

(a)	(b)
<i>Signature of Candidate</i>	

<i>Signature of Invigilator</i>	

20082	
<i>Booklet Serial No.</i>	

PAPER - I

QUESTION PAPER BOOKLET (QPB)

Duration: 01:30 Hours (Ninety Minutes)

Maximum Marks: 100

Hall Ticket No.:

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OMR Serial No.:

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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 24 pages including 3 pages for Rough Work and Paper II.
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

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Fig. (d)

100

- Which part of the blood is primarily responsible for carrying oxygen throughout the body?
 - Plasma
 - Platelets
 - White Blood Cells (WBCs)
 - Red Blood Cells (RBCs)
- What was the official theme of World Environmental Health Day?
 - Beat Plastic Pollution
 - Clear Air, Healthy People
 - Only One Earth
 - Ecosystem Restoration
- Which rule helps determine the direction of magnetic field lines around a current-carrying conductor?
 - Right-hand thumb rule
 - Fleming's left-hand rule
 - Maxwell's cork screw rule
 - Fleming's right-hand rule
- Who visited India in September 2025 as the Prime Minister of Bhutan?
- In which state is India's PM MITRA Park being established?
 - Gujarat
 - Maharashtra
 - Rajasthan
 - Madhya Pradesh
- Another name of Black salt is?
 - Washing soda
 - Bleaching powder
 - Plaster of Paris
 - Soap
- Identify the option that is not a Fundamental Right under the Indian Constitution.
- When was the 11th Anniversary of the "Make in India" initiative observed?
 - 2nd October 2025
 - 15th August 2024
 - 25th September 2025
 - 26th January 2025

7. The States Reorganization Act of 1956, India was divided into _____.

- 17 States and 9 Union Territories
- 14 States and 6 Union Territories
- 17 States and 6 Union Territories
- 15 States and 9 Union Territories

8. Where do many essential items like food, medicines and household items now fall under the new GST structure?

- 18% slab
- 40% slab
- 5% slab
- 28% slab

9. In which year did the 'Battle of Buxar' take place?

- 1769 AD
- 1761 AD
- 1764 AD
- 1757 AD

10. The _____ session of the United Nations General Assembly was recently held.

- 75th
- 78th
- 82nd
- 80th

11. Which state has the longest boundary with China?

- Uttarakhand
- Sikkim
- Arunachal Pradesh
- Himachal Pradesh

12. What is the term for spherical bacteria?

- Bacilli
- Vibrios
- cocci
- Actinomycets

13. Who is the author of the book Dapaan: Tales from kashmir

- Rana Ayyub
- Rahul Pandita
- Barkha Dutta
- Ipsita Chakravarty

14. Before becoming the Vice President of India, which position was held by Shri C.P. Radhakrishnan?

- Chief Minister of Maharashtra
- Governor of Tamil Nadu
- Speaker of Lok Sabha
- Governor of Maharashtra and Jharkhand

15. From what materials is the lithosphere composed?

- Rocks and minerals
- Water and gases
- Living organisms
- Air and gases

16. Who visited India in September 2025 as the Prime Minister of Bhutan?

- Lotay Tshering
- Jigme Khesar Namgyel
- Tshering Tobgay
- Lyonpo Dorji

17. Another name of Black soil is?

- Regur
- Crystalline
- Humus
- Bhangar

18. Identify the option that is not a Fundamental Right under the Indian Constitution.

- To reside and settle in any part of the territory of India
- To develop scientific temper, humanism and the spirit of inquiry and reform
- To establish and maintain institutions for religious and charitable purposes
- To move freely throughout the territory of India

19. The type of Goods which are durable in nature and used in the production process are _____.

- Veblen goods
- Capital goods
- Consumption goods
- Complementary goods

20. On which fundamental principle is the subject of macroeconomics based?

- Principle of investment theory
- Principle of consumer theory
- Principle of producer
- Principle of national income

21. Choose the incorrect statement about Photosynthesis process?

- Energy stored in sugar molecules
- Carbon dioxide and water released
- Produces oxygen
- Carbon dioxide and water used

22. Which type of friction is known to be self-adjusting?

- Kinetic friction
- Rolling friction
- Centripetal friction
- Static friction

23. Which theory explains the cause of tides from the moon and sun?

- Law of inertia
- Law of gravitation
- Law of reflection
- Law of refraction

24. What is the meaning of the term "L1" in the name of India's first solar mission, Aditya-L1?

- Laboratory point 1
- Lagrange point 1
- Line point 1
- Lower point 1

25. The condition of diabetes is caused by a deficiency in the production of which hormone?

- Androgen
- Glucagon
- Thyroxine
- Insulin

26. Who is the person who was appointed as the first Lokpal of India?

- Dilip B Bhosale
- Pradeep Kumar Mohanty
- Ajay Kumar Tripathi
- Pinaki Chandra Ghose

27. Identify the city where the Hawa Mahal can be found.

- Jodhpur
- Jaipur
- Udaipur
- Alwar

28. How many cycles of the TCA does one glucose molecule undergo?

- 1
- 2
- 3
- 4

29. Who wrote the book 'One Life is Not Enough'?

- Khushwant Singh
- K Natwar Singh
- Faraz Ahmed
- Jhumpa Lahiri

30. Insects have a _____ heart and the circulatory system is _____.

- Dorsal, closed
- Dorsal, open
- Ventral, closed
- Ventral, open

31. What is the main organ where the human body absorbs nutrients?

- Stomach
- Large intestine
- Pancreas
- Small intestine

32. Bacteria are present everywhere except in

- Ice
- Soil
- Distilled water
- Sea water

33. Which of the following is an antioxidant that dissolves in water?

- Acetyl cysteine
- Propyl gallate
- Hydroquinone
- Lecithin

34. Which does not provide carbohydrates?

- Spinach
- Butter
- Fish
- Cheese

35. Which amendment to the Indian Constitution lowered the voting age from 21 to 18 years?

- 61st of gravitation
- 48th of reflection
- 53rd of refraction
- 41st

36. How are Bacteria classified biologically?

- Prokaryotic Organisms
- Acellular organisms
- Monocellular Organisms
- Eukaryotic Organisms

37. Identify the virus responsible for causing Swine flu.

- Rabies virus
- Ebola virus
- H1N1 virus
- Marburg virus

38. The Blue Revolution is associated with a significant expansion in which specific industry?

- Fertilisers
- Fisheries
- Commercial farming
- Dairy Fisheries

39. Under which article of the Constitution is the 'equal protection of law' provision found?

- Article 12
- Article 13
- Article 15
- Article 14

40. How many 6s in the series are preceded by 5 but not followed by 9?

568676565685965696865568659569568

- 4
- 5
- 7
- 6

41. If Nehal says, "Amrita's father Ram is the only son of my father-in-law Manish." If Bindu is the sister of Amrita's granddaughter, how is Bindu related to Mahesh?

- Daughter
- Wife
- Daughter-in-law
- None of these

42. Fifteen years ago, the age difference between two people was 10 years and the older person was twice as old as the younger one. What is the current age of the older person?

- 25 years
- 45 years
- 35 years
- 55 years

43. Starting from a point facing East, I turned left and walked 12 ft, then turned right and walked 6 ft, then walked 6 ft South and finally walked 6 ft West. In which direction am I from my starting point?

- West
- East
- North
- South

44. Harshil is taller than Manisha but shorter than Suresh. Manisha is shorter than Anil but taller than Raghu. Who is the shortest?

- Raghu
- Manisha
- Anil
- Harshil

45. Satish is son of Raju's father's sister. Rakesh is the son of Mamta, who is Gaurav's mother and Raju's grandmother. Rahul is Sanaya's father and Satish's grandfather and is married to Mamta. What is Gaurav's wife's relation to Sanaya?

- Niece
- Sister-in-law
- Sister
- Father

46. A magnetic pole reversal caused a compass to indicate North as South. A woman, following this reversed compass, now walks East. What was her original direction of travel?

- East
- West
- North West
- North East

47. Sanju is in a square field. He walks diagonally to the South-East corner, then turns left and walks to the next corner. He turns left again and heads towards another corner. What direction is he now facing?

- South East
- South West
- North East
- North West

48. Find the angular distance covered by minute hand from 9:13 to 9:43.

- 270°
- 360°
- 144°
- 180°

49. Find the 11th letter to the right of 12th letter from left side in reverse alphabet order.

- B
- E
- D
- F

50. Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.

- Butterfly
- Death
- Larva
- Egg
- Pupa

- 4, 3, 5, 2, 1
- 4, 3, 5, 1, 2
- 1, 4, 3, 5, 2
- 1, 4, 3, 2, 5

51. A cube, painted red on all its external faces, is divided into 64 identical smaller cubes. How many of these smaller cubes have no painted faces?

- 24
- 16
- 0
- 8

52. Five friends Ansh, Priya, Nishant, Ram and Ravi have different weights. Given that Ansh weighs 50 kg, Nishant is twice his weight, Ravi is two-fifths of his weight, Ansh is 10 kg heavier than Ram and Priya is 1 kg lighter than Ravi, who is the lightest?

- Priya
- Ram
- Ansh
- Nishant

53. Arrange the following words in a logical sequence as they would appear in the English dictionary.

- Native
- Narrate
- Nest
- Name
- Naughty

(a) 4, 2, 1, 3, 5
 (b) 4, 2, 3, 5, 1
 (c) 4, 2, 1, 5, 3
 (d) 4, 1, 2, 3, 5

54. If the time in the clock is 6: 30, then its mirror image time will be ?

- 6:30
- 5:40
- 5:30
- 5:45

55. In a class, Ajay's rank was 16th from the top and 29th from the bottom among the students who passed an exam. If 6 boys were absent and 5 boys failed, what was the total number of boys in the class?

- 40
- 55
- 50
- 44

56. Choose the correct word to complete the sentence:
 "While looking at old photographs, she kept _____ about her childhood days."

- reminesing
- reminiscing
- reminissing
- reminescing

57. Choose the correct preposition to complete the sentence:
 "Films and plays were made _____ her diary."

- from
- on
- of
- by

58. Active: The volcanic eruption destroyed many houses and lives.
 Choose the correct passive form of the above sentence:
 (a) Many houses and lives were destroyed by the volcanic eruption. (b)
 (b) Many houses and lives are destroyed by the volcanic eruption. (d)
 (c) Many houses and lives have been destroyed by the volcanic eruption. (c)
 (d) Many houses and lives will be destroyed by the volcanic eruption. (b)

59. What does the phrase "Fly the coop" mean?
 (a) Display a flag (b)
 (b) Escape from a place (c)
 (c) Become suddenly angry (d)
 (d) Be successful (b)

60. Select the synonym of Resurgence.
 (a) Revival (b)
 (b) Decline (d)
 (c) Deterioration (c)
 (d) Collapse (b)

61. Which of the following words is the opposite in meaning to "Astute"?
 (a) Incisive (b)
 (b) Ingenuous (d)
 (c) Sagacious (c)
 (d) Perspicacious (b)

62. Which of the following is correctly spelt?
 (a) Rendause (b)
 (b) Rendezvous (d)
 (c) Rendizvous (c)
 (d) Rendawoo (b)

63. Which is the correct indirect speech of the following sentence?
 "Please help me with my homework", she said to her brother.
 (a) She told her brother to help has with her homework. (b)
 (b) She said to her brother to help her with her homework. (d)
 (c) She asked her brother to help her with her homework. (c)
 (d) She requested her brother to help her with her homework (b)



64. Find the correct antonym of ALACRITY.

- (a) inaptitude
- (b) uncertainty
- (c) hesitation
- (d) inability

65. Words with the same pronunciation and different meanings are:

- (a) homophones
- (b) homografts.
- (c) homologues.
- (d) homonyms

66. Pick out the correct passive voice of the following sentence:

Who did this?

- (a) Who has done this?
- (b) This was done how?
- (c) This was done by someone.
- (d) By whom was this done?

67. To complete the following sentence, choose the correct phrasal verb:

The students laughed and..... from him.

- (a) closed down
- (b) edged away
- (c) fell apart
- (d) dropped

68. I have gone through both the books, ____ has the information I need.

- (a) both
- (b) neither
- (c) every
- (d) that

69. Identify the Subordinate conjunction in the given sentence:

Johnny took bath after eating dinner.

- (a) after
- (b) eating
- (c) took
- (d) bath

70. The rise and fall of pitch in voice is called

- Stress
- Voice
- Intonation
- Frequency

71. Which of the following is wrong (with reference to narration)?

- In changing direct speech into indirect speech, a simple present becomes a simple past
- The 'will' of the future tense is changed into 'shall' and 'should'
- The 'shall' of the future tense is changed into 'should'
- The pronouns of the direct speech are changed where necessary

72. The country's economic growth was adversely ___ by political instability.

- Affected
- Effected
- Reflected
- expected

73. The correct spelling is

- Pharmacetical
- Pharamaceutical
- Pharmaceutical
- Phermaceutical

74. Identify the grammatically correct sentence from the following options.

- I am fond of reading fiction.
- This book in preferable than that
- He entered into the room
- The boy threw a stone in the river

75. Select the correct Compound Sentence of given sentence here:
In spite of being unwell, he kept on working.

- He was unwell though kept on working.
- He was unwell and kept on working.
- He was unwell, but he kept on working.
- He was unwell yet kept on working.

76. A flagstaff of height 8 m casts a shadow 5 m long on the ground and at the same time a building casts a shadow 35 m long. Find the height of the building.

- 48 m
- 56 m
- 60 m
- 50 m

77. A car takes 3 hours to reach a destination by travelling at the speed of 90 km/h. How long will it take when the car travels at the speed of 120 km/h?

- 2 hours
- 2.25 hours
- 2.5 hours
- 3 hours

78. If a basket of apples is divided among 30 students, they will get 6 apples each. How many apples would each get if the number of students is reduced by 5?

- 7 apples
- 8 apples
- 7.2 apples
- 10 apples

79. If a basket of oranges is divided among 20 students, they will get 8 oranges each. How many oranges would each get if the number of students is reduced by 4?

- 10 oranges
- 12 oranges
- 14 oranges
- 16 oranges

80. A sum of money amounts to Rs. 10648 in 3 years and Rs. 9680 in 2 years at compound interest. The rate of interest per annum is:

- 5%
- 10%
- 15%
- 20%

81. Find the sum of the squares of the digits from 1 to 9?

- 285
- 260
- 105
- 385

82. A number n is said to be perfect if the sum of all its divisors (excluding n itself) is equal to n . An example of perfect number is _____

- 15
- 12
- 6
- 9

83. $341.42 - 53.74 = ? - 62.86$

- 350.54
- 340.44
- 260.44
- 450.54

84. In a class, the average age of all students is 15.8 years. The boys have an average age of 16.4 years and the girls have an average age of 15.4 years. What is the ratio of boys to girls in the class?

- 1:2
- 3:5
- 3:4
- 2:3

85. If 198 is the difference between 80% and 62% of a number, what will be the difference between 92% and 56% of the same number?

- 396
- 360
- 3564
- 1100

86. A canteen requires 651 bananas for a week. Totally, how many bananas will it require for the months of April, May and June?

- 85
- 8463
- 9086
- 9284

87. An empty tank is connected to 8 pipes. Each inlet pipe alone fills it in 12 hours and each outlet pipe alone empties it in 36 hours. If the tank fills in 3 hours when all pipes are open, how many of the 8 pipes are outlet pipes?

- 2
- 4
- 3
- 5

88. A can complete a task in 12 days. Working together, A and B finish it in 7.5 days. If C takes 3 days longer than B to complete the task alone, how long does C take?

- 23 days
- 30 days
- 33 days
- 27 days

89. Bikers A and B begin riding towards each other at speeds of 75 km/hr and 60 km/hr, respectively. If they meet after 20 minutes, what was the initial distance between them?

- 45
- 15
- 30
- 45

90. A man takes 2.2 times as long to row a distance upstream as he does to row the same distance downstream. If he can row 55 km downstream in 2 hours and 30 minutes, what is the speed of the boat in still water?

- 40 km/hr
- 16 km/hr
- 8 km/hr
- 24 km/hr

91. A shopkeeper borrowed ₹15,000 on Jan 8, 2011, against an 18% overdraft and repaid it on June 3, 2011. What was the final repayment amount?

- ₹16400
- ₹16280
- ₹16080
- ₹16470

92. A gives B as many rupees as B has and C as many rupees as C has. Similarly, B then gives A and C as many rupees as each then has. C, similarly, then gives A and B as many rupees as each then has. If each finally has 16, with how many rupees does A start?

- 32
- 28
- 30
- 26

93. Seema and Meena share ₹25000 in a 3:2 ratio. After they each receive an additional ₹5000, what is their new sharing ratio?

- 2:3
- 3:4
- 4:3
- 5:4

94. A, B and C enter into a partnership. A invests some money at the beginning, B invests double the amount after six months and C invests thrice the amount after eight months. If the annual profit be 27000; C's share (in) is

- ₹8625
- ₹10800
- ₹9000
- ₹11250

95. A person covers half of a 6 km journey in the first two-thirds of 45 minutes. What speed must he maintain for the remaining distance to finish on time?

- 6
- 8
- 15
- 12

96. In which generation of computers were Integrated Chips (ICs) first introduced?

- 1st Generation
- 2nd Generation
- 4th Generation
- 3rd Generation

97. During the installation of _____, program files must be copied and typically decompressed from a source like a CD-ROM to the hard disk.

- programming software
- applications software
- application hardware
- system hardware

98. The logical design of a database is called the database _____, and the database _____ which is snapshot of the data in the database at given instant in time.

- Schema, Instance
- Relation, Schema
- Relation, Domain
- Trees, Attributes

99. ICMP is primarily used for _____

- Error Reporting
- Addressing
- Multicasting
- Forwarding

100. Which of the following are advantages of CD-ROM as a storage media?

- CD-ROM disks retrieve data and information more quickly than magnetic disks do.
- CD-ROM is an inexpensive way to store large amount of data and information.
- CD-ROMs make less errors than magnetic media.
- All the above

Hall Ticket No.:

PAPER - II**Descriptive Type Questions****Note :** 1) Candidate should write answers in ENGLISH language only.

2) Candidate is required to return the question paper along with answer booklet to the Invigilator after the examination.

Duration: 01:30 hours (Ninety Minutes)**Maximum Marks: 100**

1. Attempt any one in a minimum of 200 words. $(1 \times 10 = 10 \text{ Marks})$
 - a) Describe the procedure for measuring the thickness of a glass plate using a screw gauge. What factors can affect the accuracy of your measurement?
 - b) When investigating Boyle's law, what experimental setup is needed to study the relationship between pressure and volume? How is data collected and analyzed?

2. Attempt any one in a minimum of 300 words. $(1 \times 15 = 15 \text{ Marks})$
 - a) Discuss the steps involved in performing a titration to determine the concentration of an unknown acid. How do indicators help identify the endpoint?
 - b) Describe the process for measuring the rate of a chemical reaction in a laboratory setting. What factors can influence the reaction rate?

3. Attempt any one in a minimum of 300 words. $(1 \times 15 = 15 \text{ Marks})$
 - a) Explain how chromatography can be applied to separate components of a mixture. What are the principles behind paper or thin-layer chromatography?
 - b) Illustrate the method for determining the solubility of a salt at different temperatures. How the saturated solution is identified, and how does temperature affect solubility?

4. Attempt any one in a minimum of 300 words. $(1 \times 15 = 15 \text{ Marks})$
 - a) Explain the experimental approach for observing osmosis in plant cells. What materials are needed, and what results demonstrate osmosis?
 - b) Discuss how enzymes are studied in the lab with respect to their activity and factors affecting them. How can results be quantitatively measured and interpreted?

5. Attempt in a minimum of 300 words. $(1 \times 15 = 15 \text{ Marks})$

Explain how microscopy is used to study cell structures. What preparations are necessary for clear observation and documentation?

6. Attempt in a minimum of 300 words. $(1 \times 15 = 15 \text{ Marks})$

Explain the importance of lab safety and how you maintain safety protocols in your daily operations? Describe specific examples of handling hazardous materials or chemical spills.

7. Attempt in a minimum of 300 words. $(1 \times 15 = 15 \text{ Marks})$

Describe your process for organizing, labeling, and storing laboratory samples. How do you maintain order and prevent mix-ups when testing a high volume of samples?

(d) Forward

(e) 10 x 10 Marks



(f) All the above

(g) 15 x 1 Marks

8. Explain the procedure for separating the nucleus from the cytoplasm of a cell. $(1 \times 15 = 15 \text{ Marks})$

9. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

10. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

11. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

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13. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

14. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

15. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

16. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

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21. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

22. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

23. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

24. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

25. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

26. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

27. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

28. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

29. Describe the process of cell division and its significance. $(1 \times 15 = 15 \text{ Marks})$

30. Explain the concept of cell differentiation and its importance. $(1 \times 15 = 15 \text{ Marks})$

SPACE FOR ROUGH WORK

QUESTION PAPER BOOKLET

SPACE FOR ROUGH WORK

Explain how microscopes are used to study cell structure. $10 \times 15 = 15$ Marks

Attempt in any one of the following questions. $10 \times 15 = 15$ Marks

Explain the following safety rules which must be followed to maintain safety during laboratory operations. $10 \times 15 = 15$ Marks

Q1. Attempt any one of the following questions. $10 \times 15 = 15$ Marks

Describe any one process of cell division. $10 \times 15 = 15$ Marks

With the help of a diagram, explain the following types of cell division. $10 \times 15 = 15$ Marks

