

DON BOSCO COMPETITIVE ADVANTAGE TEST (DB-CAT) 2023

CLASS 9

Name: _____

Div.: _____ Roll No.: _____

General Instructions:

- Before you begin, check the total number of printed pages.
- DB-CAT consists of a total of 50 questions as follows;
 - Q 1-10 English
 - Q 11-20 Mathematics
 - Q 21-30 Science
 - Q 31-40 History
 - Q 41-50 Geography
 - Q 51-60 General Knowledge / Current Affairs
- The test is of 60 marks, with a time limit of 60 minutes.

OMR Related Instructions:

1. Each Multiple Choice Question (MCQ) has four options, of which only one is the correct answer.
2. Before marking your answers, carefully read each question and review all four options. Changing answers is not permitted.
3. Use a dark pen to mark your answers on the provided OMR sheet. Fully darken the bubble corresponding to your chosen option, as shown in the example below.

Example:

Question: The sun rises in the (a) north (b) east (c) west (d) south

Correct Method	Wrong Method
	

4. Responses with more than one darkened bubble or those not darkened as per instructions will be considered invalid.
5. Avoid making any stray marks on the sheet.
6. Write your name and other required information at the top of this sheet.

ENGLISH

1. They walked along the road together until they reached the village, but then their paths diverged. (Choose the correct meaning of the underlined word)

- a) connected b) separated
c) arrived d) combined

2. _____ moment that I have ever experienced was when I saw my one-year-old son sitting on the windowsill of our flat on the third floor.

- a) As terrified as b) Too terrifying
c) A more terrified d) The most terrifying

3. Sandy got married when she was _____ sixteen, and now, at the age of thirty-six, she is already a grandmother.

- a) still b) however
c) barely d) despite

4. John failed in his exams because he was always out with his friends when he _____.

- a) should have been b) used to study
c) must have been d) will have studied
studying

5. Eda _____ a lot of books before she got that new job.

- a) ought to be reading b) had better read
c) used to read d) can read

6. The man _____ briefcase is currently on fire is the same man _____ I argued with at the post office last week.

- a) whom / when b) that / which
c) who / whose d) whose / who

7. She was very pleased by the news of her brother's wedding. (Choose the appropriate synonym of the underlined word)

- a) dismayed b) thrilled
c) sorrowful d) pleased

8. The success of the movie has revived her career. (Choose the correct meaning of the underlined word)

- a) Damaged b) Disheartened
c) Restored d) Weakened

9. Mr. Berry feels that the world today is not _____ it was during his childhood.

- a) too safe for b) the safest that
c) so safe that d) as safe as

10. As she watched _____ get in the car and drive away, Miranda knew that _____ life would never be the same again.

- a) he / herself b) it / here
c) their / her own d) him / her

MATHEMATICS

11. The number obtained by rationalizing the denominator of $\frac{1}{\sqrt{7}-2}$ is

- a) $\frac{\sqrt{7}+2}{3}$ b) $\frac{\sqrt{7}-2}{3}$
c) $\frac{\sqrt{7}+2}{5}$ d) $\frac{\sqrt{7}+2}{45}$

12. The value of $\sqrt{15}$ times $\sqrt{21}$ is _____.

- a) $\sqrt{35}$ b) $9\sqrt{35}$
c) $3\sqrt{35}$ d) $35\sqrt{3}$

13. The degree of the polynomial $3\sqrt{5}$ is _____.

- a) $\frac{1}{2}$ b) 1
c) 2 d) 0

14. If $12x^2 - kx - 1 = (3x - 1)(4x - 1)$ for all x , then the value of 'k' is _____.

- a) 7 b) -7
c) 3 d) 4

15. Which of the following points do not lie on the X axis or Y axis?

- a) (-1, 0) b) (1, -1)
c) (0, 1) d) (1, 0)

16. The equation of Y axis is _____.

- a) $x = 0$ b) $y = 0$
c) $x - y = 0$ d) $x + y = 0$

17. If the difference of 7 complementary angles is 10° , then the smaller angle is of measure _____.

- a) 40° b) 50°
c) 45° d) 80°

18. If an angle x° is equal to its supplement, then the angle is _____.

- a) $\frac{1}{3}$ right angle b) $\frac{1}{4}$ straight angle
c) $\frac{1}{4}$ complete angle d) $\frac{1}{5}$ right angle

19. In a right ΔABC , right angled at A, if $|(AB)| = 5$ units and $|(BC)| = 12$ units, which of the following expressions represents the value of $\tan B$?

- a) $\frac{\sin B}{\cos B}$ b) $\frac{\sin B}{\cos C}$
c) $\frac{\sin C}{\cos B}$ d) $\frac{\cos B}{\cos C}$

20. If ABCD is a trapezium in which $AB \perp CD$ and $AD = BC$ then _____.

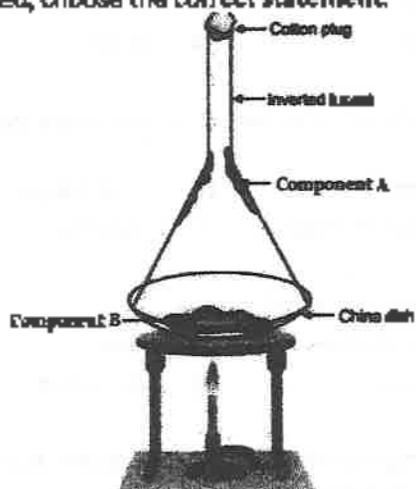
- a) $\angle A = \angle B$ b) $\angle A > \angle B$
c) $\angle A < \angle B$ d) None of these

SCIENCE

21. If a person consumed alcohol, the process of detoxification of the alcohol would take place in the _____

- a) mitochondria of the liver cells
- b) rough Endoplasmic Reticulum of the kidney cells
- c) smooth Endoplasmic Reticulum of the liver cells
- d) lysosomes of the cardiac cells

22. The diagram below illustrates a method of separation of a mixture of camphor and table salt. Considering that both components have completely separated, choose the correct statement.



- a) Component A is camphor
- b) Component B is camphor
- c) The method of separation is called evaporation.
- d) The method of separation is called distillation.

23. The fact that a fireman gets pushed in the backward direction when water from a hosepipe shoots out in the forward direction is explained by Newton's _____

- a) First Law of Motion
- b) Second Law of Motion
- c) Third Law of Motion
- d) Law of Conservation of Momentum

24. A medical student carefully observed a freshly drawn sample of human blood. Which of the following would be an incorrect observation?

- a) Shows Tyndall Effect
- b) Plasma can be separated by centrifugation.
- c) It is quite a stable mixture.
- d) It is a homogenous mixture.

25. A bus heading east travels 100 m in the first 60s and then continuing in the same direction, covers another 300 m in the next 20s. Calculate the average velocity of the car.

- a) 400 m/s E
- b) 50 m/s W
- c) 5 m/s E
- d) 40 m/s W

26. Observe the diagram and select the correct statement.

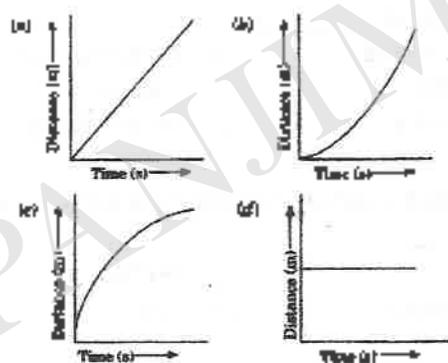


- a) A is cardiac muscle tissue
- b) A is striated and multinucleate
- c) B is skeletal muscle tissue
- d) B is un-striated and multinucleate

27. Which one of the following species of honeybee is an Italian species?

- a) *Apis dorsata*
- b) *Apis florea*
- c) *Apis cerana indica*
- d) *Apis mellifera*

28. Which of the following figures correctly represents uniform motion of a moving object?



- a) a
- b) b
- c) c
- d) d

29. 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) 120N
- b) 40N
- c) 20N
- d) 1.2N

30. When an airplane travels through air, the molecules of air separate and allow the plane to pass through because the molecules have _____

- a) greater inter molecular spaces
- b) weak inter molecular forces of attraction
- c) low kinetic energy
- d) both a and b

HISTORY

31. The National Assembly framed a constitution in 1791 to limit the powers of the _____

- a) wealthy man
- b) businessmen
- c) press
- d) monarch

32. In the meeting of the Estates General, the members of the Third Estate demanded that _____

- a) all the three Estates should have one vote altogether
- b) each Estate should have one vote
- c) each member of the three Estates should
- d) none of the above

have one vote

33. In 1794, a legislation was passed to free all slaves in the French overseas possession by _____.

- a) the active citizens b) Napoleon Bonaparte
c) Louis XVI d) the Convention

34. The main occupation of the people of Russia in the beginning of the twentieth century was _____.

- a) manufacturing b) fishing
c) poultry farming d) agriculture

35. During the course of the Russian Revolution, the name associated with April Theses was _____.

- a) Karl Marx b) Robert Owen
c) Vladimir Lenin d) Joseph Stalin

36. In the World War I, which started in 1914, Russia fought against _____.

- a) Britain and France b) Germany and Austria
c) America d) All the above

37. In Russia, a commune of farmers was known as _____.

- a) Mir b) Duma
c) Cossacks d) Tsar

38. Some of the drawbacks of democracy are _____.

- a) instability and delays b) corruption and hypocrisy
c) politicians fighting among themselves d) all the above

39. The most common form of democracy in our time is that of _____.

- a) representative democracy b) limited democracy
c) maximum democracy d) none of the above

40. The word 'sovereign' means that _____.

- a) people should live like brothers and sisters b) people have the supreme right to make decisions
c) the head of the state is an elected person d) the government will not favour any religion

GEOGRAPHY

41. The main land of India extends between latitudes _____ and _____.

- a) 3°7'N and 10°1'N b) 6°8'N and 17°1'N
c) 6°4'N and 28°6'N d) 8°4'N and 37°6'N

42. Which two neighboring countries are islands?

- a) China and Bangladesh b) Myanmar and Maldives
c) Pakistan and Afghanistan d) None of these

43. Tina's aunt lives in Sri Lanka. She wants to visit India. Which places will she have to cross to reach India?

- a) Gulf of Mannar b) Paik Strait
c) Both a and b d) None of these

44. Majuli is a riverine island located in the river _____.

- a) Ganga b) Brahmaputra
c) Yamuna d) Kaveri

45. Dudhwa National Park is located in the state of _____.

- a) Assam b) Uttar Pradesh
c) Madhya Pradesh d) Rajasthan

46. Barchans are found in the _____.

- a) desert regions b) plains
c) plateaus d) hilly regions

47. The longitudinal valleys lying between lesser Himalayas and Shivaliks are known as _____.

- a) Kangra Valley b) Patkai Bum
c) Passes d) Duns

48. Who among the following is known as the Father of Economics?

- a) Karl Max b) Adam Smith
c) Alfred Marshall d) Milton Friedman

49. Which of the following is not a plateau of Goa?

- a) Kadamba b) Bambolim
c) Calangute d) Porvorim

50. Where is the new Airport of Goa located?

- a) Siridao b) Mopa
c) Baga d) Carambalim

G.K. / CURRENT AFFAIRS

51. How many pairs of ribs are there in a Human Body?

- a) 10 pairs b) 12 pairs
c) 14 pairs d) 16 pairs

52. Which is the longest beach in the world?

- a) Maya Bay b) Santa Monica Beach
c) Navagio Beach d) Praia do Cassino

53. What is the name of the short-range ballistic missile which was recently test-launched by India?

- a) Prithvi II
- b) Agni V
- c) Vikas II
- d) Bhim I

54. In Windows XP, what does XP stands for?

- a) Extra-Powerful
- b) Experiential Performance
- c) Extended Platform
- d) Experience Platform

55. Which was the first brand Sachin Tendulkar endorsed in the beginning of his career?

- a) Boost
- b) Pepsi
- c) Nike
- d) None of them

56. Who is the President of India?

- a) Droupadi Murmu
- b) A. P. J Abdul Kalam
- c) Pranab Mukherjee
- d) Ramnath Kovind

57. Who is the Education Minister of Goa?

- a) Churchill Alembao
- b) Dr. Pramod Sawant
- c) Digambar Kamat
- d) Vishwajit Rahe

58. Which two countries are currently fighting a war amongst themselves?

- a) France and Germany
- b) Brazil and America
- c) Ukraine and Russia
- d) China and Japan

59. 'SAGAR SAMRIDDDHI' is an initiative of which Union Ministry?

- a) Ministry of Defence
- b) Ministry of Jal Shakti
- c) Ministry of External Affairs
- d) Ministry of Ports, Shipping and Waterway

60. Who is the Defense Minister of India?

- a) Amit Shah
- b) Narendra Modi
- c) Rajnath Singh
- d) Anurag Thakur