

QUESTION BOOKLET
Entrance test B.Ed. Admission/
B.Ed. Science Stream 2017
General Instructions

Roll Number :

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Question Booklet No :

QP Code : C

1. This Computerized OMR Answer Sheet is to be filled in by BLACK INK / BLUE BALL - PONT only.
ଏହି କମ୍ପ୍ୟୁଟରୀକୃତ OMR ର ଉତ୍ତର ପୂରଣ କରିବାପାଇଁ କଳା/ନୀଳ କାଳି ଥିବା ବଲପଏଣ୍ଟପେନ ବ୍ୟବହାର କରନ୍ତୁ ।
2. Since answers and other particulars are to be filled in with Black / Blue ink Ball-Point Pen, there is no provision for change of answers by eraser / blade / white fluid etc. Therefore, all particulars including answers are to be filled in VERY CAREFULLY. Kindly note that the OMR Answer Sheet will not be replaced under any circumstances.
ଯେହେତୁ ଲିଭାଇବାର ବ୍ୟବସ୍ଥାନାହିଁ । ତେଣୁ ଉତ୍ତରକୁ ଓ ସମସ୍ତ ବିବରଣୀ ଅତ୍ୟନ୍ତ ଧ୍ୟାନ ସହକାରେ ପୂରଣ କରନ୍ତୁ । ଦୟାକରି ଧ୍ୟାନ ଦିଅନ୍ତୁ, ଯେ କୌଣସି ପରିସ୍ଥିତିରେ OMR ଉତ୍ତର ପତ୍ରିକା ବଦଳ କରାଯିବ ନାହିଁ ।
3. Darken only one circle for Answer of each question as shown in the example given below. Marking should be dark and the circle is to be filled in completely as shown in the example.
ନିମ୍ନ ଉଦାହରଣରେ ଦର୍ଶାଯାଇଥିବା ଭଳି ପ୍ରତ୍ୟେକ ଉତ୍ତର ପାଇଁ କେବଳ ଗୋଟିଏ ହିଁ ଗୋଲ କଳା କରନ୍ତୁ । ଉଦାହରଣରେ ଦର୍ଶାଯାଇଥିବା ଭଳି ପୂରା ଗୋଲରେ ଗାଢ଼ କଳା/ନୀଳ ରଙ୍ଗ ଚିହ୍ନ କରାଯିବା ଉଚିତ୍ ।
4. There is only one correct response for each question. More than one response to a single question shall be treated as negative response. For each negative marking, 0.25 marks shall be deducted from your total marks.
ପ୍ରତ୍ୟେକ ପ୍ରଶ୍ନ ପାଇଁ ଗୋଟିଏ ନିର୍ଦ୍ଦିଷ୍ଟ ଉତ୍ତର ଅଛି । ଯଦି ଗୋଟିଏ ନିର୍ଦ୍ଦିଷ୍ଟ ପ୍ରଶ୍ନର ଉତ୍ତର ପାଇଁ ଏକାଧିକ ଗୋଲକୁ ରଙ୍ଗ କରାଯାଇଥାଏ, ତେବେ ତାହା ଭୁଲ ଉତ୍ତର ଭାବେ ବିବେଚନା କରାଯିବ । ପ୍ରତ୍ୟେକ ଭୁଲ ଉତ୍ତର ପାଇଁ ଏକାଧିକ ଗୋଲକୁ ରଙ୍ଗ କରାଯାଇଥାଏ, ତେବେ ତାହା ଭୁଲ ଉତ୍ତର ଭାବେ ବିବେଚନା କରାଯିବ । ପ୍ରତ୍ୟେକ ଭୁଲ ଉତ୍ତର ପାଇଁ ୦.୨୫ ମାର୍କ କରାଯିବ ।
5. Mark your answer only in the space provided. Please do not mark any other thing on the OMR answer sheet.
କେବଳ ଦିଆଯାଇଥିବା ସ୍ଥାନରେ ହିଁ ନିଜର ଉତ୍ତର ଚିହ୍ନିତ କରନ୍ତୁ । ଏହି ପୃଷ୍ଠିକାର କୌଣସି ସ୍ଥାନରେ ଅନାବଶ୍ୟକ ଚିହ୍ନ ଦିଅନ୍ତୁ ନାହିଁ ।
6. Rough work should not be done on this OMR Answer sheet. Use rough sheets provided at the end of the question booklet, for rough work.
OMR ଉତ୍ତର ପତ୍ରିକାରେ ରଫ୍ କାମ କରନ୍ତୁ ନାହିଁ । ରଫ୍ କାମ ପାଇଁ ପ୍ରଶ୍ନ ପୃଷ୍ଠିକାର ପଛପଟରେ ଥିବା ରଫ୍ ସ୍ଥାନ / କାଗଜ ବ୍ୟବହାର କରନ୍ତୁ ।
7. Do not fold OMR Answer Sheet, Carbon copy of OMR answer sheet can be taken away by the candidate.
OMR ଉତ୍ତର ପତ୍ରିକାକୁ ଭାଙ୍ଗ କରନ୍ତୁ ନାହିଁ । ଉତ୍ତର ପତ୍ରିକାର କାର୍ବନ କପି ପ୍ରାର୍ଥୀ ନେବା ଆବଶ୍ୟକ ।

Please read the following instructions carefully :

1. Write your Roll Number, Question Booklet Number and Question Booklet Series on the OMR Answer Sheet carefully and sign at the appropriate place. Please note that in absence of the correct Roll number, Question Booklet Number, Question Booklet Series and Signature on the OMR Answer Sheet, your OMR Answer Sheet will be treated as invalid and will not be evaluated.

2. Strictly follow the instructions given by the Centre Superintendent / Centre Observer/Room Invigilator, and instructions given on the Question Booklet.

Please see the last page for complete instructions

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SECTION-I

1. The red blood cells are formed in :
(A) Bone marrow (B) Lymph nodes (C) Liver (D) Heart
2. Which bacteria is responsible for the formation of curd?
(A) Bacillus radicolica (B) Lactobacillus aureus
(C) Lactobacillus acidophilus (D) Lactic acid bacteria
3. Which day is observed as National Technology Day?
(A) May 11 (B) May 13 (C) June 11 (D) June 13
4. According to Swachh Bharat Survey which is India's cleanest city?
(A) Surat (B) Indore (C) Patna (D) Gonda
5. Which of the following oceans has the shape of English alphabet 'S'?
(A) Arctic ocean (B) Indian ocean (C) Atlantic ocean (D) Pacific ocean
6. Which article of our Constitution says, "No child below the age of 14 years shall be employed to work in any factory or mines or engaged in any other hazardous employment".
(A) Article 47 (B) Article 24 (C) Article 45 (D) Article 330
7. The full form of NAAC is :
(A) Nasa Auronotics and Assessment Council
(B) National Assignment and Assessment Council
(C) National Assessment and Accreditation Council
(D) None of these
8. National Education Day was celebrated on the birthday of national leader :
(A) Sarojini Naidu (B) J.S. Kriplani (C) Rajiv Gandhi (D) Maulana Abdul Kalam Azad
9. When was the United Nations Organisation founded?
(A) Dec. 10, 1945 (B) Oct. 24, 1945 (C) Oct. 24, 1944 (D) Dec. 9, 1945
10. The Speaker of Lok Sabha is elected by :
(A) Prime Minister (B) President
(C) Members of both Houses of Parliament (D) Members of Lok Sabha
11. Choose the Synonym for the word 'Cause'.
(A) Reason (B) Principle (C) Motive (D) Belief
12. Choose the right antonym for the word 'Hard'.
(A) Harsh (B) Soft (C) Humble (D) Firm
13. Fill the right conjunctions in the blanks :
Divya _____ Dimple studied hard _____ are not able to pass the examination.
(A) and, but (B) or, but (C) but, or (D) with, but

14. Choose the correct sentence for the given one :
Suman said, "What a pleasant weather!"
(A) Suman exclaimed that the weather was very pleasant.
(B) Suman declared that the weather was very pleasant.
(C) Suman wished that the weather was very pleasant.
(D) Suman disapproved that the weather was very pleasant.
15. Choose the correct modal and fill the blank :
You _____ attend the class.
(A) may (B) might (C) must (D) surely
16. Choose the correct adverb for the following sentence :
She walks _____ due to old age.
(A) slowly (B) fastly (C) very fast (D) slow
17. Choose the similar meaning for the given word : 'Progressive'
(A) Technology (B) Advancement (C) Materialistic (D) Empowerment

Read the following passage and answer the questions from 18 to 20 :

For many years people believed that the cleverest animals after man were chimpanzees. Now, however, there is a proof that dolphins may be even cleverer than these big apes. Although a dolphin lives in a sea but it is not a fish. It is a mammal. It is in many ways, therefore, like a human being.

Dolphins have a simple language. They are able to talk to one another. It may be possible for man to learn how to talk to dolphins. But this will not be easy because dolphins cannot hear the kind of sounds man can make. If man wants to talk to dolphins, therefore, he will have to make a third language which both he and dolphins can understand.

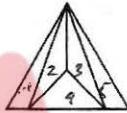
Dolphins are also very friendly towards man. They often follow ships. There are many stories of dolphins guiding ships through difficult and dangerous waters.

18. Which animals do people think may be the cleverest after man for many years?
(A) Chimpanzees (B) Dolphins (C) Big apes (D) Mammals
19. What other beings are dolphins like in many ways?
(A) Fish (B) Animals (C) Reptiles (D) Human
20. What have scientists discovered about dolphins?
(A) They understand simple language (B) They can speak to one another
(C) Men can now talk to them (D) They can teach men their language
21. The most effective method of character formation is :
(A) Teaching virtues through religious books (B) Teaching by high character teachers
(C) Organising specialists lectures on importance of values in life
(D) Rewarding virtuous behaviours and presenting high character models in the schools

22. The intellectual skills are reflected by :
- (A) Cognitive domain (B) Psychomotor domain
(C) Affective domain (D) None of these
23. The real goal of the education should be :
- (A) Securing a certificate (B) Training to made a living
(C) Mastery of the subject matter (D) Acquiring skills, habits and knowledge
24. "Life as if you were to die tomorrow. Learn as if you were to live forever". Whose quote is this?
- (A) Mark Twain (B) Oscar Wilde (C) Nelson Mandela (D) Mahatma Gandhi
25. The technique of measurement of the patterns of social behaviour in a group is known as :
- (A) Sociometry (B) Sociogram
(C) Social distance scale (D) Interactional analysis
26. What is the use of text book in a class?
- (A) To achieve teaching learning objectives (B) To delimit what is to be taught
(C) To ease the work of the teacher (D) To set new standards
27. John Locke's phrase of 'Tabula Rasa' means :
- (A) Tal and Ras (B) Free education
(C) Mind itself is a result of the process of evolution
(D) All of the above
28. Most important work of teacher is :
- (A) To maintain discipline (B) To organise teaching work effectively
(C) To take care of students (D) To check the papers of the students
29. If majority of the students in your class are weak, you should :
- (A) Not care about bright students
(B) Keep your teaching slow along with some extra guidance to the bright students
(C) Keep your teaching slow
(D) Keep your speed fast to increase the comprehensive of the students
30. The real aim of teaching is :
- (A) To give knowledge and information (B) To involve pupils in activities
(C) To impart knowledge (D) Desirable change in behaviour
31. If 'P' denotes as '+', 'Q' denotes as '+', 'R' denotes as '-' and 'S' denotes as 'x', then :
- 60 R 15 P 3 S 6 Q 4 = ?
- (A) 30 (B) 34 (C) 94 (D) 150

$$60 - 15 + 3 \times 6 + 7 = 34$$

32. Of the following two statements, both of which cannot be true, but both can also be false. Which are these two statements?
- I. All machines make noise.
 II. Some machines are noisy.
 III. No machine make noise.
 IV. Some machines are not noisy.
- (A) I & II (B) III & IV (C) I & III (D) II & IV
33. Pointing to a woman, William said, "Her only sister is the mother of my daughter's mother". How is the woman related to William?
- (A) Sister (B) Mother (C) Grandmother (D) Aunt
34. Count the number of triangles in the given figure :



- (A) 9 (B) 8 (C) 6 (D) 7
35. From the given alternatives select the word which can be formed using the letters of the given word : MATHEMATICS
- (A) TEAM (B) TEASE (C) TAUGHT (D) None of these
36. Motorcycle is related to Battery in the same way a life is related to :
- (A) Earth (B) Sun (C) Moon (D) Star
37. A person walks 5 miles to the west, turns left and walks 5 miles and turns left and walks 5 miles and again turns left and walks 5 miles. What is the direction he is facing now?
- (A) north (B) south (C) north east (D) west
38. In a certain language 'No more food' is written as 'ta ka da', 'more than that' is written as 'sa pa ka'. How is 'that' written in that language?
- (A) sa (B) ka (C) ta (D) data inadequate
39. In a certain code, LUTE is written as MUTE and FATE is written as GATE, then how will BLUE be written in that code?
- (A) CLUE (B) GLUE (C) FLUE (D) SLUE
40. If GO=32, SHE=49, then SOME will be equal to :
- (A) 56 (B) 58 (C) 62 (D) 64
41. In order to join the teaching profession what is more important?
- (A) Percentage of marks (B) Teaching aptitude
 (C) Your belonging to reserved category (D) Belonging to a family of teachers
42. If you come to know that a student of yours has started taking drugs, what will you do?
- (A) Report to the principal (B) Turn him out of the class for a week
 (C) Inform his parents (D) Will ignore his mistakes

Handwritten notes and calculations:

36. A small diagram of a motorcycle and a battery with a checkmark.

39. $C+15 = 22 + 31$
 $= 32 + 54$

43. Which of the following affects an individual's development at a given time?
(A) Their experiences (B) Interaction of nature and nurture
(C) Inherited potentialities (D) Social pressure on the individual
44. The best remedy of the student's problems related with learning is :
(A) Diagnostic teaching (B) Suggestion for private tutor
(C) Supervised study (D) Suggestion for hard work
45. Which quality of human being is necessary to lead a happy life?
(A) Capability of evaluation (B) Capability of thought and logic
(C) Capability of thought (D) Capability of imagination
46. The ideal teacher :
(A) Teaches the whole curriculum (B) Helps the students in learning
(C) Maintain good discipline (D) Is a friend, philosopher & guide
47. 'Education' as per the Constitution of India finds the entry in :
(A) Concurrent list (B) State list (C) Centre list (D) None of these
48. Which commission was appointed as a result of agitations?
(A) Charter (B) Lord Macaulay (C) Wood's (D) Hunter
49. Maximum classroom problems are due to :
(A) Faulty curriculum (B) Less intelligent students
(C) Ineffective teaching (D) Faulty examination system
50. Which ministry at the centre deals with education :
(A) Education Ministry (B) Finance Ministry
(C) Human Resources Development Ministry (D) All of the above

SECTION-II

51. Which gas causes acidic rain?
(A) H_2 (B) SO_2 (C) O_3 (D) N_2
52. Composition of natural gas :
(A) Methane, Ethane, Hydrogen Sulphide (B) Ethyne, Carbon Dioxide
(C) Propane, Sulphur Dioxide (D) None of these
53. Vermi composting is done by :
(A) Worms (B) Fungus (C) Bacteria (D) Animals
54. Malaria is caused by :
(A) Bacteria (B) Fungus (C) Virus (D) Protozoa
55. What is reason of colour blindness?
(A) Deficiency of iron (B) Defect in eye rods
(C) Defect in eye cone (D) None of these

56. Green plants of an eco system are called :
(A) D-composer (B) Consumer (C) Producer (D) None of these
57. D.D.T. is :
(A) Non-biogradable pollutant (B) Biogradable pollutant
(C) Antibiotics (D) None of these
58. Water soluble vitamin is :
(A) Vitamin-C (B) Vitamin-A (C) Vitamin-D (D) Vitamin-K
59. The amount of energy liberated by burning of carbohydrates :
(A) 37 KJ/gm (B) 37 gm/gm (C) 17 KJ/gm (D) None of these
60. The ozone layer lies :
(A) Within the troposphere (B) Within the stratosphere
(C) Just below troposphere (D) None of these
61. If $\frac{1}{5} : \frac{1}{x} = \frac{1}{x} : \frac{1}{1.25}$, then the value of x is :
(A) 1.5 (B) 2 (C) 2.5 (D) 3.5
62. A sum of Rs. 53 is divided among A, B, C in such a way that A gets Rs. 7 more than what B gets and B gets Rs. 8 more than what C gets. The ratio of their shares is :
(A) 16 : 9 : 18 (B) 25 : 18 : 10 (C) 18 : 25 : 10 (D) 15 : 8 : 30
63. $\frac{\log \sqrt{8}}{\log 8}$ is equal to :
(A) $\frac{1}{\sqrt{8}}$ (B) $\frac{1}{4}$ (C) $\frac{1}{2}$ (D) $\frac{1}{8}$
64. Which of the following is a false statement?
(A) All whole numbers are integers (B) All integers are rational
(C) All real numbers are rational (D) All fractions are real numbers
65. Which of the following is a prime number?
(A) 889 (B) 997 (C) 899 (D) 1147
66. Which of the following is not a fundamental particle of an atom?
(A) Proton (B) Neutron (C) Alpha Particle (D) Electron
67. Which metal was used by Rutherford in his alpha scattering experiment?
(A) Gold (B) Platinum (C) Silver (D) Lead
68. What is the mass of an electron?
(A) 9.1×10^{-31} kg (B) $+9.1 \times 10^{-19}$ kg (C) -7.1×10^9 kg (D) -16×10^{-19} kg
69. The most electronegative element of periodic table is :
(A) Iodine (B) Sulphur (C) Oxygen (D) Fluorine

70. Select from the following a set of three metals which are found in Free State :
(A) Copper, gold, iron (B) Silver, Gold, Platinum
(C) Aluminum, Copper, Silver (D) Gold, iron, Silver
71. Plaster of Paris is :
(A) $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$ (B) $\text{CaSO}_4 \cdot 2 \text{H}_2\text{O}$ (C) $\text{CaSO}_4 \cdot \text{CaCO}_3$ (D) $\text{CaSO}_4 \cdot 5\text{H}_2\text{O}$
72. The atomic orbitals are progressively filled in order of increasing energy. The principle is called :
(A) Hund's Rule (B) Aufbau Principle (C) Exclusion Principle (D) De – Broglie rule
73. To which group, an element with atomic number 88 will belongs to :
(A) Group 12 (B) Group 17 (C) Group 10 (D) Group 2
74. The Principal ore of aluminum is :
(A) Bauxite (B) Cryolite (C) Corundum (D) Feldsper
75. Haematite is ore of :
(A) Fe (B) Cu (C) Al (D) Ag
76. Momentum of a truck at rest is :
(A) Zero (B) Very large (C) Very small (D) None of these
77. Unit of Potential difference is :
(A) Volt (B) Ohm (C) Ampere (D) Faraday
78. The rate of flow of a charge through a circuit is called :
(A) Potential Difference (B) Energy
(C) Current (D) Resistance
79. An example of body moving with constant speed but still accelerating is :
(A) A body moving with constant speed in circular path
(B) A body moving with constant speed on straight path
(C) Both (A) and (B) (D) None of these
80. Rocket works on Principle of Conservation of :
(A) Mass (B) Momentum (C) Energy (D) Velocity
81. The expression for finding the gravitation force of attraction between any two bodies is
(A) $F = Gm_1m_2/r^2$ (B) $F = Gm_1m_2/r$ (C) $F = Gm_1m_2/r^3$ (D) $F = Gm_1/r$
82. The value of 1 kwh :
(A) $3.6 \times 10^5 \text{ J}$ (B) $3.6 \times 10^6 \text{ J}$ (C) $3.6 \times 10^7 \text{ J}$ (D) $3.6 \times 10^9 \text{ J}$
83. Sound waves are :
(A) Transverse in nature (B) Electromagnetic in nature
(C) Longitudinal in nature (D) Magnetic in nature
84. How many orbits are there in Sodium ion?
(A) 3 (B) 2 (C) 5 (D) 7
85. How many groups and periods are there in Modern Periodic table?
(A) 18, 7 (B) 8, 18 (C) 6, 18 (D) 18, 8

86. 1 Kilo Calorie =
(A) 4186 J (B) 4186 erg (C) 4186 KJ (D) None of these
87. The electronic configuration of Cl^- ion is :
(A) 2, 8, 7 (B) 2, 8, 8 (C) 2, 8, 6 (D) 2, 8, 8, 1
88. Which of the following elements will lose electron easily :
(A) K (B) Na (C) Ca (D) Mg
89. Acid reacts with base to form salt and water. This reaction is known as :
(A) Combination (B) Decomposition (C) Neutralisation (D) Reduction
90. Sodium is kept immersed in kerosene oil because :
(A) It react with moisture in air
(B) Immersing in kerosene cuts off supply of air
(C) The reaction of sodium with air is very violent
(D) All of the above
91. Which main part of sunlight causes heat?
(A) Infra red (B) Visible rays (C) Ultra violet (D) all of these
92. The source of geothermal energy :
(A) Magma (B) Ocean (C) Sun (D) CO_2
93. Bhopal Gas tragedy occurred due to leakage of :
(A) Methane (B) Phosgene
(C) Methyl-isocyanate (D) Methyl amino
94. Which of the following is responsible for depletion of O_3 layer :
(A) Chlorofluro carbons (B) N_2
(C) Carbon dioxide (D) O_2
95. Full form of CNG :
(A) Common Natural Gas (B) Compressed Natural Gas
(C) Common National Gas (D) Certified Natural Gas
96. Which of the following is used for photosynthesis?
(A) CO_2 (B) Water (C) SO_2 (D) both (A) and (B)
97. Normal human body temperature :
(A) 37°C (B) 98.6°C (C) 273K (D) None of these
98. Which of the following is bacterial disease?
(A) Measles (B) Small pox (C) Rabies (D) Tuberculosis
99. Ginger is a stem and not a root because :
(A) It stores food (B) It is bitter in taste
(C) It has nodes and internodes (D) It is non green in colour
100. The liver secretes :
(A) Bile (B) Pepsin (C) Amylase (D) Lipase

101. The 'Pasteurisation' term belongs to :
(A) Preservation by salt (B) Preservation of milk
(C) Preservation by sugar (D) None of these
102. The supersonic jets cause pollution by thinning of :
(A) CO₂ layer (B) SO₂ layer (C) O₃ layer (D) O₂ layer
103. Growth hormone is produced by :
(A) Bones (B) Pituitary gland (C) Thyroid gland (D) Adrenal gland
104. An example of non biodegradable waste is :
(A) Paper (B) Cow dung (C) Plastic (D) None of these
105. Right part of human heart contains :
(A) Oxygenated blood (B) Mixed blood
(C) Deoxygenated blood (D) No blood
106. In which medium sound travels faster?
(A) Solid (B) Liquid (C) Gas (D) None of these
107. At which temperature the density of water is maximum?
(A) 100°C (B) 0°C (C) 4°C (D) 273°C
108. Which rule is not related to electricity and magnetism?
(A) Right hand thumb rule (B) Right hand Fleming Rule
(C) Left hand Fleming Rule (D) Octave rule
109. Magnets do not attract :
(A) Ferrous (B) Cobalt (C) Nickel (D) Copper
110. A man travels a distance of 20 km from his home to office and 10 Km towards his house to back. Then displacement covered by the man in whole trip is :
(A) 30 Km (B) 10 Km (C) Zero Km (D) 50 Km
111. Formula to calculate potential energy :
(A) ma (B) $\frac{1}{2}mv^2$ (C) mgh (D) None of these
112. A stretched rubber has :
(A) Potential Energy (B) Kinetic Energy (C) Electric Energy (D) Heat Energy
113. Which of the following has bigger size :
(A) Na (B) Na⁺ (C) Mg⁺² (D) Al⁺³
114. The lowest temperature at which a substance catches fire is called :
(A) Melting Point (B) Boiling Point
(C) Ignition Temperature (D) Critical Temperature
115. Yellow color of the flame denotes :
(A) Outermost part (B) Middle Zone (C) Innermost Zone (D) None of these
116. In human each kidney has large number of filtration units called :
(A) Neutrons (B) Neurons (C) Neptune (D) Nephrons

117. The endocrine organ present in human female but not in human male is :
(A) Testis (B) Ovary (C) Pituitary gland (D) Thymus
118. World Environment Day is celebrated on :
(A) July 1 (B) June 5 (C) June 1 (D) July 5
119. Chipko Andolan is associated with :
(A) Protesting against pasting of posts on wall (B) Saving money
(C) Using more postal stamps (D) Saving forest
120. Amrita Bishnoi lost her life while saving forest having _____ trees.
(A) Teak (B) Khejri (C) Bamboo (D) Segun
121. Chlorophyll is found in oval shaped structure called :
(A) Stomata (B) Stoma (C) Chloroplast (D) Centrioles
122. Which gas is taken by plants for respiration?
(A) CO_2 (B) N_2 (C) O_2 (D) None of these
123. Deficiency of iron causes :
(A) Night blindness (B) Goitre (C) Anemia (D) Beri-beri
124. Which vitamin is prepared by our body in sunlight?
(A) Vitamin-K (B) Vitamin-C (C) Vitamin-D (D) Vitamin-A
125. Phloem tissue is found on :
(A) Plants (B) Insects (C) Mammals (D) All of these
126. Find the remainder when $x^3 - ax^2 + 6x - a$ is divided by $x - a$
(A) $3a$ (B) $4a$ (C) $2a$ (D) $5a$
127. The points A(2, 4), B(-2, 3), C(-1, -1) and D(3, 0) are the vertices of a :
(A) Rectangle (B) Square (C) Triangle (D) None of these
128. Find the angle which is equal to its supplement :
(A) 45° (B) 90° (C) 30° (D) 120°
129. Let $R = \{(1, 3), (4, 2), (2, 4), (2, 3), (3, 1)\}$ be a relation on the set $A = \{1, 2, 3, 4\}$. The relation R is :
(A) a function (B) reflexive (C) non symmetric (D) transitive
130. If $\left(\frac{a}{b}\right)^{x-1} = \left(\frac{b}{a}\right)^{x-3}$, then the value of x is :
(A) $\frac{1}{2}$ (B) 1 (C) 2 (D) $\frac{7}{2}$
131. If $a^x = b$, $b^y = c$ and $c^z = a$, then the value of xyz is :
(A) 0 (B) 1 (C) $\frac{1}{abc}$ (D) abc

132. If $x = 5 + 2\sqrt{6}$, then $\frac{(x-1)}{\sqrt{x}}$ is equal to :

- (A) $\sqrt{2}$ (B) $2\sqrt{2}$ (C) $\sqrt{3}$ (D) $2\sqrt{3}$

133. The angle of elevation of the sun, when the length of the shadow of a tree is $\sqrt{3}$ times the height of the tree is :

- (A) 30° (B) 45° (C) 60° (D) 90°

134. $\tan \frac{\pi}{2}$ is equal to :

- (A) 1 (B) 0 (C) not defined (D) $\sqrt{3}$

135. $1 + \cot^2 \theta = \operatorname{cosec}^2 \theta$ is a :

- (A) Trigonometric ratio (B) Trigonometric Identity
(C) Both (A) and (B) (D) none of these

136. First step in graphing linear equation is to :

- (A) Identify and plot coordinates (B) Connect two points
(C) Extend straight line (D) Substitute values in intercept

137. Solve simultaneous equation :

$13x - 6y = 20$
 $7x + 4y = 18$

- (A) $x=2, y=1$ (B) $x=4, y=8$ (C) $x=6, y=1$ (D) $x=2, y=4$

138. Roots of quadratic equation $ax^2 + bx + c = 0$ are real and distinct if :

- (A) $b^2 - 4ac = 0$ (B) $b^2 - 4ac > 0$ (C) $b^2 - 4ac < 0$ (D) $b^2 - 4ac = 0$

139. $\sqrt{2}$ is a polynomial of degree :

- (A) 2 (B) 0 (C) 1 (D) $\frac{1}{2}$

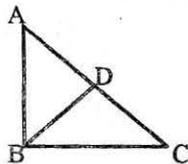
140. The angles of a triangle are in the ratio 1 : 2 : 3. The largest angle is :

- (A) 60° (B) 90° (C) 120° (D) 150°

141. Flat surface in which two points are joined by using straight line is classified as :

- (A) line (B) ray (C) intersecting line (D) plane

142. In this figure $AB = BC$ and $AD = BD = DC$. The number of isosceles triangles in the figure is :



- (A) 1 (B) 2 (C) 3 (D) 4

143. A rectangular field is 40m long and 30m wide. Perimeter of rectangular field is :

- (A) 200m (B) 180m (C) 160m (D) 140m

144. How many sides does a heptagon have?

- (A) 2 (B) 4 (C) 7 (D) 5

145. A parallelogram whose all sides are equal is called :
(A) Square (B) Rhombus (C) Rectangle (D) Both (A) & (B)
146. $A = \{x : x \text{ is a prime number less than } 10\}$
It is called :
(A) Roaster method (B) Set builder form (C) Power set (D) Symmetric
147. Domain of $f(x) = \frac{x}{2+x^2}$ is :
(A) $\mathbb{R} - \{2\}$ (B) $\mathbb{R} - \{-2\}$ (C) ∞ (D) \mathbb{R}
148. Two functions f and g are said to be equal iff :
(i) The domain of f = domain of g
(ii) $f(x) = g(x)$ for every x belonging to their common domain
(A) Statement (i) is true (B) Statement (ii) is true
(C) Both (i) and (ii) are true (D) none of these
149. Write in Roman numeral : 92.
(A) XCV (B) XCIII (C) XCIV (D) XCII
150. Let $A = \{1, 2, 3, 4\}$ then total number of subsets of A :
(A) 4 (B) 8 (C) 12 (D) 16

3. Candidates are not allowed to carry any papers, notes, books, calculators, cellular phones, mobile phones, scanning devices, pagers, log tables etc. into the Examination Hall. Any candidate found using, or in possession of such unauthorized material or involved in copying or impersonation or adopting unfair means or behaviors will be disqualified and may be subjected to penal action.

4. **This examination is of objective type. The Question Booklet consists of two sections : Section I and Section II. Both sections are compulsory.** Section I contains 50 questions from General English, Education, General Awareness, Reasoning and Teaching Aptitude. Section II consists of 100 questions from English language, Odia language, History and Political Science and Geography.

5. There are a total of 150 questions and the total time allotted is 2.30 hours. All questions and the total time allotted is 2.30 hours. All questions are compulsory and carry 1 mark each. Every correct answer will get 1 mark and 0.25 marks will be deducted for every wrong answer.

6. The candidates must check that the Question Booklet has 150 questions with multiple choice answers. If any discrepancy is found, immediately report to the invigilator, so that Question Booklet may be replaced.

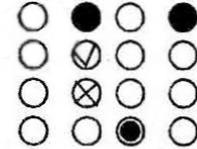
7. Each objective question is followed by four answers out of which one is correct. Your task is to choose the correct answer and mark our answer on the OMR Answer Sheet, Not on Question Booklet.

8. Completely darken the CIRCLE so that the alphabet inside the CIRCLE is not visible. Darken only one circle for each answer. The CORRECT and the WRONG method of darkening the CIRCLE on the OMR answer sheet are given in the example below :

Correct Method



Wrong Method



9. Use blue/black ink ball point pen only for filling the boxes and darkening the circle on OMR Answer Sheet. Do not use pencil.

10. Folding/wrinkling or putting any unwanted mark or damaging the OMR Answer sheet is prohibited. The candidate will be responsible for invalidation of the OMR Answer sheet for doing such deeds.

11. Space has been provided at the end of the Question Booklet for rough work.

12. The candidates are not allowed to leave the examination hall before the OMR answer sheets are collected and counted by the invigilator.

13. Candidates are provided with carbonless OMR answer sheet. They must submit the original copy to the invigilator and take away the carbon copy with them.