correctly gives the relationship between the specific gravity of soil grains (G) and the hydraulic gradient (i) to initiate 'quick' condition in a sand having a void ratio of 0.5
 A) $G = 0.5 i + 1$ B) $G = i + 0.5$ C) $G = 1.5 i + 1$ D) $G = 1.5 i - 1$
91. In a cohesionless soil deposit having a unit weight of 1.5 t/m^3 and an angle of internal friction of 30° , the active and passive lateral earth pressure intensities (in t/m^2) at a depth of 10 m will, respectively, be
 A) 15 and 5 B) 5 and 45 C) 10 and 20 D) 20 and 10
92. A sand deposit has a porosity of $1/3$ and its specific gravity is 2.5. The critical hydraulic gradient to cause sand boiling in the stratum will be
 A) 1.5 B) 1.25 C) 1.0 D) 0.75
93. A rectangular timber beam is cut out of a cylindrical log of diameter D, the depth of the strongest timber beam will be
 A) $\frac{\sqrt{1}}{2} \cdot D$ B) $\frac{\sqrt{2}}{3} \cdot D$ C) $\frac{\sqrt{5}}{8} \cdot D$ D) $\frac{\sqrt{3}}{4} \cdot D$
94. A high strength steel band saw of 90 mm width and 0.5 mm thickness runs over a pulley of 500 mm diameter. Assuming $E=200 \text{ GPa}$, the maximum flexural stress developed would be
 A) 200 MPa B) 100 MPa C) 400 MPa D) 500 MPa
95. Two shafts of solid circular cross section are identical except for their diameters d_1 and d_2 . They are subjected to the same torque T. The ratio of the strain energies stored U_1/U_2 will be
 A) $\left(\frac{d_1}{d_2}\right)^4$ B) $\left(\frac{d_1}{d_2}\right)^2$ C) $\left(\frac{d_2}{d_1}\right)^2$ D) $\left(\frac{d_2}{d_1}\right)^4$
96. A cast iron pipe of 1 m diameter is required to withstand a 200 m head of water. If the limiting tensile stress of the pipe material is 20 MPa, then the thickness of the pipe would be
 A) 25 mm B) 50 mm C) 75 mm D) 100 mm
97. The carbon content of structural steel is
 A) Less than 0.1% B) 0.10 to 0.25% C) 0.25 to 0.60% D) 0.60 to 1.00%
98. A welded filter joint of length L can be subjected to a maximum load of
 A) $(f_s \times L \times pss)/3$ B) $f_s \times L \times pss$
 C) $(0.7) \times f_s \times L \times pss$ D) $2(f_s \times L \times pss)$

Where pss = permissible shear stress
 f_s = fillet size

99. The slenderness ratio of the lacing bar for compression member usually does not exceed
A) 145 B) 100 C) 75 D) 50
100. A tie takes
A) Compressive load B) Tensile load C) Torsional load D) All of the above
101. The age of tree can be determined by
A) Cambium layer B) Annular rings C) Modullary rings D) Heart wood
102. The burning temperature of asphalt is
A) 60°C B) 100°C C) 200°C D) 250°C
103. After casting, an ordinary cement concrete on drying
A) Shrinks B) Expands C) Remains unchanged D) Swells
104. Durability of cement concrete generally improve by
A) Addition of cement B) Addition of sand
C) Vibrations D) Addition of coarse aggregates
105. The behaviour of concrete under instantaneous load is
A) Elastic B) Plastic C) Anelastic D) Visco-elastic
106. The cement becomes useless for concreting work when its moisture content exceeds
A) 0.5% B) 1% C) 2% D) 5%
107. The approximate ratio of the strength of cement concrete of 7 days to that of 28 days is
A) 0.65 B) 0.85 C) 1.0 D) 1.15
108. The beam sections has to be redesigned if the shear stress exceeds the allowable shear stress by
A) 2 times B) 4 times C) 6 times D) 10 times
109. The percentage of steel as per I.S. recommendation in compression should not exceed
A) 0.15% B) 1.5% C) 2.5% D) 4%
110. For RCC columns, a column is considered to be short if the effective length to least side ratio is less than
A) 12 B) 16 C) 24 D) 30
111. For one way slab, the ratio of length & breadth of the slab should be
A) Less than 1.5 B) More than 1.5 C) Less than 2 D) More than 2
112. For design purpose, the width of one-way slab is always taken as
A) 10 metres B) 0.1 metres C) 1 metre D) 5 metres

113. **The colour of water is measured on**
A) Turbidity scale B) Silica scale C) Platinum cobalt scale D) Threshold scale
114. **The first stage in water treatment is**
A) Sedimentation B) Filtration C) Disinfection D) Coagulation
115. **The removal of dissolved organic matter occurs in**
A) Slow sand filter B) Trickling filter C) Rapid sand filter D) Dual media filter
116. **The presence of ozone in water is indicated by**
A) Red colour B) Light yellow colour
C) Blue colour D) Black colour
117. **PH value of fresh sewage is expected to be**
A) 1 B) 3.5 C) 7 D) 8 to 11
118. **Activated carbon can be obtained from**
A) Lignite B) Wood C) Peat D) Any of the above
119. **Main gas from land-fill area is**
A) Oxygen B) Nitrogen C) Carbon monoxide D) Methane
120. **The coagulant widely used for sewage treatment is**
A) Ferric chloride B) Lime C) Alum D) Ferric sulphate

| KEY P-1 | | | | | | | | | | | |
|---------|---|----|---|----|---|----|---|-----|---|-----|---|
| Q | A | Q | A | Q | A | Q | A | Q | A | Q | A |
| 1 | C | 21 | A | 41 | A | 61 | B | 81 | C | 101 | B |
| 2 | A | 22 | B | 42 | B | 62 | C | 82 | C | 102 | D |
| 3 | D | 23 | B | 43 | A | 63 | D | 83 | B | 103 | A |
| 4 | C | 24 | B | 44 | B | 64 | A | 84 | D | 104 | A |
| 5 | A | 25 | D | 45 | D | 65 | B | 85 | A | 105 | A |
| 6 | D | 26 | D | 46 | D | 66 | C | 86 | B | 106 | D |
| 7 | C | 27 | A | 47 | A | 67 | B | 87 | D | 107 | A |
| 8 | B | 28 | D | 48 | A | 68 | A | 88 | A | 108 | B |
| 9 | A | 29 | A | 49 | A | 69 | C | 89 | B | 109 | D |
| 10 | D | 30 | B | 50 | D | 70 | C | 90 | C | 110 | A |
| 11 | D | 31 | C | 51 | A | 71 | B | 91 | B | 111 | D |
| 12 | A | 32 | B | 52 | B | 72 | C | 92 | C | 112 | C |
| 13 | C | 33 | B | 53 | A | 73 | A | 93 | B | 113 | C |
| 14 | B | 34 | C | 54 | C | 74 | A | 94 | A | 114 | A |
| 15 | B | 35 | B | 55 | C | 75 | B | 95 | D | 115 | A |
| 16 | D | 36 | A | 56 | B | 76 | A | 96 | B | 116 | B |
| 17 | B | 37 | B | 57 | A | 77 | A | 97 | B | 117 | D |
| 18 | A | 38 | D | 58 | C | 78 | B | 98 | C | 118 | D |
| 19 | D | 39 | A | 59 | A | 79 | A | 99 | A | 119 | D |
| 20 | A | 40 | B | 60 | D | 80 | A | 100 | B | 120 | A |