

DO NOT OPEN THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

इस पुस्तिका की सील तब तक न खोले जब तक कहा न जाए

A

JDD-4/FSL/X-14

Serial No.

POST CODE/पोस्ट कोड : 57/09,
24/13, 25/13, 26/13, 27/13, 28/13,
29/13, 31/13, 32/13, 33/13, 35/13

Write here Roll number and Answer-Sheet No.

यहाँ क्रमांक एवं उत्तर-पत्रिका संख्या लिखें

INT 001061

Roll No./ अनुक्रमांक

Answer Sheet No./ उत्तर-पत्रिका संख्या

POST : TECHNICAL/SCIENTIFIC

पद : तांत्रिक/वैज्ञानिक

Time Allowed : 1 hour

OBJECTIVE TYPE SCREENING TEST

Maximum Marks : 100

निर्धारित समय : 1 घंटे

वस्तुनिष्ठ स्क्रीनिंग परीक्षा

अधिकतम अंक : 100

Read the following instructions carefully before you begin to answer the questions.

प्रश्नों के उत्तर देने से पहले नीचे लिखे अनुदेशों को ध्यान से पढ़ लें।

IMPORTANT INSTRUCTIONS TO CANDIDATES

1. This Booklet contains 100 questions in all comprising the following Sections :

Sl. No.	Test Components	No. of Questions	Page No.
i)	General Awareness	20	4 - 7
ii)	General Intelligence and Reasoning Ability	20	8 - 13
iii)	Arithmetical and Numerical Ability	20	14 - 17
iv)	Test of General Science	20	18 - 21
v)	Test of Language : English	20	22 - 23

- All questions are compulsory and carry equal marks.
- The paper carries negative markings. For each wrong answer 0.25 mark will be deducted.
- In case of any discrepancy between the English and Hindi versions of any question, the English version will be treated as final/authentic.
- OMR Answer-Sheet is enclosed in this Booklet. You must complete the details of Roll Number, Question Booklet No., etc., on the Answer-Sheet and Answer-Sheet No. on the space provided above in this Question Booklet, before you actually start answering the questions, failing which your Answer-Sheet will not be evaluated and you will be awarded 'ZERO' mark.
- You must not tear off or remove any sheet from this Booklet. The Answer-Sheet must be handed over to the Invigilator before you leave the Examination Hall.
- Use of Calculator/Palmtop/Laptop/Other Digital Instrument/Mobile/Cell Phone/Pager is not allowed.
- Candidates found guilty of misconduct/using unfair means in the Examination Hall will be liable for appropriate penal/legal action.
- The manner in which different questions are to be answered has been explained at the back of this Booklet, which you should read carefully before actually answering the questions.
- No Rough Work is to be done on the Answer-Sheet.

उम्मीदवारों के लिए महत्वपूर्ण अनुदेश

1. इस पुस्तिका में कुल 100 प्रश्न हैं, जिनमें निम्नलिखित भाग शामिल हैं :

क्रमांक	परीक्षण विषय	प्रश्नों की संख्या	पृष्ठ क्रमांक
i)	सामान्य जानकारी	20	4 - 7
ii)	सामान्य बुद्धिमत्ता तथा तार्किक योग्यता	20	8 - 13
iii)	अंकगणितीय एवं संख्यात्मक योग्यता	20	14 - 17
iv)	सामान्य विज्ञान परीक्षा	20	18 - 21
v)	भाषा परीक्षा : अंग्रेजी	20	22 - 23

- सभी प्रश्न अनिवार्य हैं तथा सबके बराबर अंक हैं।
- प्रश्न पत्र में नकारात्मक अंकन होगा। हर गलत उत्तर के लिए 0.25 अंक काटा जायेगा।
- यदि किसी प्रश्न के हिन्दी तथा अंग्रेजी अनुवाद में कोई अंतर है तो अंग्रेजी अनुवाद को ही सही समझा जायेगा।
- इस उत्तर-पुस्तिका में ओ.एम.आर. उत्तर-पत्रिका संलग्न है। प्रश्नों के उत्तर वास्तव में शुरू करने से पहले आप उत्तर-पत्रिका में अपना रोल नम्बर, प्रश्न पुस्तिका संख्या, इत्यादि तथा इस प्रश्न पुस्तिका में उपरोक्त दिए गए स्थान पर उत्तर-पत्रिका की संख्या लिखें। अन्यथा आपकी उत्तर-पत्रिका को जाँचा नहीं जायेगा और शून्य अंक दिया जायेगा।
- इस पुस्तिका से कोई पन्ना फाड़ना या अलग करना मना है। परीक्षा-भवन छोड़ने से पहले उत्तर-पत्रिका निरीक्षक के हवाले कर दें।
- कैलकुलेटर/पामटॉप/लैपटॉप/अन्य डिजिटल उपकरण/मोबाइल/सेल फोन/पेजर का उपयोग वर्जित है।
- परीक्षा-भवन में अनुचित व्यवहार एवं कार्य के लिए दोषी पाये गये अभ्यर्थी युक्तिसंगत दंडनीय/वैधानिक कार्यवाही के पात्र होंगे।
- विभिन्न प्रश्नों के उत्तर देने की विधि इस पुस्तिका के पीछे छपे हुए निर्देशों में दे दी गई है, इसे आप प्रश्नों के उत्तर देने से पहले ध्यानपूर्वक पढ़ लें।
- कोई रफ कार्य उत्तर-पत्रिका पर नहीं करना है।

Go through instructions given in Page No. 24 (Back Cover Page)

A*

SEAL

SEAL



i) General Awareness

1. Who among the following was decorated with "Bharath Rathna" award in Feb. 2014 ?
(A) Sonia Gandhi
(B) Amitab Bacchan
(C) Sachin Tendulkar
(D) Rahul Gandhi
2. Recently, Karnataka team has become Ranji Trophy Champion for the 7th time. The captain of this team is
(A) K. L. Rahul
(B) Vinay Kumar
(C) Rahul Dravid
(D) None of these
3. Human Rights Day is observed on
(A) Dec. 1
(B) Dec. 3
(C) Dec. 10
(D) Dec. 23
4. Who is considered as the architect of Indian Constitution ?
(A) Mahatma Gandhi
(B) Jawaharlal Nehru
(C) Sardar V. Patel
(D) Dr. B. R. Ambedkar
5. The present Chief Justice of Supreme Court of India is
(A) Justice H. L. Dattu
(B) Justice P. Sadashivam
(C) Justice Santhosh Kumar Hegde
(D) Justice Venkatachalayya
6. Which of the following planets is the biggest ?
(A) Jupiter (B) Saturn
(C) Mercury (D) Venus
7. India's national emblem is adopted from
(A) Puri
(B) Sanchi
(C) Sarnath
(D) Mahabalipuram
8. In 1498, Vasco-da-Gama landed at
(A) Goa (B) Bombay
(C) Surat (D) Calicut
9. Universal blood donor belongs to the blood group
(A) A (B) B
(C) AB (D) O
10. Which of the following states does not touch the boundary of Bangladesh ?
(A) Assam (B) Nagaland
(C) Meghalaya (D) Tripura



11. An area legally reserved for wildlife in its natural surroundings is
(A) Social Forests
(B) National Park
(C) Sanctuary
(D) Biosphere Reserve
12. Who is the present Governor of Reserve Bank of India ?
(A) Dr. D. Subba Rao
(B) Dr. Raghuram G. Rajan
(C) Dr. Y. V. Reddy
(D) Dr. Bimal Jalan
13. When a moving bus suddenly applies brakes, the passengers sitting in it fall in the forward direction. This can be explained by
(A) Newton's First Law
(B) Newton's Second Law
(C) Newton's Third Law
(D) Theory of Relativity
14. The Headquarters of United Nations Organisation is situated at
(A) Geneva
(B) Paris
(C) Vienna
(D) None of these
15. Expand WTO.
(A) Window Trade Organisation
(B) World Treaty Organisation
(C) World Trade Organisation
(D) Wonderful Trade Organisation
16. According to the census 2011, which one among the following Union Territories has the least population ?
(A) Daman and Diu
(B) Dadra and Nagar Haveli
(C) Lakshadweep
(D) Puducherry
17. Which of the following is Maharashtra's famous form of folk theatre ?
(A) Nautanki
(B) Tamasha
(C) Ras
(D) Naat
18. R. K. Laxman of India is a well known
(A) Cartoonist
(B) Novelist
(C) Painter
(D) Dancer
19. Bodo language is spoken in which of the following States ?
(A) Mizoram
(B) Tripura
(C) Assam
(D) Arunachal Pradesh
20. The largest continent in terms of area is
(A) Africa
(B) North America
(C) Australia
(D) Asia



ii) General Intelligence and Reasoning Ability

21. Out of the four alternatives given below, three are similar in a certain way and thus form a group. Which one of the following does not belong to that group ?
- (A) X-Ray
(B) Telephone
(C) Radio
(D) Television
22. Which one of the following does not belong to the group ?
- (A) Saxophone
(B) Tabla
(C) Flute
(D) Clarinet
23. Keep the odd one out.
- (A) Volleyball
(B) Cricket
(C) Football
(D) Pocket
24. Which one of the following does not belong to the group ?
- (A) $(3 - 2)$ (B) 10°
(C) $\frac{5}{9-4}$ (D) $2'$

Directions (Qs. 25 – 27) : Eight friends P, Q, R, S, T, U, V and W are sitting in a circle facing the centre. Q is sitting between V and S. W is third to the left of Q and second to the right of P. R is sitting between P and V and Q and T are not sitting opposite to each other.

25. Who is third to the left of S ?
- (A) U
(B) T
(C) P
(D) None of these
26. Who is opposite to V ?
- (A) T
(B) W
(C) P
(D) Q
27. Who is sitting to the right of S ?
- (A) T
(B) R
(C) Q
(D) None of these
28. If "+" means " \div ", " \times " means " $-$ ", " \div " means "+", and " $-$ " means " \times ", then
- $$16 \div 8 \times 6 - 2 + 12 = ?$$
- (A) 3 (B) 20
(C) 23 (D) 22

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29. If the first ten letters of the following alphabet are written in the reverse order, which of the following letters will be sixth to the left of the second letter from the right end ?

A B C D E F G H I J

- (A) D
(B) G
(C) E
(D) H

30. In a certain code "TOGETHER" is written as "RQEGRJCT". In the same code "PAROLE" will be written as

- (A) NCPQJG
(B) NCQPJG
(C) RCTQNG
(D) RCPQJK

31. Pointing towards a person in a photograph, Geetha said, "He is the son of the father of my sister's brother". How is that person related to Geetha ?

- (A) Uncle
(B) Brother
(C) Cousin
(D) Maternal uncle

32. How many such 3's are there in the following number sequence which are immediately preceded by an odd number and immediately followed by an even number ?

5 3 8 9 4 3 7 2 3 8 1 3 8 4 2 3 5 7 3 4 2 3 6

- (A) One
(B) Two
(C) Three
(D) Four

33. If blood is called blue, blue is called red, red is called white, white is called rain, rain is called sky and sky is called air, which of the following is the colour of milk ?

- (A) white
(B) sky
(C) rain
(D) air

34. Gopal is shorter than Ashok but taller than Kiran. Naveen is shorter than Kiran. Jayesh is taller than Naveen. Ashok is taller than Jayesh. Who among them is the tallest ?

- (A) Gopal
(B) Jayesh
(C) Naveen
(D) Ashok

35. In a certain code language,
 "1 3 4" means "You are well"
 "2 5 8" means "They go home"
 "8 3 9" means "We are home"
 Which of the following represents
 "We" in that code language ?

(A) 9 (B) 3
 (C) 8 (D) 5

36. If in a given number 7 9 6 2 1 3 4 5 6 8,
 we interchange the first and the
 second digits, the third and the fourth,
 the fifth and the sixth and so on, then
 counting from the right end, which will
 be the eighth ?

(A) 3
 (B) 2
 (C) 4
 (D) 5

Directions (Qs. 37 and 38) : There are five
 friends standing in a row facing south.
 Jayesh is to the immediate right of Alok.
 Pramod is between Babir and Subodh.
 Subodh is between Jayesh and Pramod.

37. Who is at the extreme left end ?

(A) Babir
 (B) Jayesh
 (C) Alok
 (D) Subodh

38. Who is in the middle ?

(A) Subodh
 (B) Pramod
 (C) Babir
 (D) Jayesh

Directions (Qs. 39 and 40) : In each question
 below, there are some statements followed
 by four conclusions numbered I, II, III and IV.
 You have to take the given statements to be
 true even if they seem to be at variance from
 commonly known facts. Read all the
 conclusions and then decide which of the
 given conclusions logically and definitely
 follows from the given statements,
 disregarding commonly known facts.

39. **Statements :** Some birds are insects.
 All birds are butterflies. All insects are
 snakes.

Conclusions :

- I. Some snakes are birds.
 II. Some insects are birds.
 III. Some butterflies are insects.
 IV. All snakes are insects.

(A) All
 (B) I, II and III only
 (C) Only IV
 (D) I and II only

40. **Statements :** All mangoes are
 brinjals. All brinjals are lady's fingers.
 Some lady's fingers are oranges.

Conclusions :

- I. Some oranges are brinjals.
 II. All brinjals are mangoes.
 III. Some mangoes are oranges.
 IV. All lady's fingers are mangoes.

(A) I only
 (B) IV only
 (C) All
 (D) None



iii) Arithmetical and Numerical Ability

41. If Arithmetic Mean and Harmonic Mean of two numbers are 10 and 6.4 respectively, find their Geometric Mean.
 (A) 8
 (B) 0.8
 (C) 5
 (D) 16
42. The radius of a cone is 7 cm and slant height is 10 cm. Find the total surface area.
 (A) 270 sq.cm.
 (B) 374 sq.cm.
 (C) 189 sq.cm.
 (D) 1890 sq.cm.
43. If $4a = \frac{36}{a}$, $a = ?$
 (A) ± 9
 (B) ± 6
 (C) ± 3
 (D) ± 12
44. $10^\circ = ?$
 (A) 0
 (B) 100
 (C) 10
 (D) 1
45. Raviraj invested ₹ 10,000 at compound interest rate of 10% p.a. for a period of 3 years. How much amount will he get after 3 years?
 (A) ₹ 13,210
 (B) ₹ 13,320
 (C) ₹ 13,310
 (D) ₹ 13,130
46. $(\sqrt{7} + \sqrt{5})(\sqrt{7} - \sqrt{5}) = ?$
 (A) 10
 (B) 2
 (C) 12
 (D) 4
47. Three circles with radius 2 cm, 3 cm and 4 cm respectively touch each other externally. If their centres are P, Q and R. Find the perimeter of $\triangle PQR$.
 (A) 18 cm
 (B) 9 cm
 (C) 24 cm
 (D) 20 cm
48. How many 3 digit numbers can be formed using the numbers 6, 1, 2, 3 without repetition?
 (A) 36
 (B) 24
 (C) 18
 (D) 12
49. Tenth term of the progression $\frac{1}{3}, \frac{1}{7}, \frac{1}{11}, \dots$ is
 (A) $\frac{1}{42}$
 (B) $\frac{1}{41}$
 (C) $\frac{1}{39}$
 (D) $\frac{1}{40}$
50. Ratio of two numbers is 3 : 4. Their HCF is 4, then their LCM is
 (A) 48
 (B) 24
 (C) 16
 (D) 12



51. For which sum (principal) the difference between the compound interest and simple interest for 2 years at 10% is ₹ 200 ?
(A) ₹ 2,000 (B) ₹ 4,000
(C) ₹ 20,000 (D) ₹ 40,000
52. The polyhedron having the same number of faces and vertices is
(A) Hexahedron
(B) Tetrahedron
(C) Octahedron
(D) None of these
53. A and B invested money in the ratio 5 : 3, B and C invested money in the ratio 2 : 3. In what ratio, profit should be distributed between A, B and C at the end of the year ?
(A) 5 : 3 : 3 (B) 5 : 2 : 3
(C) 10 : 5 : 3 (D) 10 : 6 : 9
54. Rita's present age is four times her daughter's present age and two thirds of her mother's present age. Total of present ages of all of them is 154 years. What is the difference between Rita's present age and Rita's mother's present age ?
(A) 28 yrs. (B) 34 yrs.
(C) 32 yrs. (D) 30 yrs.
55. Twelve men by working 6 hours/day can complete a work in 10 days. In how many days ten men by working 8 hours/day can complete the same work ?
(A) 12 days (B) 11 days
(C) 10 days (D) 9 days
56. If 25% of a number is subtracted from a second number, the second number reduces to its five-sixth. What is the ratio of the first number to the second number ?
(A) 3 : 2 (B) 2 : 3
(C) 4 : 3 (D) 3 : 4
57. In a 2 digit numbers, the sum of the 2 digits is 5. If the digits are interchanged, new number will be 9 more than the original number. Find the original number.
(A) 32 (B) 14
(C) 41 (D) 23
58. $\sqrt[3]{8^2} + \sqrt[2]{25^3} = ?$
(A) 129 (B) 7
(C) 125 (D) 27
59. John travels A to B at 30 KM/H and returns from B to A at 20 KM/H speed. Find the average speed of his total journey.
(A) 24 KM/H
(B) 25 KM/H
(C) 26 KM/H
(D) 22 KM/H
60. A man sells calculator at the rate of ₹. 560 each which includes 12% profit. What amount of profit will he earn in 15 days if he sells 8 calculators per day ?
(A) ₹ 8,000
(B) ₹ 1,200
(C) ₹ 7,200
(D) ₹ 6,000



iv) Test of General Science

61. Tripple vaccine is administered to a new born baby to immunise it against
(A) Whooping cough, tetanus, measles
(B) Whooping cough, tetanus, diphtheria
(C) Tetanus, diphtheria, smallpox
(D) Whooping cough, tetanus, tuberculosis
62. A device used for measuring heat is called
(A) Thermometer
(B) Heatometer
(C) Calorimeter
(D) Ammeter
63. Law of heredity was put forward by
(A) Mendeleev (B) Pavlov
(C) Darwin (D) Mendel
64. Water is made up of
(A) Nitrogen and hydrogen
(B) Hydrogen and oxygen
(C) Nitrogen and oxygen
(D) Chlorine and oxygen
65. 1 Hectare = ?
(A) 1000 sq.m.
(B) 100 sq.m.
(C) 10000 sq.m.
(D) 5000 sq.m.
66. A Television remote uses
(A) infrared waves
(B) cosmic waves
(C) microwaves
(D) E-waves
67. Which of the following animals is a parasite ?
(A) Amoeba
(B) Sponge
(C) Plasmodium
(D) Earthworm
68. In which of the following processes is energy released ?
(A) Respiration
(B) Photosynthesis
(C) Ingestion
(D) Absorption
69. What is the chemical name of common salt used in kitchen ?
(A) Potassium sulphate
(B) Calcium chloride
(C) Ammonium chloride
(D) Sodium chloride
70. How much is the density of pure water ?
(A) 3 gm/c.c. (B) 1 gm/c.c.
(C) 2.5 gm/c.c. (D) 2 gm/c.c.



71. Noise is measured in
(A) Watt
(B) REM
(C) Centigrade
(D) Decibel
72. Which is the third nearest planet to the sun ?
(A) Jupiter (B) Mars
(C) Venus (D) Earth
73. A concave lens always forms an image which is
(A) real and erect
(B) virtual and erect
(C) real and inverted
(D) virtual and inverted
74. Atoms with same atomic number but different atomic mass are called
(A) Isobars
(B) Isotones
(C) Isotopes
(D) Isotypes
75. Most important function of blood is to transport
(A) Nutrients
(B) Oxygen
(C) Waste products
(D) Hormones
76. Which planet is seen brightest from the earth ?
(A) Venus
(B) Mars
(C) Mercury
(D) Jupiter
77. Which of the following is most elastic ?
(A) Glass
(B) Copper
(C) Steel
(D) Sponge
78. When an object is placed between two mirrors placed parallel to each other, how many images will be formed ?
(A) 2
(B) 4
(C) 6
(D) infinite
79. Pure gold is
(A) 18 carat
(B) 20 carat
(C) 24 carat
(D) 26 carat
80. Dynamo is a device that converts
(A) Mechanical energy into electrical energy
(B) Electrical energy into mechanical energy
(C) A.C. into D.C.
(D) Heat into electricity



v) Test of Language : English

भाषा परीक्षा : अंग्रेजी

Directions (Qs. 81 – 85) : Some parts of the sentences have errors and some have none. Find out which part of a sentence (A), (B), (C) has an error. If a sentence is free from error, choose (D) as your answer.

81. The principal asked (A) / Mani and I (B) / where our teacher was (C) / No error (D)
82. Neither the USA nor the UK (A) / are the largest democracy (B) / in the twentieth century (C) / No error (D)
83. Newspaper (A) / carried a report (B) / of the plane crash (C) / No error (D)
84. No sooner (A) / had we set out (B) / when a thunder storm occurred (C) / No error (D)
85. Twelve inches (A) / makes (B) / a foot (C) / No error (D)

Directions (Qs. 86 – 90) : Sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four.

86. She did not approve _____ my going abroad for further studies.
(A) about
(B) over
(C) of
(D) with

87. She _____ because she had been waiting for you for an hour.
(A) was angry
(B) is angry
(C) will be angry
(D) shall be angry
88. I can imagine no place _____ interesting than a railway station.
(A) as
(B) better
(C) more
(D) equally
89. The leader, with all his followers, _____ imprisoned.
(A) were
(B) are
(C) will
(D) was
90. Racial violence erupted throughout the United States _____ Martin Luther king was assassinated in April 1968.
(A) while
(B) for
(C) because
(D) when



91. Find the correctly spelt word

- (A) courageous
- (B) currageous
- (C) couragious
- (D) curragious

92. Choose the word opposite in meaning to the word "ignore".

- (A) forget
- (B) delete
- (C) consider
- (D) erase

93. Past tense of the verb "strike" is

- (A) struk
- (B) struck
- (C) striked
- (D) stroke

94. Plural of the word "radius" is

- (A) reduce
- (B) radiuses
- (C) roudies
- (D) radii

95. Feminine gender of "horse" is

- (A) mare
- (B) horsy
- (C) mary
- (D) horsie

Directions (Qs. 96 – 100) : In the following passage, at certain points you are given a choice of four words. Choose the one which fits the meaning of the passage.

Picasso is considered by many as the greatest painter of the modern age. There are stories and legends about him. Once, on a beach in Southern France, a little boy, obviously sent by his parents, approached Picasso ... (96) ... a sheet of paper and begged for a small autographed drawing. Picasso ... (97) ... for a moment, then tore up the paper, took ... (98) ... colour crayons, drew designs on the boy's chest ... (99) ... neck and signed his 'work' and sent the youngster ... (100) ... to his parents.

96. (A) with
(B) by
(C) at
(D) for

97. (A) painted
(B) thought
(C) stand
(D) ran

98. (A) back
(B) aside
(C) some
(D) over

99. (A) and (B) near
(C) behind (D) above

100. (A) after (B) again
(C) back (D) in