

QUESTION BOOKLET AND ANSWER KEY

For Recruitment Test for the post of

of

SDE Elect.

Code-P-2

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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, ਹੈਰਾਣੀ 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) ਪੜਨਾਂਵ

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) Porbundar (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) Commissionerate 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. In a stepper motor the angular displacement:

- (A) can be precisely controlled.
- (B) cannot be readily interfaced with micro computer based controller.
- (C) cannot be precisely controlled.
- (D) cannot be used for positioning of work tables and tools in NC machines.

62. If a transformer primary is energised from a square wave voltage source, its output voltage will be a:

- (A) square wave
- (B) sine wave
- (C) triangular wave
- (D) pulse wave

63. The primary winding of a 220/6 V, 50 Hz transformer is energised from 110 V, 60 Hz supply. The secondary output voltage will be:
(A) 3.6 V (B) 2.5 V (C) 3.0 V (D) 6.0 V
64. The e.m.f. induced in the primary of a transformer:
(A) is in phase with the flux (B) lags behind the flux by 90 degree
(C) leads the flux by 90 degree (D) is in phase opposition to that of flux
65. The current from the stator of an alternator is taken out to the external load circuit through:
(A) slip rings (B) commutator segments
(C) solid connections (D) carbon brushes
66. A motor which can conveniently be operated at lagging as well as leading power factors is the:
(A) squirrel cage induction motor (B) wound rotor induction motor
(C) synchronous motor (D) DC shunt motor
67. A hysteresis motor:
(A) is not self-starting in nature (B) is a constant speed motor
(C) needs dc excitation for starting (D) can not be run in reverse direction
68. The most suitable motor for low power applications is a/an:
(A) dc series motor (B) dc shunt motor
(C) ac two-phase induction motor (D) ac series motor
69. The size of a conductor used in power cables depends on the:
(A) operating voltage (B) power factor
(C) current to be carried (D) type of insulation used
70. Which of the following heating methods is independent of supply frequency?
(A) electric arc heating (B) induction heating
(C) electric resistance heating (D) dielectric heating
71. A two-winding single phase transformer has a voltage regulation of 4.5% at full-load and unity power-factor. At full-load and 0.80 lagging power-factor, the voltage regulation will be:
(A) 4.5% (B) less than 4.5%
(C) more than 4.5% (D) none of the above
72. In a dc shunt motor the terminal voltage is halved while the torque is kept constant. It will result as follows:
(A) both ω and I_a will be doubled
(B) ω will remain constant while I_a will be doubled
(C) ω will be doubled while I_a will be halved
(D) ω will remain constant while I_a will be halved
73. A balanced three-phase, 50 Hz voltage is applied to a 3 phase, 4 pole, induction motor. When the motor is delivering rated output, the slip is found to be 0.05. The speed of the rotor m.m.f. relative to the rotor structure is:
(A) 1500 r.p.m. (B) 1425 r.p.m. (C) 25 r.p.m. (D) 75 r.p.m.

74. An alternator is delivering rated current at rated voltage and 0.8 power-factor lagging. For delivering rated current at rated voltage and 0.8 power-factor leading, the required excitation will be:
(A) less (B) more (C) more or less (D) the same
75. The 'sheath' in a cable is used to:
(A) provide strength
(B) provide proper insulation
(C) prevent moisture from entering the cable
(D) avoid chances of rust on strands
76. The drive used in a mixer-grinder is a:
(A) dc motor (B) induction motor
(C) synchronous motor (D) universal motor
77. A 1:5 step-up transformer has 120V across the primary and 600 ohms resistance across the secondary. Assuming 100% efficiency, the primary current will be:
(A) 0.2 Amp. (B) 5 Amps. (C) 10 Amps. (D) 20 Amps.
78. A dc shunt generator has a speed of 800 rpm when delivering 20 A to the load at the terminal voltage of 220V. If the same machine is run as a motor it takes a line current of 20A from 220V supply. The speed of the machine (in rpm) will be:
(A) 800 (B) more than 800 (C) less than 800 (D) none of the above
79. A 50 Hz, 3-phase induction motor has a full load speed of 1440 rpm. The number of poles of the motor is:
(A) 4 (B) 6 (C) 12 (D) 8
80. In a 3-phase synchronous motor:
(A) the speed of the stator MMF is always more than that of the rotor MMF
(B) the speed of the stator MMF is always less than that of the rotor MMF
(C) the speed of the stator MMF is synchronous speed while that of the rotor MMF is zero
(D) the rotor and the stator MMF are stationary with respect to each other
81. In a capacitor start single-phase induction motor, the capacitor is connected in:
(A) series with the main winding (B) series with the auxiliary winding
(C) series with both the windings (D) parallel with the auxiliary winding
82. A synchro has a:
(A) 3-phase winding on the rotor and a single-phase winding on the stator
(B) 3-phase winding on the stator and a commutator winding on the rotor
(C) 3-phase winding on the stator and a single-phase winding on the rotor
(D) single-phase winding on the stator and a commutator winding on the rotor
83. Upon increasing the transmission voltage, volume of the conductor will:
(A) increase (B) not change
(C) decrease (D) increase for some time and then decrease

84. The size of the feeder is determined primarily by the:
(A) current carrying requirement
(B) percentage of variation of voltage in the feeder
(C) voltage across the feeder
(D) distance of transmission
85. In a three phase transformer, if the primary side is connected in star and secondary side is connected in delta, the angle difference between phase voltage in the two cases will be:
(A) delta side will lag by -30°
(B) star side will lag by -30°
(C) delta side will lead by 30°
(D) star side will lead by -30°
86. If slip of an induction machine is 0.02 and the stator supply frequency is 50 Hz, what will be the frequency of the rotor induced e.m.f.?
(A) 10 Hz
(B) 50 Hz
(C) 1 Hz
(D) 2500 Hz
87. A 4 pole lap wound dc shunt motor rotates at the speed of 1500 rpm, having a flux of 0.4 mWb and total number of conductors 1000. The value of e.m.f. will be:
(A) 100 Volts
(B) 0.1 Volts
(C) 1 Volts
(D) 10 Volts
88. The synchronous reactance of the synchronous machine is the ratio between:
(A) open circuit voltage and short circuit current at constant field current
(B) short circuit voltage and open circuit current at constant field current
(C) open circuit voltage and short circuit current at different field current
(D) short circuit voltage and open circuit current at different field current
89. A 3 stack stepper motor with 12 number of rotor teeth has a step angle of:
(A) 12°
(B) 8°
(C) 24°
(D) 10°
90. An oil-filled cable has a working stress of _____ kV/mm.
(A) 10
(B) 12
(C) 13
(D) 15
91. Inverse definite minimum time lag relay is also called _____.
(A) pilot relay
(B) differential relay
(C) over current relay
(D) directional overcurrent relay
92. In the heating process of _____ type a simple method of temperature control is possible by means of a special alloy which loses its magnetic properties at a particular high temperature and regains them when cooled to a temperature below this value.
(A) Indirect induction oven
(B) core type induction furnace
(C) coreless induction furnace
(D) high frequency eddy current
93. In order to reduce the harmful effects of harmonics on the AC side of a high voltage DC transmission system _____ are provided.
(A) synchronous condensers
(B) shunt capacitors
(C) shunt filters
(D) static compensators

94. An AC tachometer is just a _____ with one phase excited from the carrier frequency.
(A) two-phase AC servomotor (B) two-phase induction motor
(C) universal motor (D) hybrid stepper motor
95. The torque, in a _____ is proportional to the square of the armature current.
(A) DC shunt motor (B) stepper motor
(C) 2-phase servomotor (D) DC series motor
96. The eddy current loss in an AC motor is 100 watts at 50 Hz. Its losses at 100 Hz will be:
(A) 25 watts (B) 59 watts (C) 100 watts (D) 400 watts
97. The maximum power in a synchronous motor (for a given excitation) is produced when the power angle is equal to:
(A) 0° (B) 45° (C) 60° (D) 90°
98. A commutator in a d.c. machine:
(A) reduces power loss in armature
(B) reduces power loss in field circuit
(C) converts the induced a.c armature voltage into direct voltage
(D) is not necessary
99. The efficiency of a transformer is mainly dependent on:
(A) core losses (B) copper losses (C) stray losses (D) dielectric losses
100. A 3 phase, 400 volts, 50 Hz, 100 kW, 4 pole squirrel cage induction motor with a rated slip of 2% will have a rotor speed of:
(A) 1500 rpm (B) 1470 rpm (C) 1530 rpm (D) 1570 rpm
101. If the phase-angle of the voltage coil of a directional relay is 50° , the maximum torque angle of the relay is:
(A) 130° (B) 100° (C) 50° (D) 25°
102. If voltage at the two ends of a transmission line is 132 kV and its reactance is 40 Ohms, the capacity of the line will be:
(A) 435.6 MW (B) 217.8 MW (C) 251.5 MW (D) 500 MW
103. If a 220/440 V, 50 Hz, 5 KVA, single-phase transformer operates on 220V, 40Hz supply with secondary winding open circuited:
(A) both the eddy current and the hysteresis losses will decrease
(B) both the eddy current and the hysteresis losses will increase
(C) eddy current losses will remain the same but the hysteresis losses will increase
(D) eddy current losses will increase but the hysteresis losses will remain the same
104. The no load speed of a d.c. shunt motor is 1140 rpm. At full load, the armature reaction weakens the main flux by 5% whereas the armature circuit voltage drops by 10%. The motor full load speed in rpm will be:
(A) 1080 (B) 1203 (C) 1000 (D) 1200

105. The introduction of interpoles in between the main poles improves the performance of DC machines because:
(A) the interpole produces additional flux to augment the torque developed
(B) the flux waveform is improved with reduction in harmonics
(C) the inequality of air flux on the top and bottom halves of the armature is removed
(D) a counter emf is induced in the coil undergoing commutation
106. The rotor power output of a 3-phase induction motor is 15 kW and the corresponding slip is 4%. The rotor copper losses will be:
(A) 600 W (B) 625 W (C) 650 W (D) 700 W
107. An 1.8° step, 4-phase stepper motor has 40 teeth on 8 poles of the stator. The number of rotor teeth for their rotor will be:
(A) 40 (B) 50 (C) 100 (D) 80
108. Low head power plants generally use:
(A) Pelton Wheel Turbine
(B) Francis Turbine
(C) Combination of Pelton Wheel and Francis Turbines
(D) Kaplan Turbines
109. Electric ovens using heating elements made of _____ can produce a temperature up to 3000°C.
(A) nickel (B) graphite (C) chromium (D) iron
110. In DC generators, armature reaction is produced by the:
(A) field current (B) armature conductors
(C) field pole winding (D) load current in armature
111. Two transformers operating in parallel will share the load depending upon their:
(A) rating (B) leakage reactance
(C) efficiency (D) per-unit impedance
112. A 400kW, 3-phase, 440V, 50Hz induction motor has a speed of 950 rpm on full load. The machine has 6 poles. The value of slip for the machine will be _____.
(A) 0.06 (B) 0.10 (C) 0.04 (D) 0.05
113. Reduction in the value of capacitance of a capacitor-start motor, results in reduced:
(A) noise (B) speed (C) starting torque (D) armature reaction
114. Regenerative braking can:
(A) be used for stopping a motor
(B) not be easily applied to DC series motors
(C) be easily applied to DC shunt motors
(D) not be used for heavy duty-cycle motors

115. **The most advantageous method of generating electricity from sea is the:**
(A) Tidal power generation
(B) Ocean thermal energy conversion
(C) Ocean current power generation
(D) Wave power generation
116. **Electric resistance seam welding uses _____ electrodes.**
(A) pointed (B) disc (C) flat (D) domed
117. **For low voltage applications (below 1 kV), _____ cables are used.**
(A) paper insulated (B) plastic (C) single core (D) oil filled
118. **No load current in a transformer:**
(A) lags the applied voltage by 90°
(B) lags the applied voltage by somewhat less than 90°
(C) leads the applied voltage by 90°
(D) leads the applied voltage by somewhat less than 90°
119. **The temperature of resistance furnaces can be controlled by changing the:**
(A) applied voltage (B) number of heating elements
(C) circuit configuration (D) all of the above
120. **The line trap unit employed in carrier current relaying method offers:**
(A) high impedance to 50 Hz power frequency signal
(B) high impedance to carrier frequency signal
(C) low impedance to carrier frequency signal
(D) high impedance to 50 Hz power frequency signal and high impedance to carrier frequency signal

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