

Date of Examination:	01.03.2023	Time:	2 Hrs
Name of the Post:	Junior Superintendent & Junior Technician (Mechanical) - Level 1 Written Test – Common Paper		

Name of the Candidate:										
Application No:										

Candidate's Signature

Invigilator's Signature

Instructions to the Candidate:

1. This booklet consists of 80 questions. Please check that this Question Booklet does not have any missing or torn pages or items, if so get it replaced by another Question Booklet.
2. A separate OMR Sheet is given. It should not be folded or mutilated. No additional OMR Sheet shall be provided.
3. Use only Black Ball point pen for filling all particulars of Question Booklet and OMR Sheet as well as to darken the circle of the Response in the OMR Sheet.
4. This Question Booklet contains 80 Multiple Choice Questions, and each question is followed by four alternative answer options namely A, B, C and D out of which only one option is correct. You need to darken the most appropriate correct circle of the OMR Sheet by black ball point pen.
5. For each question, darken only one circle on the Response Evaluation Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect. Cutting, Alterations/ Correction are not permitted. Answer once darkened cannot be changed in the OMR sheet. If you do not wish to attempt a question, leave all the circles in corresponding row blank and in such condition zero marks will be awarded for that question.
6. Every correct answer will be awarded 1.25 marks and 0.3125 marks will be deducted for each of the wrong answer. No marks are assigned for questions not attempted.
7. Use of Electronic Gazettes, Pager, Mobile Phone, Calculator etc. are strictly prohibited. Use of Unfair means will lead to cancelation of candidature. Do not carry any loose paper.
8. The blank spaces and the blank page at the end of this Booklet can be used for Rough Work.
9. Strictly adhere to appropriate discipline during the course of examination and you are not permitted to leave the Examination Hall until the end of the test.
10. Return the Question Booklet and OMR Sheet to the Invigilator after completion of examination.

1.	Which of the following number has most divisors? A) 99 B) 101 ✓C) 176 ✓ D) 182
2.	Rs. 395 is divided among three persons A, B and C such that B gets 25% more than A and 20% more than C. The difference between what A and C get is A) A gets Rs 5 more than C ✓B) A gets Rs 5 less than C C) A gets 30 more than C D) A gets Rs. 30 less than C
3.	The sum of three integers in arithmetic progression is 15 and the sum of squares of these numbers is either 83 or 93, then which of the following can be the three numbers? ✓ I. 3, 5, 7 II. 2, 5, 8 III. 1, 5, 9 A) I or II but not III B) I or III but not II C) II or III but not I D) I or II or III
4.	Certain amount was borrowed at 5% compound interest and the amount along with interest was paid back in two annual instalments of Rs. 882 each. The amount borrowed is ✓A) Rs. 1640 B) Rs. 1680 C) Rs. 1620 D) Rs. 1700
5.	The numbers in the following series are obtained by applying a formula on the previous number. 1, 2, 8, 33, 148, 760, 4626 Which of the number does not follow the rule? A) 33 B) 33 ✓C) 148 D) 760
6.	Two dice are tossed simultaneously. Probability of getting a prime number is A) 1/6 B) 5/6 C) 5/12 ✓D) 7/12
7.	Two persons have attended an interview and their chances of getting selected are 1/5 and 1/7. The chances of only one of them getting selected is (A) 4/5 (B) 6/7 (C) 24/35 ✓(D) 2/7
8.	A six faced die is a biased one. It is thrice more likely to show an odd number than to show an even number. It is thrown twice. The probability that the sum of the numbers in the two throws is even is (A) 4/8 ✓(B) 5/8 (C) 6/8 (D) 7/8
9.	In a certain language, each digit represents one word in English '742' means 'mangoes are good' '657' means 'eat good food' and '934' means 'mangoes are ripe' Which digit means 'ripe' in that language? (A) 5 (B) 4 (C) 7 ✓(D) 9
10.	Fill in the blank choosing the correct word from the given choices The vote will have to be laid _____ until next week. A) on ✓B) over C) off D) in
11.	The octal equivalent of the hexadecimal number 4DF is A) 2333 B) 2773 ✓C) 2337 D) 2373
12.	In computer memory, negative integers are represented in the form A) one's Compliment ✓B) Two's Compliment C) Nine's Compliment D) Ten's Compliment

13.	<p>The sum of two numbers is 216 and their HCF is 27. Which of the following can be the two numbers?</p> <p>I. 27 and 189 II. 54 and 162 III. 81 and 135</p> <p>A) I and II but not III ✓ B) I and III but not II C) II and III but not I D) I, II and III</p>
14.	<p>If $1^3 + 2^3 + \dots + 9^3 = 2025$, then the value of $(0.11)^3 + (0.22)^3 + \dots + (0.99)^3$ is approximately equal to</p> <p>✓ A) 2.695 B) 3.695 C) 0.2695 D)).3695</p>
15.	<p>In the month of January, ticket checking staff at a railway station caught 4000 ticketless travelers. In the next month, it increased by 5%. Due to strict vigil, the number of ticketless travelers in March in the station has reduced by 5% and in April, it further reduced by 10%. The total number of ticketless travelers caught in the month of April in the station is</p> <p>A) 3125 B) 3255 C) 3575 ✓ D) 3591</p>
16.	<p>When 24 is subtracted from a number, it is reduced to its four-seventh. Which of the following are true about the number?</p> <p>I. The number is an even number II. Sum of the digits of the number is 11 III. Tens digit is larger than its unit's digit by 1.</p> <p>✓ A) I and II but not III B) I and III but not II C) II and III but not I D) I, II and III</p>
17.	<p>Consider a mathematically correct statement $9 _ 6 _ 3 = X$, where X is an integer between 20 and 50 after applying one of the following operators in the above statement. What is a possible value of X?</p> <p>I. *, + II. +, * III. *, /</p> <p>(A) 45 ✓ (B) 27 (C) 57 (D) 18</p>
18.	<p>First six numbers in a sequence are 1, 2, 3, 6, 11, 20. The tenth number in the sequence is</p> <p>(A) 125 (B) 140 ✓ (C) 230 (D) 245</p>
19.	<p>The average age of the students in the class is 14. The average age of half of the students in the class and their class teacher is 16. The average age of the remaining half of the students in the class is 15. The number of students in the class is</p> <p>(A) 30 ✓ (B) 40 (C) 50 ✓ (D) Data inadequate</p>
20.	<p>In a simultaneous throw of two dice, the probability of getting a total divisible by 3 but not by 6 is</p> <p>A) 1/3 ✓ B) 1/6 C) 2/5 D) 3/5</p>
21.	<p>How many pairs of letters are there in the word 'MATHEMATICIAN' each of which has as many letters between them in the word as in the English alphabet?</p> <p>(A) None (B) One (C) Two ✓ (D) Three</p>
22.	<p>Five boys participated in a competition. Anand was ranked lower than Gautam. Hari was ranked higher than Manish but lower than Gautam. Sarman was ranked between Anand and Hari. Who was ranked highest?</p> <p>(A) Hari (B) Anand ✓ (C) Gautam (D) Manish</p>

23.	For an English word four different spelling are given. Identify the correct one. ✓ A) ceiling B) ceeling C) cieling D) cealing
24.	Which of the following phrasal verb means "To spend time doing unimportant things instead of doing necessary things"? A) fake out B) fade out ✓ C) faff apart D) fall apart
25.	Q is as much younger than R as he is older than T. If the sum of the ages of R and T is 50, then the sum of the ages of R and Q is (A) 2 years (B) 5 years (C) 25 years ✓ (D) Cannot be determined
26.	Atal tunnel in Northern India is used for ✓ A) Highway transportation B) Railway transportation C) Waterway transportation D) None of these
27.	The number of districts in the state of Andhra Pradesh in the year 2023 is A) 13 B) 31 ✓ C) 26 D) 33
28.	In a certain coding, the word RIPPLE is written as 613382 and the word LIFE as 8192. In the same coding mechanism, the word PILLER is to be written as A) 318826 B) 318286 ✓ C) 618826 D) 328816
29.	Karan and Arjun run a 100 meters race, where Karan beats Arjun by 10 meters. To do a favor to Arjun, Karan starts 10 meters behind the starting line in a second 100 meter race. They both run at their earlier speeds. Which of the following is true in connection with the second race? (A) Karan and Arjun reach the finishing line simultaneously (B) Arjun beats Karan by 1 meter (C) Arjun beats Karan by 11 meters ✓ (D) Karan beats Arjun by 1 meter
30.	Which of the following is correct phrase to describe a group of insects? ✓ A) swarm B) shoal C) school D) flock
31.	Identify odd one out A) HTTP B) HTML ✓ C) FCFS D) TCP/IP
32.	What is the slogan of Swachh Bharat Mission? A) Keep cleanliness ✓ B) One step towards cleanliness C) One step towards swachhata D) Maintain Swachhata
33.	Two-fifth of one-fourth of three-seventh of a number is 15. Half of two-seventh of that number is A) 25 ✓ B) 50 C) 100 D) None of these
34.	In an examination a student has scored an average mark of 63. If he had scored 20 more marks in the subject Mathematics and two more marks in Physics subjects, his average mark would be 65. The number of subjects in which the student has appeared in the examination is A) 9 B) 10 ✓ C) 11 D) 12

35.	Ravi has purchased two clocks at a total price of Rs. 650. He sells one of them for 20% profit, the other one at 25% loss and gets the same selling price on both. The purchase values of the two clocks is A) Rs. 225, Rs. 425 ✓ B) Rs. 250, Rs. 400 C) Rs. 275, Rs. 375 D) Rs. 300, Rs.350
36.	In a two-digit number, units digit exceeds its tens digit by 2. The product of the number and sum of the digits is 144. The square of the number is A) 24 ✓ B) 576 C) 46 D) None of these
37.	If $\frac{3x-1}{25} = \frac{x+5}{11}$, the value of x is A) 7 ✓ B) 17 C) 136 D) None of these
38.	A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn and all three were found to be red. The probability of occurrence of the event is A) $\frac{2}{77}$ ✓ B) $\frac{2}{91}$ C) $\frac{2}{45}$ D) $\frac{2}{55}$
39.	The number of 3 digit numbers, divisible by 5 can be formed using the digits 2, 3, 5, 6, 7 and 9, without repetition of digits is ✓ A) 20 B) 15 C) 10 D) 8
40.	If August 15 th of 2017 is a Saturday, then which day is the 15 th August 2019? A) Friday B) Saturday C) Sunday ✓ D) Monday
41.	Students in a class are standing in a row. Ramesh is 5 th from right end and Yogesh is 15 th from left end. If they interchange their places, Yogesh becomes 24 th from left end then the number of students in the class is (A) 27 ✓ (B) 28 (C) 29 (D) 30
42.	The number of even numbers that can be formed by using all the digits 2, 3, 4, 5, 6 is (A) 25 ✓ (B) 72 (C) 120 (D) 1875
43.	Based on the statements 1 and 2, which of the conclusions can be drawn? 1. All the organized persons find time for rest. 2. Sunita, in spite of her very busy schedule, finds time for rest. Conclusions: I. Sunita is an organized person. II. Sunita is an industrious person. (A) I Only (B) II only (C) I and II ✓ (D) Neither I nor II.
44.	Choose the answer which best expresses the meaning of the idiom/phrase "to burn a hole in the pocket" A) steal from someone's pocket B) to destroy other's belongings C) to be very miserly ✓ D) money that is spent quickly

45.	When a hexadecimal number $(37)_H$ is divided by the hexadecimal number $(17)_H$ the remainder in hexadecimal representation is A) C0 B) 03 C) 07 <input checked="" type="checkbox"/> D) 09
46.	India's fastest train from New Delhi to Varanasi was inaugurated on <input checked="" type="checkbox"/> A) 15 th February 2019 B) 15 th February 2020 C) 26 th January 2019 D) 26 th January 2020
47.	Who is currently the chief justice of supreme court in India <input checked="" type="checkbox"/> A) Chandrachud B) N V Ramana C) Prashant Kumar Mishra D) Ujjal Bhuyan
48.	In mobile phones SMS stands for <input checked="" type="checkbox"/> A) Short Messaging Service B) Smart Messaging Service C) Show Message Service D) None of these
49.	For any two events A and B, the probability that both of them occur simultaneously is 0.3 and any one of them occur is 0.3, then the sum of the probabilities that A does not occur and that B does not occur is A) 1.0 <input checked="" type="checkbox"/> B) 1.1 C) 0.9 D) 1.15
50.	A fair coin is tossed 4 times. The probability of getting at least one head is A) 1/16 B) 6/16 C) 13/16 <input checked="" type="checkbox"/> D) 15/16
51.	From the integers between 4 and 55, all the integers divisible by 3 and those that contain 3 as a digit are removed. The remaining number of integers is A) 23 B) 24 <input checked="" type="checkbox"/> C) 25 D) 26
52.	Which of the following is synonym of the word "meagre"? A) abundant <input checked="" type="checkbox"/> B) limited C) needful D) helpful
53.	From among the choices, identify the most suitable one word for the expression "A book containing summarized information on all branches of knowledge" A) Dictionary B) Anthology C) Directory <input checked="" type="checkbox"/> D) Encyclopedia
54.	Acronym of ASCII is <input checked="" type="checkbox"/> A) American Standard Code for Information Exchange B) American Standard Code for Internet Information C) American Standard Code for Information Interchange D) American Standard Code for Internet Interchange
55.	Nibble in computer terminology is A) One byte <input checked="" type="checkbox"/> B) Two bytes C) One Word D) Two Words
56.	A student in an objective type examination gets 4 marks each for every correctly answered question and loses 1 mark for each wrongly answered question. A student has attempted 60 questions and got a score of 130 marks. If he had answered half of wrongly answered questions as correct, how many marks he would have got additionally? A) 185 B) 49 C) 196 <input checked="" type="checkbox"/> D) 55

57.	If 830 is divided into three parts such that four times the first term is equal to five times the second and seven times the third, then the first term is A) 200 B) 280 ✓C) 350 D) None of these
58.	The number 243 is divided into three parts. Half of first part, one-third of second part and one-fourth of the third part are all equal. The largest of the three parts is A) 54 B) 91 ✓C) 108 D) None of these
59.	In a school, each student has to take exactly one foreign language. If three-fifths students take German and one-fourth of the remaining take Russian and all the remaining students take French language. The percentage of students taking French is A) 10 B) 20 C) 25 ✓D) 30
60.	If an amount lent on compound interest becomes three times in 4 years, then how many years will take for the same amount to become 27 times at the same compound interest? A) 8 B) 10 ✓C) 12 D) 24
61.	From a group of 7 men and 6 women, in how many ways can a committee with 5 persons with at least 3 men be formed? A) 564 B) 646 ✓C) 756 D) 765
62.	If the symbols $-$, $+$, \div , and $*$ mean addition, subtraction, multiplication, and division respectively, then which of the following equation will be correct? (A) $10 + 5 - 14 \div 10 * 15 = 158$ (B) $30 + 5 + 14 - 10 * 5 = 122$ ✓(C) $30 * 5 - 4 \div 10 + 15 = 31$ (D) None of these
63.	Five persons A, B, C, D and E are travelling in a car. Of the five, two are ladies and only two of them including a lady can drive. A is brother of D. B is wife of D and drove the car in the beginning. E drove at the end. The other lady in the group is A) B ✓B) C C) D D) E
64.	In the series 1, 3, 5, 4, 8, 9, 12, 17, x,, the value of x is A) 19 B) 20 ✓C) 21 D) 22
65.	When we open an internet site, we find "www". What does www stand for? A) World Wide Works ✓B) World Wide Web C) Word Wide Web D) None of these
66.	In online money transfer applications UPI stands for A) Universal Payment Instruction B) Uniform Payment Interface ✓C) Unified Payment Interface D) Unified Payment Information
67.	A man wants to cut a single cloth roll of 91 mts into three pieces such that the second length is 3 mts longer than the shortest and third piece is twice as long as the shortest. If the third part is to at least 5 mts longer than the second, then the length of the first part is I. Greater than or equal to 8 II. Less than or equal to 22 A) I only B) II only C) I or II ✓D) I and II

68.	The average weight of 3 persons A, B and C is 84 kg. Another person D joins them and the average weight of them becomes 80 kg. If another person E, whose weight is 3 kg more than D, replaces A, the average weight of B, C, D and E becomes 79 Kg. The weight of A is A) 70 kg ✓ B) 75 kg C) 80 kg D) 72 kg
69.	There are four machines in a workshop and it is known that only two of them are faulty. If all the four machines are checked randomly, the probability that both the machines are identified in the first two tests is A) 1/2 B) 1/3 C) 1/4 ✓✓ D) 1/6
70.	In the alumni association of a school, there are twice as many girls than boys. At one of the alumni association meeting, the percentage of boys attending was twice that of girls. The percentage of boys attending the meeting is A) 10 B) 20 C) 40 ✓✓ D) 50
71.	The simple interest on certain amount for 3 years at 8% per annum is half the compound interest on Rs. 4000 for 2 years at 10% per annum. The amount placed on simple interest is A) Rs 1550 B) Rs 1650 ✓✓ C) Rs 1750 D) Rs 2000
72.	Certain amount of money is lent on simple interest. Which of the following statement(s) is/are correct? I. Money gets doubled in 5 years if the rate of interest is 20% II. Money becomes four times in 10 years if it gets doubled in 5 years III. Money becomes four time in 15 years if it gets doubled in 5 years A) I and II but not III ✓✓ B) I and III but not II C) II and III but not I D) I, II and III
73.	A merchant purchased 120 reams of paper at the rate of Rs. 80 per ream. He spent Rs. 280 for transportation and Rs 72 on loading. The tax on the purchase was 40 paise per ream. If he wants to make 8% profit, what must be the selling price per ream? A) Rs. 86 B) Rs 86.50 C) Rs. 88 ✓✓ D) Rs. 90
74.	The sum of all 4 digit numbers formed using the digits 0,1,2 and 3, with no digit repeated in any number is (A) 32768 (B) 38664 (C) 65536 ✓✓ (D) 39996
75.	How many numbers can be formed using the digits 1, 2, 3, 4,3, 2, 1 such that odd positions are filled with odd digits and even positions are filled with even digits? A) 6 B) 12 ✓✓ C) 18 D) 24
76.	Odd number in the series of numbers 2, 9, 28, 65, 126, 216, 243 is A) 65 ✓✓ B) 216 C) 243 D) 2
77.	Two pipes A and B can fill a tank in 6 hours and 4 hours respectively. If they are opened on alternate hours and if pipe A is opened first, in how many hours can the tank be filled? ✓ A) 5 hours B) 4 hours C) 4 ½ hours D) 5 ½ hours

78.	Excluding stoppages, the average speed of a bus is 54kmph and including stoppages it is 45kmph. For how many minutes does the bus stop per hour? A) 9 ✓ B) 10 C) 12 D) 15
79.	National Science day is celebrated on A) January 28 ✓ B) February 28 C) January 15 D) February 15
80.	Who is the union minister for education in the year 2023? A) Nirmal Sitharaman B) Nithin Gadkari C) Rajnath Singh ✓ D) Dharmendra Pradhan

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