

DON BOSCO HIGH SCHOOL, PANJIM
DON BOSCO COMPETITIVE ADVANTAGE TEST (DB-CAT) 2024-25
27 FEBRUARY 2025
CLASS IX

A. QUESTION PAPER RELATED INSTRUCTIONS

Before you begin, check if all 80 questions have been printed on your question paper.
DB-CAT 24 - 2025 consists of a total of 80 questions as follows:

ENGLISH – Q Nos. 1-15

MATHEMATICS- Q Nos. 16-30

SCIENCE - Q Nos. 31-45

HISTORY – Q Nos. 46 -55

GEOGRAPHY – Q Nos. 56 – 65

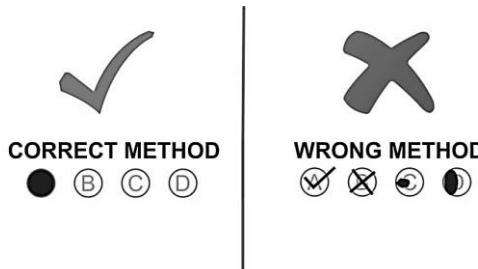
G.K AND CURRENT AFFAIRS Q Nos. 66 – 75

LOGIC AND REASONING – Q Nos. 76-80

1. Each question carries 1 mark.
2. Total duration of the test is 90 minutes
3. All questions are compulsory.
4. There is no negative marking for incorrect answers.
5. You may take away the question paper after the examination.

B. OMR SHEET RELATED INSTRUCTIONS:

1. Begin by writing your name and other required information in the space provided at the top of the OMR sheet.
2. Your signature must be entered in the box labelled as Candidate's signature.
3. Each Multiple Choice Question (MCQ) has four options - a) b) c) and d) of which only one is the correct answer.
4. Before marking your answers, carefully read each question and review all four options. Changing answers is not permitted.
5. Once you are sure of your answer, use a dark pen (**BLUE OR BLACK BALL POINT PEN**) to mark your answers on the provided OMR sheet. Answers marked with pencil will not be accepted
6. Fully darken the bubble corresponding to your chosen option, as shown in the example below.



7. Responses with more than one darkened bubble or those not darkened as per instructions will be considered invalid.
8. Avoid making any stray marks on the sheet.
9. No rough work should be done on the OMR sheet. All rough work must be done in the space provided on the question paper. Additional paper for rough work will be provided by the invigilator on request.
10. Do not use a marker or whitener on the OMR sheet.

**DON BOSCO COMPETITIVE ADVANTAGE TEST
(DB-CAT) 2024-2025
STD IX
ENGLISH**

1. The August is the best month for water sports. (Choose the part of the sentence that has an error)

 - a) The August
 - b) the best month
 - c) for water sports
 - d) No error

2. Choose the option with the correct spelling.

 - a) hilarious
 - b) hilurious
 - c) hillarious
 - d) hilarious

3. Choose the correct antonym of '**whine**'.

 - a) lament
 - b) praise
 - c) cry
 - d) protest

4. Raj's victory in the match is **inevitable**. (Choose the correct option for the underlined word)

 - a) Noun
 - b) Adjective
 - c) Adverb
 - d) Verb

5. Choose the correct option to complete the conversation.

Sam: I can't take this anymore.

Maria: Don't worry. It's just a storm in a _____.

 - a) sea
 - b) boat
 - c) teacup
 - d) weather

6. My principal wrote me a letter _____ recommendation.

 - a) for
 - b) of
 - c) from
 - d) To

7. Choose the correct synonym of '**enthral**'.

 - a) upset
 - b) glum
 - c) droopy
 - d) fascinate

8. What does the phrase '***like wildfire***' mean?

 - a) uncontrolled fire
 - b) very carefully
 - c) very rapidly
 - d) deliberately

9. Identify the sentence in the active voice.

 - a) She baked the cake.
 - b) The cake has been baked by her.
 - c) The cake was baked by her.
 - d) The cake is being baked by her.

10. She could not _____ the weight of the heavy box. (Choose the correct homophone):

 - a) bare
 - b) baer
 - c) bear
 - d) beer

11. What do we call 'A person who speaks many languages'?

 - a) orator
 - b) linguist
 - c) teacher
 - d) polyglot

12. Identify the correct spelling.

 - a) embarrass
 - b) embarrass
 - c) embarass
 - d) Embarrase

13. Rearrange the following sentence parts to form a meaningful sentence:

 - a) in the park
 - b) playing cricket
 - c) we saw some children
 - d) yesterday
 - a) d, a, c, b
 - b) d, c, b, a
 - c) c, b, d, a
 - d) c, d, a, b

14. Identify the sentence that contains personification.
- a) The stars danced playfully in the night b) She is as graceful as a swan.
sky.
c) The lion is the king of the jungle. d) The cake was as sweet as honey.
15. What does the idiom "hit the nail on the head" mean?
- a) To make a mistake. b) To avoid a situation.
c) To express anger d) To say or do exactly the right thing.
- MATHEMATICS**
16. Which of the following is an irrational number?
- a) $0.\overline{14}$ b) $0.14\overline{16}$
c) 0.1416 d) $0.4014001400014\dots$
17. Decimal representation of a rational number cannot be _____
- a) terminating b) non-terminating
c) non-terminating repeating d) non-terminating non-repeating
18. $\sqrt{2}$ is a polynomial of degree _____
- a) 2 b) 0
c) 1 d) $\frac{1}{2}$
19. The value of $249^2 - 248^2$ is _____
- a) 1^2 b) 2
c) 487 d) 497
20. Ordinate of all the points on the x -axis is _____
- a) 0 b) 1
c) -1 d) any number
21. On plotting the points O (0, 0), A (3, 0), B (3, 4), C (0, 4) and joining OA, AB, BC and CO, which of the following figure is obtained?
- a) Square b) Rectangle
c) Trapezium d) Rhombus
22. If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 2 : 3, then the greater of the two angles is _____
- a) 54° b) 108°
c) 120° d) 136°
23. The angles of a triangle are in the ratio 5: 3: 7. The triangle is _____
- a) an acute angled triangle b) an obtuse angled triangle
c) a right triangle d) an isosceles triangle
24. If $\Delta ABC \cong \Delta PQR$ and ΔABC is not congruent to ΔRPQ , then which of the following is not true?
- a) $BC = PQ$ b) $AC = PR$
c) $QR = BC$ d) $AB = PQ$
25. The area of the figure formed by joining the mid-points of the adjacent sides of a rhombus with diagonals 12 cm and 16 cm is _____
- a) 48 cm^2 b) 64 cm^2
c) 96 cm^2 d) 192 cm^2
26. The diagonals AC and BD of a parallelogram ABCD intersect each other at the point O. If $\angle DAC = 32^\circ$ and $\angle AOB = 70^\circ$, then $\angle DBC$ is equal to _____
- a) 24° b) 86°
c) 38° d) 32°
27. If the perimeter of an equilateral triangle is 60 m, then its area is _____
- a) $10\sqrt{3} \text{ m}^2$ b) $15\sqrt{3} \text{ m}^2$
c) $20\sqrt{3} \text{ m}^2$ d) $100\sqrt{3} \text{ m}^2$

28. If the sides of a triangle are 56 cm, 60 cm and 52 cm long, then the area of the triangle is _____

- a) 1322 cm^2 b) 1311 cm^2
c) 1344 cm^2 d) 1392 cm^2

29. The mean of five numbers is 30. If one number is excluded, their mean becomes 28. The excluded number is _____

- a) 28 b) 30
c) 35 d) 38

30. The value of $(256)^{25} \times (256)^{\frac{-49}{2}}$ is _____

- a) 4 b) 16
c) 64 d) 256.25

SCIENCE

31. The atomic numbers of some elements are as follows: -

Sodium=11; magnesium=12; chlorine=17; argon=18

Which two elements have the same valency?

- a) sodium and magnesium b) chlorine and argon
c) magnesium and chlorine d) sodium and chlorine

32. Which of the following is a mismatch?

- a) When we switch on a mixer grinder – electrical energy to mechanical energy
b) During photosynthesis – light energy to chemical energy
c) When you stretch a rubber band and then release it – kinetic energy to potential energy
d) When you switch on the iron – electrical energy to heat energy

33. If the mass of an object is 12kg, what is the weight of the object on the surface of the moon? ($g = 10 \text{ m/s}^2$)

- a) 20N b) 1.2 N
c) 120N d) 1200N

34. A student observed a permanent slide of a plant tissue and reported that the most abundant cells forming the bulk of the tissue were oval, thin cell walled with large intercellular spaces. These are the cells of the tissue

- a) Parenchyma b) Chlorenchyma
c) Sclerenchyma d) Epidermis

35. A student carefully prepared a colloidal solution of human blood and studied its properties. Which of the following properties would not be observed in a colloidal solution of human blood?

- a) Can scatter a beam of light b) Particle size between 1nm to 1000nm
c) Homogeneous d) Quite stable

36. If a horse begins pulling a cart with a force of 100 N and causes it to accelerate by 20 m/s^2 , what is the mass of the cart?

- a) 20kg b) 150kg
c) 5 kg d) 200kg

37. The Molar Mass of Calcium Carbonate is _____

- a) 350 g b) 45u
c) 157 u d) 100 g

38. Which of the following practices naturally improves soil fertility?

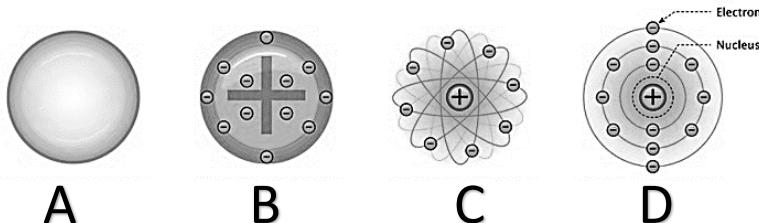
- a) Using NPK fertilizers b) Crop rotation with leguminous plants.
c) Growing and then mulching Guar d) Both b and c

39. Identify the type of muscular tissue shown in the diagram.



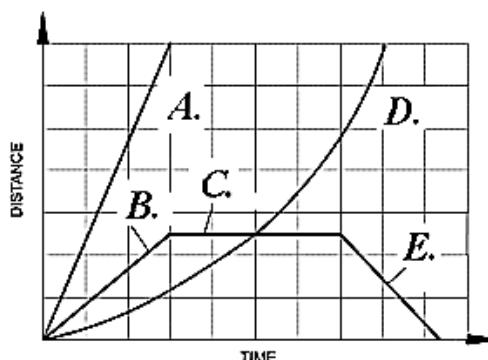
- a) Skeletal
 - b) Cardiac
 - c) Smooth
 - d) Gastric

40. Which of the following represents Thomson's Plum Pudding model of the atom?



- | | |
|------|------|
| a) A | b) B |
| c) C | d) D |

41. Which section of the graph shows that the object stopped for some time before it continued its journey?



43. A person accidentally cuts a small piece of skin. Over time, the wound heals. The type of cell division responsible for this process is

- a) Mitosis in somatic cells b) Meiosis in somatic cells
c) Meiosis in germ (reproductive) cells d) Mitosis in germ (reproductive) cells

44. Select the incorrect correlation.

- a) oil and water - separating funnel b) plasma from blood-centrifugation
c) camphor and salt-distillation d) mud from muddy water-filtration

45. A fan of 1200 W is used for 6 hours per day. The weekly energy consumption of the fan is _____.

HISTORY

46. A tax levied by the church on the peasants in France during the 18th century was called the _____

- a) Taille
 - b) Tithe
 - c) Feudal
 - d) Livre

G.K/ CURRENT AFFAIRS

66. Who among the following is known as the 'Architect of the Indian Constitution'?

 - a) Jawaharlal Nehru
 - b) Sardar Vallabhbhai Patel
 - c) B.R. Ambedkar
 - d) Subhas Chandra Bose

67. In which year was the Goods and Services Tax (GST) introduced in India?

 - a) 2015
 - b) 2017
 - c) 2019
 - d) 2020

68. Which is the longest National Highway in India?

 - a) NH-44
 - b) NH-2
 - c) NH-7
 - d) NH-48

69. What was the theme of World Environment Day 2024?

 - a) Nature for Climate
 - b) Solutions to Plastic Pollution. #BanSingleUsePlastics
 - c) Our land. Our future. We are #GenerationRestoration.
 - d) Only One Earth

70. In which year was the Environment Protection Act enacted?

 - a) 1986
 - b) 1989
 - c) 1884
 - d) 1990

71. Which international organization launched the 'Decade of Action for Road Safety' in 2021?

 - a) World Bank and United Nations (UN)
 - b) World Health Organization (WHO) and United Nations(UN)
 - c) International Monetary Fund (IMF)
 - d) World Bank

72. Which country hosted the 2024 Summer Olympics?

 - a) Japan
 - b) France
 - c) United States
 - d) Brazil

73. Which one of the following states has the longest coastline?

 - a) Gujarat
 - b) Maharashtra
 - c) Tamil Nadu
 - d) Andhra Pradesh

74. Who won the 2024 Nobel Peace Prize?

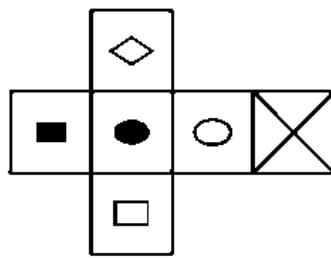
 - a) Malala Yousafzai
 - b) Nihon Hidankyo
 - c) Greta Thunberg
 - d) International Committee of the Red Cross

75. Which of the following is the largest producer of milk in India?

 - a) Punjab
 - b) Uttar Pradesh
 - c) Gujarat
 - d) Maharashtra

LOGIC AND REASONING

76. Which cube can be made from this shape?



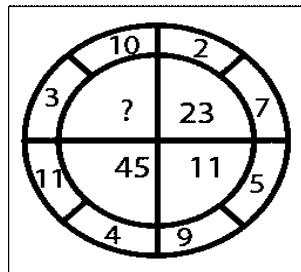
- The image shows four options (a, b, c, d) for a 3D cube. Each cube has a front face with a black square, a top face with a white circle, and a right face with a black oval. The back and left faces are white.

 - a) The cube is oriented with the front face towards the left.
 - b) The cube is oriented with the front face towards the right.
 - c) The cube is oriented with the front face towards the bottom-left.
 - d) The cube is oriented with the front face towards the bottom-right.

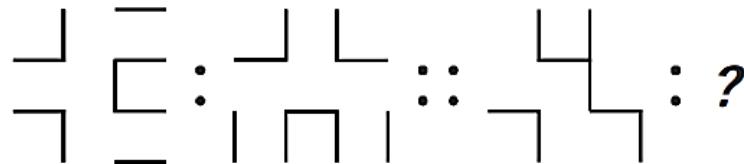
77. A is the son of C; C and Q are sisters; Z is the mother of Q and P is the son of Z. Which of the following statements is true?

78. If 5 persons weave 180 shawls in 12 days, how many shawls will 6 persons weave in 15 days?

79. Which number replaces the question mark?



80. Observe the correlation between the first pair of figures and choose the figure which completes the second pair.



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