

BIRLA INDUSTRIAL & TECHNOLOGICAL MUSEUM
(A unit of National Council of Science Museums)
KOLKATA-700 019

Written Test for Recruitment of Office Assistant (Gr.III)

Time : 2 Hours

Total Marks : 100

Name of the Candidate : _____ Signature: _____
Email ID : _____ Mobile No. : _____ Roll No.: _____

General Instructions :

1. All the questions are compulsory.
2. There will be no negative marks for wrong answers.
3. Rough work may be done on blank sheet to be provided in the Examination Hall.
4. Question Paper & Rough Sheet, if any, have to be submitted by the candidate to the Invigilator after completing the exam.

A. Select the correct answer:

(20 X 1 = 20)

1. If $7 \times 8 = 49$, $4 \times 4 = 12$ and $6 \times 4 = 18$, what will 9×6 be?
(a) 54 (b) 50 (c) 45 (d) None of the above
2. Five men A, B, C, D and E read a newspaper. The one who reads first gives it to C, the one who reads last had taken it from A. E was not the first or last to read. There were two readers between B and A. Find the person who read the newspaper last.
(a) E (b) B (c) D (d) A
3. Pick odd one out.
(a) Foreword (b) Text (c) Preface (d) Index
4. Find the missing number in the following question.

3	6	8
5	8	4
4	7	?

(a) 6 (b) 7 (c) 8 (d) 9
5. A stands for 'addition', B for 'subtraction', C for 'division', D for 'multiplication', E for 'less than', F for 'greater than' and G for 'equal to'. Out of the alternatives only one expression is correct according to the letter symbols. Identify that.
(a) $18 \div 2 = 4 + 6 \times 9$ (b) $6 \div 4 = 12 + 4 \times 2 + 18$
(c) $10 \div 2 = 4 + 6 \times 12$ (d) $9 + 7 = 4 \times 2 + 14$
6. The average age of a husband and his wife was 23 years at the time of their marriage. After five years they have a one year old child. What was the average age of the family of three when the child was born?
a) 21 years b) 20 years c) 18 years d) 19 years

7. Mausmi says, "He is the only son of the father of my sister's brother". How is that person related to Mausmi?
 (a) Uncle (b) Cousin (c) Father (d) Brother
8. A man borrows Rs. 20,000 at 10% compound interest. At the end of every year he pays Rs. 2000 as part repayment. How much does he still owe after three such installments?
 a) Rs.24000 b) Rs.20000 c) Rs.15000 d) Rs.10000
9. The age of Sunita's father today is four times as that of her age. After 8 years, the age of her father will be three times that of her age. What is Sunita's age today?
 (a) 24 years (b) 20 years (c) 18 years (d) 16 years
10. A's and B's shares in a business are in the ratio of 5:3. If A has invested Rs. 70000 for 12 months, for what period B has invested Rs. 60000?
 a) 7 months b) 7.4 months c) 8 months d) 8.4 months
11. In a zoo, there are Rabbits and Pigeons. If heads are counted, there are 200 and if legs are counted, there are 580. How many Pigeons are there?
 (a) 90 (b) 100 (c) 110 (d) 120
12. In a row of children, Divya is 7th from the left and Vijay is 9th from the right. When they interchange their places among themselves, Divya becomes 18th From the left. Then what will be Vijay's present position from the right?
 (a) 16th (b) 26th (c) 20th (d) 24th
13. Present age of A is 52 years. 8 years hence, ages of A and B will be in ratio 4 : 5. What is the present age of B?
 (a) 67 (b) 75 (c) 72 (d) 60
14. Which set of letters, when sequentially placed at the gaps in the given letter series, shall complete it?
 ___ c b ___ c a b ___ b a c a ___ c b a ___ a b
 (a) c a b c b (b) a b c c b (c) b a c b c (d) b c a b a
15. In the following question, one statement is given followed by two conclusions (I) and (II). You have to consider the statement to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statement.
Statement : "Bats do not lay eggs and therefore, bats are not birds"
Conclusions : (I) All birds lay eggs
 (II) Only birds lay eggs
 (a) Only (I) follows (b) Only (II) follows
 (c) Both (I) and (II) follow (d) Neither (I) or (II) follows
16. From her home Priya wishes to go to school. From home she goes toward North and then turns left and then turns right and finally she turns left and reaches school. In which direction her school is situated with respect to her home?
 (a) North-East (b) North-West (c) South-East (d) South-West

17. There are some boys and dogs at a place. If total number of heads is 7 and total number of legs is 20, how many boys and how many dogs are there?
 (a) 2 boys and 5 dogs (b) 3 boys and 4 dogs (c) 4 boys and 3 dogs (d) 5 boys and 2 dogs
18. In a family the average age of a father and a mother is 35 years. The average age of the father, mother and their only son is 27 years. What is the age of the son?
 a) 9 b) 10 c) 11 d) 12
19. If PAINT is coded as 74128 and EXCEL is coded as 93596 then how would you encode ACCEPT?
 a) 455978 b) 547978 c) 454978 d) 554978
20. In a shop, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, find out approximately what percentage of the selling price is the profit?
 a) 30% b) 100% c) 70% d) 250%
- B. Choose the correct answer from the options given below : (20 X 1 ½ = 30)**
21. A train running at an average speed of 48 km/hr performs a journey in 6 hours 30 minutes. How long would the same journey take it after crossing 180 kms, the speed was reduced to 33 km/hr ?
 (a) 7 hours 45 minutes (b) 4 hours
 (c) 3 hours 45 minutes (d) 6 hours 45 minutes
22. 2000 soldiers in a fort had enough food for 20 days. But some soldiers were transferred to another fort and the food lasted for 25 days. How many soldiers were transferred ?
 (a) 400 (b) 450 (c) 525 (d) 500
23. If the difference between Simple Interest and Compound Interest for 2 years on a sum of money lent at 5% is Rs.6, then the sum is –
 (a) Rs.2200 (b) Rs.2400 (c) Rs.2600 (d) Rs.2000
24. Tea at Rs.126 per kg and at Rs.135 per kg are mixed with a third variety in the ratio 1 : 1 : 2. If the mixture is worth Rs.153 per kg, the price of the third variety per kg is –
 (a) Rs.169.50 (b) Rs.175 (c) Rs.175.50 (d) Rs.185
25. A boat goes 40 km upstream in 8 hours and 36 km downstream in 6 hours. The speed of the boat in still water is –
 (a) 6.5 km/hr (b) 5.5 km/hr (c) 6 km/hr (d) 5 km/hr
26. The ratio of volumes of water and glycerine in 240 cc of a mixture is 1 : 3. The quantity of water (in cc) that should be added to the mixture so that the new ratio of the volumes of water and glycerine becomes 2 : 3 is –
 (a) 55 (b) 60 (c) 62.5 (d) 64
27. 20% of a man's salary is paid as rent, 60% are his living expenses and 10% is paid in LIC. If he spends the remaining Rs.3,000/- on education of the children, his salary is –
 (a) Rs.30,000/- (b) Rs.9,000/- (c) Rs.90,000/- (d) Rs.35,000/-
28. A thief is noticed by a policeman from a distance of 200 m. The thief starts running and the policeman chases him. The thief and the policeman run at the rate of 10 km and 11 km per hour respectively. The distance (in metres) between them after 6 minutes is –
 (a) 190 (b) 200 (c) 100 (d) 150

29. The salary of an employee increases every year in the month of July by 10%. If his salary in May 2000 was Rs.15,000/- his salary in October 2001 was –
 (a) Rs.18,150/- (b) Rs.19,965/- (c) Rs.16,500/- (d) Rs.18,000/-
30. A train crosses a platform in 30 seconds travelling with a speed of 60 km/hr. If the length of the train be 200 metres, then the length (in metres) of the platform is –
 (a) 400 (b) 300 (c) 200 (d) 500
31. One pipe can fill a tank three times as fast as another pipe. If together the two pipes can fill the tank in 36 minutes, the slower pipe alone will be able to fill the tank in –
 (a) 81 minutes (b) 108 minutes (c) 144 minutes (d) 192 minutes
32. A sells to B an iron box at 10% profit. B sells it to C for 20% profit. If C pays Rs.528/-, then the cost price of A is –
 (a) Rs.508/- (b) Rs.500/- (c) Rs.489/- (d) Rs.400/-
33. The average weight of a group of 20 boys was calculated to be 89.4 kg and it was later discovered that one weight was misread as 78 kg instead of 87 kg. The correct average weight is-
 (a) 88.95 kg (b) 89.25 kg (c) 89.55 kg (d) 89.85 kg
34. In an examination a student scores 4 marks for every correct answer and loses 1 mark for every wrong answer. If he attempts all 75 questions and secures 125 marks, the number of questions he attempts correctly is –
 (a) 35 (b) 40 (c) 42 (d) 46
35. Last year there were 610 boys in a school. The number decreased by 20 percent this year. How many girls are there in the school if the number of girls is 175 percent of the total number of boys in the school this year?
 a) 854 b) 848 c) 798 d) 782
36. If the simple interest on a certain sum of money for three years is Rs.225/- and the compound interest on the same sum at the same rate for 2 years is Rs.153/-, then the principal invested, in rupees, is -
 (a) 1,500 (b) 2,250 (c) 3,000 (d) 1,875
37. In an examination, 60% of the candidates passed in English and 70% of the candidates passed in Mathematics, but 20% failed in both of these subjects. If 2500 candidates passed in both the subjects, the number of candidates that appeared at the examination was –
 (a) 3000 (b) 3500 (c) 4000 (d) 5000
38. The average of 6 observations is 45.5. If one new observation is added to the previous observations, then the new average becomes 47. The new observation is –
 (a) 58 (b) 56 (c) 50 (d) 46
39. A train travelling with constant speed crosses a 96 mtr. long platform in 12 sec. and another 141 mtr. long platform in 15 sec. The length of the train and its speed are –
 (a) 64 mtr. and 44 km/hr. (b) 64 mtr. and 54 km/hr.
 (c) 84 mtr. and 54 km/hr. (d) 84 mtr. and 60 km/hr.
40. Two pipes A and B can fill a water tank in 20 min. and 24 min. respectively and a third pipe C can empty at the rate of 3 gallons per minute. If A, B and C opened together fill the tank in 15 min., the capacity (in gallons) of the tank is –
 (a) 180 (b) 150 (c) 120 (d) 60

- C. In the following questions, out of the given four alternatives, select the one which is opposite in meaning of the given word. (5 X 1 = 5)
41. *Lackadaisical*
 (a) Intelligent (b) Enthusiastic (c) Classical (d) Irresponsible
42. *Meticulous*
 (a) Unmerited (b) Unimaginative (c) Carefree (d) Careless
43. *Robust*
 (a) lean (b) strong (c) flexible (d) feeble
44. *Dismantle*
 (a) Build (b) Decimate (c) Teardown (d) Disassemble
45. *Spurious*
 (a) Truthful (b) Authentic (c) Credible (d) Original
- D. In the following questions, out of the given four alternatives, select the one which best expresses the meaning of the given word/idiom/phrase. (5 X 1 = 5)
46. *Tranquil*
 (a) tremendous (b) dynamic (c) treacherous (d) peaceful
47. *Under a cloud*
 (a) under suspension (b) under suspicion (c) under scrutiny (d) warned severely
48. *To have a jaundice eye*
 (a) to have jaundice (b) to have fever (c) to be prejudiced (d) to lose colour
49. *To cut the Gordian knot*
 (a) to perform the opening ceremony (b) to be present at the opening ceremony
 (c) to solve a difficult problem (d) to get a sharp cut
50. *Paucity*
 (a) surplus (b) shortage (c) excess (d) meanness
- E. In the following questions, a part of the sentence is printed in bold. Choose the correct alternative to the bold part which may improve the sentence / best expresses the meaning. (5 X 1 = 5)
51. If he calls again, I am going to give him a piece of my mind.
 (a) to be nice to him (b) to take revenge on him
 (c) to reprimand him (d) to support him
52. As he was a braveheart, Abhijeet decided to join the army.
 (a) though he was a braveheart (b) although he was a braveheart
 (c) while he was a braveheart (d) No improvement

53. I did one mistake in the dictation test today.

- (a) I did a mistake in (b) I did a mistake at
(c) I made a mistake in (d) No improvement

54. As I am new to the place I felt like a fish in water.

- (a) felt like a fish in the water (b) felt like a fish out of water
(c) felt like a fish with water (d) No improvement

55. They reached at Kolkata on Monday last.

- (a) reached to Kolkata (b) reached on Kolkata
(c) reached Kolkata (d) No improvement

F. In the following questions, out of the four alternatives, choose the one which can be substituted for the given words / sentences. (5 X 1 = 5)

56. A speech delivered without previous preparation

- (a) Soliloquy (b) Extempore (c) Rhetoric (d) Expression

57. Failing to discharge one's duty

- (a) debacle (b) dereliction (c) determination (d) deterrent

58. A state where no law and order exists

- (a) Monarchy (b) Mobocracy (c) Anarchy (d) Democracy

59. Too much official formality

- (a) Bureaucracy (b) Red-Tapism (c) Nepotism (d) Formalism

60. Able to use left hand and right hand equally well

- (a) ambivert (b) ambidextrous (c) ambivalent (d) ambitious

G. Do as directed.

(5 X 1 = 5)

61. Change the voice of the given sentence and select the correct option.

The little boy asked the man the way to Athens.

- (a) The man has been asked the way to Athens by the little boy
(b) The man was asked the way to Athens by the little boy
(c) The man was being asked the way to Athens by the little boy
(d) The way to Athens was asked by the man from the little boy

62. Change the voice of the given sentence and select the correct option.

The patient was examined by the doctor.

- (a) The doctor and the patient were examined
(b) The doctor was examining his patient
(c) The doctor examined the patient
(d) The patients were being examined by the doctor

63. Select the correct indirect form of the given sentence.

He said to me, "What are you doing?"

- a) He said what I had been doing
- b) He said that what I was doing
- c) He asked me what I was doing
- d) He asked me that what was I doing

64. Select the option that is the direct form of the given sentence.

Brinda told her doctor that she was leaving for Boston the next day.

- a) Brinda told her doctor, "I was leaving for Boston tomorrow"
- b) Brinda had told her doctor, "She was leaving for Boston the next day"
- c) Brinda said to her doctor, "I am leaving for Boston tomorrow"
- d) Brinda told to her doctor, "I will be leaving for Boston the next day"

65. Select the correct option which best expresses the indirect speech of the given sentence.

Nisha said to Swati, "Will you help me in my project just now?"

- (a) Nisha told Swati whether she will help her in her project just now.
- (b) Nisha asked Swati if she would help her in her project just then.
- (c) Nisha questioned to Swati that will you help me in my project just now.
- (d) Nisha asked to Swati that will she help her in her work just now.

- H. **Read the following passage carefully and answer the questions below:** (5 X 1 = 5)

Artificial Intelligence (AI) has undergone remarkable transformations since its inception in the mid-20th century. Initially, AI systems were limited to performing specific tasks based on predefined rules. However, advancements in machine learning and neural networks have enabled AI to evolve into a powerful tool capable of analyzing vast datasets, recognizing patterns, and making predictions. Today, AI is integrated into various industries, including healthcare, finance, and transportation, revolutionizing the way these sectors operate.

Despite its benefits, AI poses significant ethical and societal challenges. Concerns about privacy, bias in algorithms, and the potential displacement of human workers have sparked debates among policymakers and researchers. Furthermore, the development of autonomous systems raises questions about accountability and decision-making in critical scenarios, such as self-driving cars or military applications.

As AI continues to advance, it is crucial to strike a balance between innovation and regulation. Governments and organizations must collaborate to establish frameworks that ensure AI is used responsibly and equitably, minimizing risks while maximizing its potential to improve lives.

Questions:

66. How has AI evolved from its initial stages?

Ans :

67. Name three industries where AI has been integrated.

Ans :

68. What are two ethical concerns associated with AI?

Ans :

69. Why is the development of autonomous systems controversial?

Ans :

70. What is essential for responsible AI development?

Ans :

I. Write a letter to your Municipal Commissioner of your city requesting for better public lighting and pedestrian safety in your locality

(10 marks)

OR

Write a letter to the Bank Manager requesting him to apply reduced rate of interest on the education loan you have taken.

J. Write a short essay (in about 150 words) on any one of the following topics: (10 marks)

- (a) Artificial Intelligence -
- (b) Rise of digital public infrastructure in India
- (c) Operation Sindoor