

<i>Signature of Candidate</i>

<i>Signature of Invigilator</i>

12450
<i>Booklet Serial No.</i>

PAPER - I

QUESTION PAPER BOOKLET (QPB)

Duration: 01:30 Hours (Ninety Minutes)

Maximum Marks: 100

Hall Ticket No.:

--

OMR Serial No.:

--

INSTRUCTIONS TO THE CANDIDATES

1. Candidate should write his/her HALL TICKET NUMBER and OMR SERIAL NUMBER in the space provided above and not elsewhere.
2. This Paper is a MCQ (Multiple Choice Question) based test with **negative marking**.
3. This QPB contains 20 pages including 2 pages for Rough Work.
4. Check the QPB and MCQs thoroughly before taking the TEST.
5. Report to the INVIGILATOR in case of mis-print or any discrepancy in the QPB & MCQs.
6. There are 100 MCQs. Each MCQ has four options: Choose the correct option and darken the circle only with blue/black ballpoint pen in the OMR sheet against the corresponding option.
7. One mark is given for each correct option and negative marking of **0.25** marks for each incorrect option.
8. If more than one circle is **bubbled** for a question in the OMR Sheet, marks shall not be awarded.
9. At the end of the ENTRANCE TEST, handover the QPB & OMR sheet to the INVIGILATOR.
10. Candidate shall be disqualified, if the QPB and the OMR sheet are not handed over to the INVIGILATOR after the examination.

SPACE FOR ROUGH WORK

GAPSI

GAPSI is being used

GAPSI is being used

GAPSI is being used

LAPSE

LAPSE - 1

100% of the marks

obtained by the student



STRUCTURE OF THE CANNON

1. Cannon barrel is made of iron. The barrel is tapered and has a bore of 100 mm. The bore is bored with a gunpowder of density 1.5 g/cm³. The bore has a diameter of 100 mm and a length of 1000 mm.

2. The breech of the gun is closed with a breech block (breech cap). The breech block is made of iron and has a bore of 100 mm. The breech block is closed with a breech cap (breech cap).

3. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

4. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

5. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

6. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

7. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

8. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

9. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

10. The gun is mounted on a carriage. The carriage is made of iron and has a bore of 100 mm. The carriage is closed with a carriage cap (carriage cap).

- Metalloids are _____
 - metal heavier than led
 - colloids of metals
 - alloys of alkali metals with other metals
 - element having some properties of both metals and non-metals
- What is the revolution period of Mars?
 - 4333 days
 - 786 days
 - 687 days
 - 686 days
- In drafting Constitution, _____ shares responsibilities among the Centre and the States.
 - Concurrent List
 - Union-State Relations
 - Seventh Schedule
 - Inter-State Council
- Where was the NATO Summit held in June 2025?
 - Brussels, Belgium
 - Washington D.C., USA
 - The Hague, Netherlands
 - London, UK
- Who on this list won a Nobel Prize at the youngest age?
 - Jane Anne Phillips
 - Rita Bullwinkel
 - Percival Everett
 - Gayl Jones
- What is it called when white light separates into different colors?
 - Condensation
 - Dispersion
 - Sublimation
 - Combustion

7. What does the term "veto power" means?
- (a) The right to enforce law
 - (b) The right to reject a decision or proposal
 - (c) The right to disclose information
 - (d) The right to vote
8. Myopia and Hypermetropia can be treated using which type of lenses?
- (a) Convex and cylindrical lens
 - (b) Concave and cylindrical lens
 - (c) Concave and convex lens
 - (d) Plano-concave and Cylindrical lens
9. Basic form of matter that can't be broken down into simpler substance by chemical reactions is called.
- (a) Compound
 - (b) Element
 - (c) Substance
 - (d) Mixture
10. On pH scale, what pH value does lemon juice have?
- (a) About 2.2
 - (b) About 8.2
 - (c) About 5.4
 - (d) About 11.4
11. In 2025, how many people received the Padma Vibhushan Award?
- (a) 3
 - (b) 6
 - (c) 7
 - (d) 5
12. In the context of banking and financial transactions, what does RTGS stand for?
- (a) Real Time Gross Settlement
 - (b) Rapid Transfer Gross System
 - (c) Real Time General Settlement
 - (d) Registered Transfer of Gross System
13. Which Indian scientist won the Nobel Prize for Physics in 1930?
- (a) Vikram Sarabhai
 - (b) Rabindranath Tagore
 - (c) Sir Chandrasekhara Venkata Raman
 - (d) Amartya Sen

14. What is a device that detects electric current in a circuit?

- (a) diode
- (b) transistor
- (c) galvanometer
- (d) resistance

15. Which of these gases helps stop food from oxidizing?

- (a) Hydrogen
- (b) Nitrogen
- (c) Chlorine
- (d) Oxygen

16. How would you describe the Indian economy?

- (a) Planned economy
- (b) Market economy
- (c) Mixed economy
- (d) Traditional economy

17. Plant cells change their structure to facilitate their work based on the amount of _____ they contain.

- (a) hormones
- (b) electrochemical pulses
- (c) water
- (d) protein

18. Who on this list won a Nobel Prize at the youngest age?

- (a) Malala Yousafzai
- (b) Tsung Dao Lee
- (c) Nadia Murad
- (d) Lawrence Bragg

19. Meteorology is the scientific study of _____.

- (a) weather
- (b) earthquakes
- (c) metals
- (d) meteors

INTELLIGENT TANAI

20. Personal Disposable Income is an important measure in economics. It refers to the amount of money an individual has available to spend or save after fulfilling certain financial obligations. Which of the following best describes Personal Disposable Income?
- (a) The total income before paying any taxes
 - (b) The income remaining after paying direct taxes
 - (c) The income after paying indirect taxes
 - (d) The income before paying indirect taxes
21. Under which Article of the Indian Constitution are the Fundamental Duties of the citizens listed?
- (a) Article 50A
 - (b) Article 50B
 - (c) Article 51B
 - (d) Article 51A
22. What is the term for plants that do not produce flowers?
- (a) Cryptogams
 - (b) Bryophytes
 - (c) Thallophytes
 - (d) Phanerogams
23. Who has written the book 'The Idea of India'?
- (a) Sunil Khilnani
 - (b) Girish Kuber
 - (c) Amitav Ghosh
 - (d) Amartya Sen
24. Which two planets are Earth's neighbors?
- (a) Mars and Jupiter
 - (b) Mercury and Venus
 - (c) Venus and Saturn
 - (d) Venus and Mars
25. What is the mirror image of the time 10:15 on a clock?
- (a) 1:55
 - (b) 1:35
 - (c) 1:45
 - (d) 2:40

26. Reverse the first half of the alphabet, and then find the letter that is three positions to the right of the 9th letter from the left in this new sequence.
- A
 - B
 - C
 - Y
27. Arrange the following words in a logical sequence as they would appear in the English dictionary.
- Metric
 - Method
 - Meet
 - Metre
 - Meter
- 3, 5, 1, 2, 4
 - 3, 5, 1, 4, 2
 - 3, 5, 4, 1, 2
 - 3, 5, 2, 4, 1
28. Five people are in a queue to deposit money at a bank. Aman is directly behind Raman. Tripti is directly in front of Shreya. Lavanshi is directly behind Aman. If Tripti is at the front of the line, who is the second from the last?
- Lavanshi
 - Shreya
 - Aman
 - Raman
29. A clock's hour hand is pointing North at 9:00 p.m. According to this same clock, which direction will its hour hand be pointing at 4:30 p.m.?
- South West
 - South East
 - North West
 - North East
30. A cuboid measuring 9 cm by 18 cm by 27 cm is cut into smaller cubes, each with a side of 3 cm. How many such cubes are created, and what is the minimum number of knife cuts required to achieve this?
- 162 cubes and 15 times
 - 150 cubes and 12 times
 - 162 cubes and 12 times
 - 142 cubes and 15 times

31. In a class of 45 students, a boy is ranked 20th from the top. After two new boys join the class, his rank falls to 21st. What is his new position from the bottom of the class?
- 25
 - 26
 - 27
 - 28
32. Pointing towards a person, a man said to a woman, "His mother is the only daughter of your father." How is the woman related to that person?
- Aunt
 - Mother
 - Daughter
 - Sister
33. Raj walks 80 meters from point X to Y. He then takes three right turns, walked 50 meters, then 70 meters, and then another 50 meters. What is his distance from his starting point, X?
- 10 metres
 - 20 metres
 - 50 metres
 - 70 metres
34. Starting from his house, Gopal walks west for 30m, takes a right and walks 20m, then a left for 10m, followed by another left for 40m, and finally a left for 5m. After this last turn, what direction is he facing?
- East
 - South
 - North
 - South-west
35. Each of the following questions, arrange the given words in the sequence in which they occur in the dictionary and then choose the correct sequence.
- 1) Preach
 - 2) Praise
 - 3) Precinct
 - 4) Precept
 - 5) Precede
- 2, 1, 4, 5, 3
 - 2, 1, 3, 4, 5
 - 2, 1, 5, 4, 3
 - 2, 5, 1, 4, 3

36. In a class of 35 students, Kunal ranks 7th from the bottom, and Sonali ranks 9th from the top. If Pulkit is ranked exactly between Kunal and Sonali, what is Kunal's rank in relation to Pulkit?
- 10
 - 9
 - 11
 - 13
37. A man's total money of ₹480 consists of equal numbers of one-rupee, five-rupee, and ten-rupee notes. How many notes does he have in total?
- 45
 - 60
 - 90
 - 75
38. Mohini left her house and drove 15 km west. She then made a left turn and drove 20 km, followed by another left turn and 25 km. After one final left turn, she drove 20 km. What is the straight-line distance from her final location to her house?
- 5 km
 - 10 km
 - 40 km
 - 80 km
39. If two-thirds of the shirts need sleeve alterations and four-fifths need body alterations, how many total alterations will be needed for 60 shirts?
- 24
 - 123
 - 88
 - 143
40. If 'orange' is called 'butter', 'butter' is called 'soap', 'soap' is called 'ink', 'ink' is called 'honey' and 'honey' is called 'orange', which of the following is used for washing clothes?
- Ink
 - Butter
 - Orange
 - Honey
41. Convert the following into reported speech:
Direct Speech: "Are you ready for the party?" asked my mother.
- My mother asked me if I was ready for the party.
 - My mother asked me if I am ready for the party.
 - My mother asked me whether I will be ready for the party.
 - My mother asked me was I ready for the party.

42. Choose the word that is most similar in meaning to "parishioners".

- (a) Villains
- (b) Congregation
- (c) Officials
- (d) Strangers

43. Which of these is the correct spelling of a type of fabric?

- (a) Jacqard
- (b) Jacquard
- (c) Jacquerd
- (d) Jackard

44. Spot the mistake: "She has been working here since five years."

- (a) has been
- (b) since
- (c) working
- (d) years

45. Select the most appropriate meaning of the given idiom.

Hit the nail on the head

- (a) Do something without having planned beforehand
- (b) Take advantage of a good situation
- (c) Do something exactly right
- (d) Do something pointless

46. Select the option that expresses the given sentence in indirect speech.

Ron said to me, "I had my lunch at 2 p.m. yesterday."

- (a) Ron told me that he ate his lunch at 2 p.m. the previous day.
- (b) Ron told me that he had his lunch at 2 p.m. the previous day.
- (c) Ron told me that he had had his lunch at 2 p.m. the previous day.
- (d) Ron told me that he had eaten his lunch at 2 p.m. the previous day.

47. Choose the correctly spelled word:

- (a) Indispensable
- (b) Indespensable
- (c) Indispensible
- (d) Indispensible

48. Through thick and thin
- Big and small
 - Large object
 - Thin and fat
 - Under all conditions
49. "____ Andes are ____ longest continental mountain range."
- The, the
 - A, the
 - An, a
 - An, the
50. Which of the following options given below is an example of the correct form of Passive Voice?
- The shopkeeper handed the bread in a paper bag to the customer
 - The child was expecting a good gift from her parents as she had done well in the examination
 - The bouquet was delivered to me by one of her friends
 - The instructor advised every participant to listen to him attentively
51. Which of the following is the synonym for the word 'ferocious'?
- Brutal
 - Considerate
 - Compassionate
 - Empathic
52. Every boy and every girl _____ been invited.
- have
 - is
 - has
 - are
53. Identify the correct article usage: "____ rich should help ____ poor."
- A, a
 - The, the
 - An, an
 - A, the

54. The preposition "despite" in "Despite the rain, we went out" shows:
- Contrast
 - Time
 - Location
 - Purpose
55. When the manager said, "Let's table this," she wanted to:
- Discuss it immediately
 - Postpone the discussion
 - Document it formally
 - Assign it to a committee
56. The phrase "cost an arm and a leg" means _____.
- To suffer physically
 - To be extremely expensive
 - To make a great sacrifice
 - To lose important things
57. What is the best synonym for "perspicacious"?
- Stubborn
 - Insightful
 - Forgetful
 - Wealthy
58. Select the correct definition of "obfuscate".
- To make clearer
 - To deliberately confuse
 - To decorate lavishly
 - To speed up a process
59. Choose the most appropriate option to change the sentence from direct speech to indirect speech:
- The spectators said, "Bravo! Well played, Ravi."
- The spectators called Ravi bravo because he had played well.
 - The spectators said that Ravi played well and applauded him.
 - The spectators applauded Ravi, saying that he had played well.
 - The spectators encouraged Ravi saying that he played well.

60. Five years ago, Rina's age was four times Tanu's age. In ten years, her age will be twice Tanu's age. What is Tanu's current age?
- 10 years
 - 20 years
 - 12.5 years
 - 15 years
61. Classrooms A and B have students in a 4 to 11 ratio. If there are 44 students in Classroom B, how many are in Classroom A?
- 12
 - 20
 - 16
 - 24
62. Simplify: $\left(\frac{1}{3^3}\right)^7$
- 3^{-21}
 - 3^{21}
 - 3^{-10}
 - 3^0
63. If $a = 7$, $b = 5$, $c = 3$ then the value of $a^2 + b^2 + c^2 - ab - bc - ca$ is
- 12
 - 12
 - 8
 - 0
64. A fraction has a denominator that is 3 greater than its numerator. When you add 4 to both the numerator and the denominator, the new fraction equals $\frac{4}{5}$. Find the original fraction.
- $10/13$
 - $5/8$
 - $8/11$
 - $7/10$
65. The sum of 5% of A and 4% of B equals two-thirds of the sum of 6% of A and 8% of B. Determine the ratio A:B.
- 2:3
 - 1:1
 - 3:4
 - 4:3

66. A solid metal cube with a side length of 12 cm is melted down and recast into three new, smaller cubes. Two of these smaller cubes have side lengths of 6 cm and 8 cm. What is the side length of the third cube?
- (a) 8 cm
 (b) 12 cm
 (c) 10 cm
 (d) 14 cm
67. It is 3:00 on an accurate clock. What will the time be after the hour hand has moved 135 degrees?
- (a) 7.30
 (b) 6.30
 (c) 8.00
 (d) 9.30
68. A and B started a business with investments in the ratio 3:7. After one year, the profit was ₹60,000. They reinvest 40% of this profit back into the business and share the remaining 60%. How much money will A receive from this profit share?
- (a) 10,800
 (b) 15,600
 (c) 25,200
 (d) 20,400
69. If the sum of two numbers is 14 and their difference is 10, find the product of these two numbers.
- (a) 18
 (b) 20
 (c) 22
 (d) 24
70. Among five people with monthly income (in) Rs.15,000, Rs.26,000, Rs.16,000, Rs.19,000 and Rs.50,000, how many will have income less than the mean income of five people?
- (a) 1
 (b) 2
 (c) 4
 (d) 3
71. A, B, C, D and E are five consecutive odd numbers. The sum of A and C is 146. What is the value of E?
- (a) 79
 (b) 75
 (c) 71
 (d) 81

72. Twenty men finish one-third of a job in 20 days. How many additional men are needed to complete the remaining work in the next 25 days?
- 10
 - 15
 - 12
 - 20
73. What does the term "IoT" stand for?
- Internet of Things
 - Internet of Tools
 - Internal of Things
 - Interconnected of Things
74. Which file mode is used to open a file for writing in binary format?
- w
 - a
 - r
 - wb
75. What is the wireless technology used to create a Personal Area Network (PAN) for data transfer over short distances?
- Wi-Fi
 - Infrared
 - Bluetooth
 - Ethernet
76. The invention of the microprocessor, leading to the development of Personal Computers, marks the beginning of which generation of computers?
- Third Generation
 - Fourth Generation
 - Fifth Generation
 - Sixth Generation
77. Which cell line was used to produce the polio vaccine?
- Dog kidney
 - Primate kidney
 - Mouse fibroblast
 - Human Stem Cell

78. Where is the primary site of action for a local anesthetic?
- (a) Cell membrane
 - (b) Mitochondria
 - (c) Cytoplasm
 - (d) Nucleus
79. What is used as an insecticide?
- (a) Organophosphate
 - (b) Insulin
 - (c) Arsenic
 - (d) Warfarin
80. The respiratory center is located in the _____.
- (a) Cerebellum
 - (b) Hypothalamus
 - (c) Medulla oblongata
 - (d) Cerebrum
81. Which group includes floating plants, rooted plants, algae, and invertebrates that live in standing freshwater bodies?
- (a) Lotic Ecosystem
 - (b) Freshwater Ecosystem
 - (c) Coastal Ecosystem
 - (d) Lentic Ecosystem
82. Who first gave the definition of 'ethnobotany' as the study of the relationships between primitive societies and plants?
- (a) Alcom
 - (b) Hartweh
 - (c) Schultes
 - (d) Moldenke
83. A cell kept in a solution increases in volume. The solution is
- (a) Isotonic
 - (b) Hypotonic
 - (c) Hypertonic
 - (d) None of these



84. What is the name of the document that lists endangered and rare species of animals, plants, fungi, and sometimes local subspecies?
- (a) Blue Data Book
 - (b) Black Data Book
 - (c) Red Data Book
 - (d) Green Data Book
85. What is *Bacillus thuringiensis* used to control?
- (a) Bacterial pathogens
 - (b) Fungal pathogens
 - (c) Nematodes Insect pests
 - (d) Nematodes
86. Polyploidy can be artificially induced through the use of _____.
- (a) Inbreeding
 - (b) Colchicine
 - (c) Line breeding
 - (d) Self-pollination
87. Large empty cells found in the adaxial epidermis in grasses
- (a) Bulliform cell
 - (b) Lenticel
 - (c) Subsidiary cell
 - (d) Mesophyll cell
88. Where in the body is synovial fluid located?
- (a) Spinal cavity
 - (b) Cranial cavity
 - (c) Fixed joints
 - (d) Freely movable joints
89. Find the incorrectly matched pair.
- (a) Spirulina-Single cell protein
 - (b) Rhizobium-Biofertilizer
 - (c) Nostoc-Drug addiction
 - (d) Streptomyces-Antibiotic

90. Cleistogamy is not found in which of the following flower?

- (a) Commelina benghalensis
- (b) Ixora
- (c) Drosera
- (d) Oxalis

91. What micro-organism oxidizes nitrites into nitrates?

- (a) Nitrosomonas
- (b) Nitrobacter
- (c) Nitrosococcus
- (d) Azotobacter

92. _____ type of fermentation is observed in yeasts.

- (a) Acrylic fermentation
- (b) Pyruvic fermentation
- (c) Lactic acid fermentation
- (d) Alcoholic fermentation

93. The fixation of free nitrogen by bacteria in the soil is done by

- (a) Nitrobacter
- (b) Nitrosomonas
- (c) Azotobacter
- (d) Thiobacillus

94. What group do diatoms belong to?

- (a) Chrysophytes
- (b) Dinoflagellates
- (c) Pyrrhophytes
- (d) Euglenoids

95. A facility dedicated to the storage of cells and tissues of endangered organisms is called a

- (a) Gene library
- (b) Genomic DNA libraries
- (c) Gene bank
- (d) Gene pool

SP25-34

96. What are the key plant hormones for control and coordination?

- (a) Adrenaline and insulin
- (b) Thyroxine and progesterone
- (c) Cytokinin and ethylene
- (d) Melatonin and testosterone

97. Where does oxygenated blood enter the heart?

- (a) Right atrium
- (b) Left atrium
- (c) Right ventricle
- (d) Left ventricle

98. What is the name for the process of breaking down glycogen into glucose?

- (a) Glycolysis
- (b) Glycogenesis
- (c) Glycogenolysis
- (d) Gluconeogenesis

99. Which cells are responsible for protecting and nourishing nerve cells ?

- (a) Glial cells
- (b) Muscle cells
- (c) Blood cells
- (d) Bone cells

100. What is an example of stratification ?

- (a) Keeping lotus seeds in water
- (b) Keeping grape seeds cool
- (c) Pressing mango seeds into the soil
- (d) Digging papaya seeds in the ground
