



सार्वजनिक आरोग्य विभाग परिक्षा
महाराष्ट्र शासन
प्रश्नपुस्तिका



Test Booklet No.: 32000416

प्रश्नपुस्तिका क्रमांक

Test Booklet Code

D

Roll Number: 4453223416

Answer sheet No.: 587992

Post Code: 32 \ Chemical Assistant

Total Questions: 100

Total Marks: 200

Time: 2 Hours

Rajdar Nitin

Name and
Signature of the Candidate

Shakun

Signature of the invigilator

IMPORTANT INSTRUCTIONS

महत्वाच्या सूचना

1. The test is of 2 hours duration and Questions Booklet contains 100 questions. Each question carries 02 mark. For each correct response, the candidate will get 02 mark.	१. परिक्षेसाठी २ तासांची वेळ आहे. प्रश्न पुस्तिकेमध्ये १०० प्रश्न आहेत. प्रत्येक प्रश्नासाठी दोन गुण आहे. प्रत्येक अचूक उत्तरास दोन गुण मिळेल.
2. Use Blue/Black Ball point Pen only for writing particulars on this page or marking responses.	२. या पानावर निष्पक्षील लिहिण्यासाठी अथवा चिन्हं कित करण्यासाठी निळा/कळा बॉलपॉइंट पेन वापरा.
3. Rough work is to be done on the space provided for this purpose in the Questions Booklet only.	३. कच्चे काम करावयाचे असल्यास त्यासाठी याच प्रश्न पुस्तिकेमध्ये उपलब्ध केलेल्या स्वतंत्र जागेचा उपयोग करावा.
4. On completion of the test, the candidate must handover the Answer Sheet to the Invigilator before leaving the Examination Hall. The candidates are allowed to take away this Questions Booklet with them after examination is over.	४. परिक्षा पूर्ण झाल्यानंतर उमेदवाराने परिक्षाकेंद्र सोडण्यापूर्वी उत्तर पत्रिका समावेशकांकडे जमा करणे बंधनकारक आहे. मात्र प्रश्नपुस्तिका उमेदवाराना वरोवर घेऊन जाण्याची परवानगी आहे.
5. The candidates should ensure that Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Roll No. Anywhere but except in the specified space in the Questions Booklet and Answer Sheet.	५. उमेदवाराने उत्तरपत्रिकेच्या धड्या धालू नयेत. उत्तरपत्रिकेवर उत्तराचे गडद केलेले फक्त एकच वर्तुळ सोडून इतर कोणत्याही प्रकारच्या खाण-खुणा करू नयेत. प्रश्नपुस्तिका व उत्तरपत्रिकेवरील निर्दिष्ट केलेल्या ठिकाणीच आपला रोल नंबर लिहावा.
6. Each candidate must show his/her Admit Card/Hall Ticket to Invigilator whenever demanded.	६. परिक्षा केंद्रावरील समावेशकांनी मागणी केल्यानंतर उमेदवारानी प्रवेशपत्र दाखवावे. (Admit Card/Hall Ticket)
7. No candidate should leave his / her seat without special permission of the Invigilator/Supervisor.	७. परिक्षा केंद्रा वरिल समावेशक अथवा पर्यवेक्षक यांच्या विशेष परवानगी जिवाय कोणत्याही उमेदवाराने आपली जागा अथवा परिक्षा कक्ष सोडता येणार नाही.
8. Use of Electronic/Manual Calculator is prohibited.	८. इलेक्ट्रॉनिक/हॅन्डव्हॉल कॅल्क्युलेटर यांचा वापर करण्यास सक्त मनाई आहे.
9. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Hall.	९. उमेदवारांनी परिक्षे संबंधी लागू असणाऱ्या सर्व दिश्यांचे पालन करणे बंधनकारक राहिल. आचारसंहितेचा अर्थ केल्यास नियमानुसार कारवाई करण्यात येईल.
All cases of unfair means will be dealt with the rules & regulations of this examination.	
10. No part of Booklet and Answer Sheet shall be detached under any circumstances.	१०. परिक्षा पूर्ण होईपर्यंत कोणत्याही परिस्थितीत प्रश्नपत्रिका तसेच उत्तरपत्रिका यांची पाने वेगळी करू नयेत.

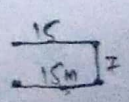
29 - Mon
1 - Mon

- 1) A bag contains 7 blue balls and 5 yellow balls. If two balls are selected at random, what is the probability that none is yellow?
- A. $\frac{5}{33}$
 - B. $\frac{5}{22}$
 - C. $\frac{7}{22}$ ✓
 - D. $\frac{7}{33}$

- 2) Damodar is 26 years older than his son. In four years, his age will be twice the age of his son. The present age of his son is :
- A. 16 years
 - B. 18 years
 - C. 20 years
 - D. 22 years ✓
- 3) Introducing a girl, Niraj said, 'Her mother is the only daughter of my mother-in-law'. How is Niraj related to the girl?
- A. Husband
 - B. Brother
 - C. Father
 - D. Uncle

- 4) Covid-19 is caused by _____
- A. Bacteria
 - B. Parasite
 - C. Virus ✓
 - D. Fungus

- 5) Madhuri, who is facing South turns to her left and walks 15 metres, then she turns to her left and walks 7 metres, then facing west she walks 15 metres. How far is she from her original position?
- A. 7m
 - B. 10m
 - C. 5m
 - D. 8m



- 6) If Sunday falls on 30th April, what day would be on 31st May?
- A. Saturday
 - B. Sunday
 - C. Monday
 - D. Wednesday

7)

6	6	8
5	7	5
4	3	?
120	126	320

- A. 12
 - B. 8
 - C. 14
 - D. 16
- 8) Deepak has some hens and some goats. If the total number of animal heads is 90 and the total number of animal feet is 248, what is the total number of goats Deepak has?
- A. 32
 - B. 36
 - C. 34 ✓
 - D. Cannot be determined
- 9) In class the average age of 75 students is 7 years. If along with the class teacher, the average is 7.5 years. What is the age of teacher age?
- A. 37.5 years
 - B. 45 years
 - C. 42 years
 - D. 39 years

- 10) In a factory of 140 machine parts, 5 percent were defective. In a factory of 80 machine parts, 10 percent were defective. For the two factory combined, what percent of the machine parts were defective?
- A. 6.50%
 - B. 7%
 - C. 7.50%
 - D. 8%

7078 = 2525

Set - D (Chemical Assistant) 37.5

- 11) The correct sequence of communication is
- Message Sender Receiver
 - Message Receiver Sender
 - Sender Message Receiver
 - Receiver Sender Message
- 12) AB, DE, GH, ?, MN
- IJ
 - HI
 - JK
 - None
- 13) Pick the odd one
- Bengali
 - Marathi
 - English
 - Kannad
- 14) In a row of trees, one tree is seventh from either end of the row. How many trees are there in the row?
- 8
 - 13
 - 14
 - 11
- 15) In a class of 45 students, a boy is ranked 20th. When two boys joined, his rank was dropped by one. What is his new rank from the end?
- 25th
 - 26th
 - 27th
 - 28th
- 16) अशुध्द शब्द ओळखा
- तथापि
 - परंतु
 - आणि
 - यापैकी नाही
- 17) 'दुभत्या गाईच्या लाथा गोड' या म्हणीचा अर्थ खालीलपैकी कोणता?
- दुभत्या गाईची लाथ लागत नाही.
 - फायदयासाठी अपमान सहन करणे.
 - अडथळे आले तरी प्रयत्न करावा.
 - दुभत्या गाईच्या लाथा खाणे.
- 18) 'अर्थ नसणे' या अर्थाचा योग्य वाकप्रचार कोणता?
- गाशा गुंडाळणे
 - फुगडी घालणे
 - वा-यावर सोडणे
 - राम नसणे
- 19) 'कृपण' या शब्दाच्या विरुद्धार्थी शब्द ओळखा
- उदार
 - कृतघ्न
 - गरीब
 - अपूर्व
- 20) गटात न बसणारा शब्द ओळखा?
- सूत
 - भ्राता
 - बंधू
 - भाऊ
- 21) रामबाण
- अचूक गुणकारी
 - रामाचा बाण
 - थोर पुरुष
 - राजा
- 22) दिलेल्या शब्दाचा समानार्थी नसलेला शब्द ओळखा.
- निखिल
 - सर्व
 - निर्भीड
 - पूर्ण
 - सगळा

- 23) अधोरेखित शब्दांच्या विभक्तीचा अर्थ ओळखा.
अ) तो घरातून बाहेर पडला.
A. कर्ता
B. कर्म
C. अपादान
D. संप्रदान
- 24) 'सूर्य मावळत आहे' - पूर्ण भविष्यकाळ करा.
A. सूर्य मावळेल.
B. सूर्य मावळत असेल.
C. सूर्य मावळलेला असेल
D. सूर्य मावळला.
- 25) 'अमुक झाले तर अमुक होईल' असे काल्पनिक विधान करावयाचे असेल तर भूतकाळी आणि भविष्यकाळी कोणत्या अर्थाच्या क्रियापदाची योजना करावी लागते?
A. आज्ञार्थी
B. संकेतार्थी
C. प्रश्नार्थक
D. यांपैकी नाही
- 26) तो पेरुचे फळ सावकाश खात आहे, या वाक्यातील क्रियाविशेषण कोणते?
A. पेरुचे फळ
B. फळ
C. सावकाश
D. खात आहे
- 27) अधोरेखित शब्दाचा प्रकार ओळखा. तू पण माझ्याबरोबर प्रार्थना म्हण.
A. उभयान्वयी अव्यय
B. शब्दयोगी अव्यय
C. क्रियाविशेषण
D. केवलप्रयोगी अव्यय
- 28) कर्ता - कर्म - क्रियापद यांच्या परस्परसंबंधांना म्हणतात.
A. वाक्य
B. शब्दसमूह
C. कर्तरी प्रयोग
D. प्रयोग
- 29) सावळाच रंग तुझा पावसाळी नभापरी ! (अलंकार ओळखा)
A. श्लेष अलंकार
B. यमक अलंकार
C. अतिशयोक्ती अलंकार
D. उपमा अलंकार
- 30) लहानपण देगा देवा | मुंगी साखरेचा रवा |
ऐरावत रत्न थोर | त्यासी अंकुशाचा मार ||
वरील कडव्यातील अलंकार ओळखा.
A. यमक अलंकार
B. अनुप्रास अलंकार
C. रूपक अलंकार
D. दृष्टांत अलंकार

31) What is the full form of AD, used with dates?

- A. Anno Domini
- B. Assistant Director
- C. Acknowledgement Due
- D. After Date

32) Which of the following planets of our solar system has least mass?

- A. Neptune
- B. Jupiter
- C. Mars
- D. Mercury

33) Ozone gas is present in which layer of atmosphere?

- A. Stratosphere
- B. Troposphere
- C. Ionosphere
- D. Mesosphere

34) Who built the Khajuraho temples?

- A. Holkars
- B. Scindias
- C. Bundela
- D. Chandela

35) At which of the following places is the famous Kailasha Temple located?

- A. Ajanta
- B. Badami
- C. Chittor
- D. Ellora

36) Which of the following is NOT a Union Territory?

- A. Goa
- B. Lakshadweep
- C. Dadar and Nagar Haveli
- D. Chandigarh

37) How many spokes are there in the Dharma Chakra (Ashok Chakra) depicted on the National Flag of India?

- A. 16
- B. 20
- C. 24
- D. 32

38) The headquarter of RBI is situated at:

- A. Delhi
- B. Kolkata
- C. Chennai
- D. Mumbai

39) Thar Desert is situated in -

- A. Rajasthan
- B. West Bengal
- C. Tamilnadu
- D. Uttarakhand

40) Which of the following is the highest mountain peak in Maharashtra?

- A. Taramati
- B. Anjaneri
- C. Salher
- D. Kalsubai

41) National Rural Health Mission (NRHM) was launched in the year:

- A. 2003
- B. 2004
- C. 2005
- D. 2006

42) Who was called the 'Iron Man of India'?

- A. Sardar Ballabhbhai Patel
- B. Surendranath Bannerjee
- C. Bipin Chandra Pal
- D. Lala Lajpat Rai

43) Which sea is to the west of Maharashtra?

- A. Black
- B. Arabian
- C. Labrador
- D. Timor

44) Marathi Language Day is Celebrated on

- A. 15th February
- B. 7th February
- C. 20th February
- D. 27th February

45) The river Koyna joins the river Krishna at _____

- A. Satara
- B. Karad
- C. Kolhapur
- D. Mahabaleshwar

- * 46) Give the meaning of 'To call it a day'.
A. To have a good day.
B. To work all the day.
C. To have a free day.
D. To stop doing work of the day.

- * 54) "I'm sure I've met your father."
A. Verb
B. Preposition
C. Pronoun
D. Interjection

- 47) Choose the correct meaning of the given phrase or idiom:
Look into—
A. to examine thoroughly
B. to watch
C. to observe
D. to follow

- 55) Make the adjective of the word 'occasion.'
A. occasioned
B. accusational
C. occasional
D. occasionally

- 48) Which of the following word is correctly spelt?
A. administration
B. conversation
C. creature
D. develop

- 56) Choose the correct conjunction :
She bought a car, _____ she was too young to learn to drive.
A. if
B. because
C. although
D. if not

- 49) Meaning of "Fly by night"
A. Night journey
B. A Bird busy in night
C. Cat's eye
D. Swindler

- 57) I will sing if he _____
A. will ask me
B. asks me
C. asked me
D. has asked me

- 50) I _____ the apartment all day yesterday.
A. Clear
B. Washed out
C. Cleaned Up
D. None of these

- 58) He said, "Please help me."
Choose the option with the correct indirect form of the above.
A. He pleased me to help me.
B. He requested me to help him.
C. He ordered me about helping.
D. He said I need help

- 51) Choose the word spelt correctly.
A. Substantial
B. Substantial
C. Substential
D. Substendial

- * 59) Choose appropriate antonym for the word 'Gloomy'
A. Idle
B. Wise
C. Cheerful
D. Sad

- 52) He competed _____ me for the prize.
A. Off
B. With
C. To
D. Off

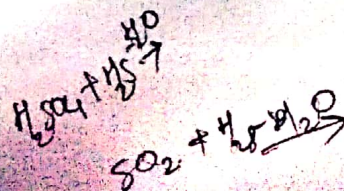
- 60) Choose the correct answer from the following and fill in the blank:
A doctor who studies and treats mental illness

- 53) He _____ a very good grade in the examination.
A. Earned
B. Given
C. Received
D. None of these

- A. psychiatrist
B. psychologist
C. psychoanalyst
D. psychiatry

- 61) Which of the following does not react with water?
 A. Barium
 B. Calcium
 ✓ C. Beryllium
 D. Strontium
- 62) Identify the amino acids containing nonpolar, aliphatic R groups.
 A. Phenylalanine, tyrosine, and tryptophan
 ✓ B. Glycine, alanine, leucine
 C. Lysine, arginine, histidine
 D. Serine, threonine, cysteine
- ✓ 63) Which among the following is both glucogenic and ketogenic?
 ✓ A. Isoleucine
 B. Leucine
 C. Lysine
 D. Histidine
- † 64) Peptide bond is a _____
 A. Covalent bond ✓
 B. Ionic bond
 C. Metallic bond
 D. Hydrogen bond
- 65) Which of the following statements is true about size-exclusion chromatography?
 A. During the separation of a mixture of proteins, protein with smallest molecular weight is eluted first
 ✓ B. During the separation of a mixture of proteins, protein with largest molecular weight is eluted first
 C. During the separation of a mixture of proteins, protein with largest molecular weight is eluted last
 D. During the separation of a mixture of proteins, protein with largest molecular weight flow around the beads
- 66) Which of the following alkaline earth metals is the rarest in the earth crust?
 A. Calcium
 B. Strontium
 C. Radium
 ✓ D. Beryllium
- 67) What is water gas?
 A. mixture of CO and H₂
 B. mixture of CO and H₂O
 C. mixture of CO₂ and H₂
 D. Carbon mono-oxide
- 68) Which of the following catalyst is used generally during the hydrogenation of Alkenes?
 A. Platinum
 B. Palladium
 C. Nickel
 ✓ D. All of the above
- ✗ 69) Which of the following is correct about Hard water?
 A. it is free from soluble salts of calcium and magnesium
 B. it does not give lather with soap
 C. Both a and b
 ✓ D. None of the above
- 70) Which of the following is correct about Ammonia?
 A. The ammonia molecule is trigonal pyramidal in shape
 B. Ammonia gas is light blue in colour ✗
 C. its aqueous solution is highly basic
 D. Ammonia gas is odorless ✗
- 71) Which of the following is NOT correct about Phosphine?
 A. The chemical formula is PH₃
 B. The electronic structure is like Ammonia
 C. It is odorless
 D. it is used as a dopant in semiconductor industries

- 72) The neutralization reaction between an acid and a base is a type of:
- Double displacement reaction
 - Displacement reaction
 - Addition reaction
 - Decomposition reaction
- 73) Oleum is
- a mixture of conc. H_2SO_4 and oil
 - sulphuric acid which gives fumes of sulphur dioxide
 - sulphuric acid saturated with sulphur trioxide
 - a mixture of sulphuric and nitric acid.
- 74) When sulphur dioxide is passed through a solution of hydrogen sulphate in water
- Sulphuric acid is formed in solution
 - Sulphurous acid is formed
 - Sulphur is precipitated ✓
 - No change in observed
- 75) Which one of the following statement about a chemical equation is true
- Mass is conserved
 - Mass as well as atoms are conserved ✓
 - Atoms are conserved
 - Ions are conserved
- 76) A balanced chemical equation is in accordance with
- Law of gaseous volumes
 - Law of Avogadro
 - Law of constant proportions
 - Law of conservation of mass
- 77) Chemical reaction involve the participation of
- Electron
 - Protons
 - Neutrons
 - Nuclei
- 78) Chemical reaction does not involve:
- Formation of new substances having entirely different properties than that of the reactants.
 - Breaking of old chemical bonds and formation of new chemical bonds
 - Rearrangement of the atoms of reactants to form new products
 - Changing of the atoms of one element into those of another element to form new products
- 79) One of the following processes does not involve a chemical reaction. That is:
- Melting of candle wax when heated
 - Burning of candle wax when heated
 - Digestion of food in our stomach
 - Ripening of banana
- 80) Rusting of iron involves a chemical reaction which is a combination of:
- Reduction as well as combination reactions
 - Oxidation as well as combination reactions ✓
 - Reduction as well as displacement reactions
 - Oxidation as well as displacement reactions
- 81) When ferrous sulphate is heated strongly it undergoes decomposition to form ferric oxide as a main product accompanied by a change in colour from:
- Blue to green.
 - Green to blue.
 - Green to brown. ✓
 - Green to yellow.
- 82) Which of the following gases is used in the storage of fat and oil containing foods for a long time?
- Carbondioxide gas
 - Nitrogen gas
 - Oxygen gas
 - Neon gas



- 83) Which among the following is popularly called Hypo?
 A. Silver Bromide
 B. Silver nitrate
 ✓ C. Sodium thiosulphate
 D. Sodium phosphate
- 84) Which of the following is not a non-metallic mineral?
 A. Mica
 ✓ B. Bauxite
 C. Granite
 D. Silica
- 85) Which among the following is known as White Vitriol?
 A. Zinc Sulphate ✓
 B. Zinc Chloride
 C. Zinc Phosphate
 ✗ D. Zinc oxide
- 86) Which among the following is a common salt in Detergents?
 A. Sulphate
 B. Nitrate
 C. Sulphonate
 D. Carbonate
- 87) Which among following is also known as white gold?
 A. Nickel
 B. Rhodium
 ✓ C. Platinum
 D. Palladium
- 88) Consider the following statements about Zeolites:
 ✓ 1) Zeolites are a large group of natural and synthetic hydrated aluminium silicates
 2) Zeolites are mainly found in low-temperature metamorphic rocks
 Which of the above statements is/are correct?
 A. 1 Only
 B. 2 Only
 C. Both 1 & 2
 D. Neither 1 nor 2
- 89) The symbolic representation of the molecule of a compound is called
 A. Structural formula
 ✓ B. Molecular formula
 C. Empirical formula ✗
 D. Graphic formula ✗
- 90) Reaction between neutral solution of barium chloride and sodium carbonate goes to completion because
 A. the reaction is irreversible
 B. sodium chloride is only sparingly soluble in water
 ✓ C. barium carbonate is almost insoluble in water
 D. the solubility of $BaCl_2$ decreases in the presence of sodium carbonate
- 91) A Photochemical reaction is
 A. Catalyzed by light
 ✓ B. Initiated by light
 C. Accompanied with emission of light
 D. Used to convert heat energy into light
- 92) Before burning in air, the magnesium ribbon is cleaned by rubbing with a sand paper to:
 A. Make the ribbon surface shinier
 B. Remove the layer of magnesium oxide from the ribbon surface
 C. Remove the layer of magnesium carbonate from the ribbon surface
 D. Remove the moisture from the ribbon surface
- 93) The energy required to remove an electron from the outermost shell of an atom in its isolated gaseous state is called?
 A. Electron Affinity
 B. Reducing Potential
 ✓ C. Ionization Potential
 D. Shell Potential

94) Which of the following is an essential fatty acid?

- A. Linolenic
- B. Palmitic
- C. Oleic
- D. Stearic

95) Which of the following is a polar derivative of cholesterol?

- A. Bile salt
- B. Oestrogen
- C. Vitamin D
- D. Progesterone

96) Which of the following fatty acid has the least melting point?

- A. Palmitic acid + 62.9°C
- B. Stearic acid + 69.3°C
- C. Arachidonic acid (-49°C)
- D. Timnodonic acid (-54°C)

97) Which of the following is a storage form of lipid?

- A. Glycolipid
- B. Phospholipid
- C. Sufolipid
- D. Triacyl glycerol

98) In the binding of oxygen to myoglobin, the relationship between the concentration of oxygen and the fraction of binding sites occupied can best be described as _____

- A. Hyperbolic
- B. Linear with a negative slope
- C. Linear with a positive slope
- D. Parabolic

99) Which of the following are not the components of RNA?

- A. Thymine
- B. Adenine
- C. Guanine
- D. Cytosine

100) What is the composition of nucleoside?

- A. a sugar + a phosphate
- B. a base + a sugar \rightarrow nucleoside
- C. a base + a phosphate
- D. a base + a sugar + phosphate \rightarrow nucleotide

Rough Work