

Duration : 60 min.
Class : 9th

Maximum Marks : 180
Subject : SCIENCE



International Talent Search Examination - 2022-23

अंतराष्ट्रीय प्रतिभा खोज परीक्षा - २०२२-२३

Organized by

Savitri Skill Development Institute, Training Partner with
Ministry of Micro Small & Medium Enterprises (MSME), Govt. of India.



TEST BOOKLET

Name :

Class : School:

Father's Name : Father's Occupation :

Mother's Name : Mother's Occupation :

Categories : Gen OBC SC ST

Correspondence Address :

Date of Birth :

Father's Contact No :

Home/Mother's Contact No. :

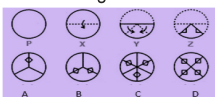
WhatsApp No. :

Basic Instructions:

- Ensure that your personal data has been entered correctly.
- Immediately after opening the test booklet verify that all the pages are printed properly and are in order. If there is a problem with your test booklet, immediately inform the invigilator. You will be provided with the replacement.
- All questions are compulsory.
- For every correct answer you will be awarded with 4 marks and for all incorrect answer 1 mark will be deducted.
- Directions for answering the questions are given. Read those directions carefully and answer the question by circling the bubble in the OMR Sheet Provided to you. Test booklet/OMR Sheet will be submitted at the end of the examination.
- Follow the instructions given by the invigilator. Students found violating the instructions will be disqualified.
- Rough work can be done separately or on the Question paper.
- Please fill the bubbles in OMR sheet with Blue or Black pen only.
- Do not tear the question paper or OMR sheet else you will be disqualified in the examination.

CLASS-9 (SCIENCE)

- Q.1 Which is the important resource that decides the diversity of life in an area?
 a) Water b) Plants c) Air d) Soil
- Q.2 Law of constant proportion is also known as _____.
 a) Law of definite proportions b) Proust's Law c) Both a and b d) None of the above
- Q.3 Choose a figure which would most closely resemble the unfolded form of figure (Z).







- a) A b) B c) C d) D
- Q.4 If the resultant of applied forces is equal to zero, then what force does it resemble?
 a) Unbalanced force b) Balanced force c) Both a and b d) None of the above
- Q.5 Find out from the four alternatives as to how the pattern would appear when the transparent sheet is folded at the dotted line.



- a) A b) B c) C d) D
- Q.6 Where are the pores called 'Stomata' located in plants?
 a) Bark b) Roots c) Leaves d) Stems
- Q.7 What is the minimum distance between two consecutive crest called?
 a) Amplitude b) Wavelength c) Frequency d) Wave pulse
- Q.8 What is the C.G.S unit of velocity?
 a) m/s b) cm/s c) cm/minute d) m/minute
- Q.9 How many types of permanent tissues are there in a plant?
 a) 5 b) 4 c) 3 d) 2
- Q.10 Which of these are organisms that cause an infectious disease in a host with depressed resistance?
 a) Hormone b) Pathogen c) Disease d) None of the above
- Q.11 Abhi conducted an experiment to investigate what would happen when different cell organelles of a balsam plant leaf are removed. The results are recorded in the table given below. Identify cell parts P, Q, R and S.

Cell Parts	Outcomes
P	The cell cannot function properly.
Q	Iodine solution remains yellowish brown.
R	The cell cannot control the entry and exit of the substances.
S	The cell loses its regular shape.

- a) P - Nucleus, Q - Chlorophyll, R - Cell wall, S - Cytoplasm b) P - Cytoplasm, Q - Chlorophyll, R - Cell wall, S - Nucleus
 c) P - Nucleus, Q - Chloroplast, R - Cell membrane, S - Cell wall d) P - Nucleus, Q - Chloroplast, R - Cell wall, S - Cell membrane
- Q.12 Which cell transports oxygen?
- a)  b)  c)  d) 
- Q.13 A car starts from rest and accelerates uniformly over a time of 5.21 seconds for a distance of 110 m. Determine the acceleration of the car.
 a) 6.10 ms^{-2} b) 8.10 ms^{-2} c) 10.10 ms^{-2} d) 12.10 ms^{-2}
- Q.14 At what temperature should all the gases occupy zero volume?
 a) 0°C b) -273°C c) 273°C d) 100°C

- Q.15 Two flasks I and II contain oxygen (O_2) and ozone (O_3) respectively. Flask I contains 0.5 moles of oxygen while flask II contains 0.4 moles of ozone. Which of the two flasks have a greater number of oxygen atoms?
- Flask II containing ozone has a greater number of oxygen atoms as compared to flask I.
 - Flask I containing oxygen has a greater number of oxygen atoms as compared to flask II.
 - Both flasks I and II have the same number of oxygen atoms.
 - The number of atoms of oxygen cannot be calculated from the available data.
- Q.16 Which of the following structures helps you to determine that it is not an animal cell?
- Cell wall and vacuole
 - Mitochondria and ribosome
 - Ribosomes and lysosomes
 - Plasma membrane
- Only 1
 - Only 2
 - Both 2 and 4
 - Both 1 and 3
- Q.17 Which of the following statements is false?
- Neutron has the highest mass among the fundamental particles.
 - The mass of an electron is negligible.
 - The value of e/m is the highest for a proton.
 - A charge of a neutron is zero.
- Only A
 - Only C
 - Both A and B
 - Both C and D
- Q.18 When the mass and velocity of the body are doubled, what happens to its kinetic energy?
- It gets doubled
 - It gets quadrupled
 - It becomes eight times
 - It becomes one fourth
- Q.19 An airplane accelerates down a runway at 3.2 m s^{-2} for 32.8 s until it finally lifts off the ground. Determine the distance travelled before takeoff.
- 1323.5 m
 - 1527.7 m
 - 1721.3 m
 - 1931 m
- Q.20 Why are houseflies NOT considered as biological vectors?
- They do not spread diseases.
 - They do not transmit disease directly.
 - They are parasites and not vectors.
- Only 1
 - Only 2
 - Only 3
 - 1, 2 and 3
- Q.21 The rectangular components of a force are applied to move a body. One of the components is 30 N. What should be the other component to obtain a resultant force of 50 N?
- 30 N
 - 40 N
 - 50 N
 - 90 N
- Q.22 What type of quantity is velocity?
- Vector
 - Scalar
 - Both a and b
 - None of the above
- Q.23 What is the purpose of cattle farming?
- Milk production
 - Farm labour
 - Both a and b
 - None of the above
- Q.24 Identify the statement that is NOT true?
- Cytoplasm contains jelly-like substance.
 - Nucleus makes food for the plants.
 - Chloroplast contains chlorophyll.
 - Cytoplasm is the site where many cell activities take place.
- Q.25 The force exerted by any object per unit area is called as _____.
- Pressure
 - Balanced force
 - Upward thrust
 - Thrust
- Q.26 A gun fires a bullet of mass m with velocity v . The mass of the gun is M and it recoils with velocity V . If the kinetic energy of the bullet is E_b and that of the gun is E_g , identify the relation between E_b and E_g .
- $E_b = E_g$
 - $E_b < E_g$
 - $E_b > E_g$
 - Cannot say
- Q.27 Which of the following is a type of Meristematic tissue?
- Apical Meristem
 - Lateral Meristem
 - Intercalary Meristem
 - All of the above
- Q.28 A man with a box on his head is climbing up a ladder. What work is said to be done by the man on the box?
- Positive
 - Negative
 - Zero
 - Undefined
- Q.29 Which type of cycle does this image represent?
- 
- Biogeochemical cycle
 - Nitrogen cycle
 - Carbon cycle
 - Water cycle

- Q.30 Which of the following technique is used to separate dirt particles from clothes in a washing machine?
 a) Magnetic separation b) Filtration c) Evaporation d) Centrifugation
- Q.31 A force of 100 N acts on a body of mass 2 kg for 10 s. Find the change in the velocity of the body.
 a) 100 m/s b) 250 m/s c) 500 m/s d) 1000 m/s
- Q.32 What happens to a substance when the space between its particles is decreased?
 a) The volume of the substance increases. b) The volume of the substance decreases.
 c) The mass of the substance increases. d) The mass of the substance decreases.
- Q.33 Ajit walks a distance of 3 km towards South, then turns to his left and walks 4 km. He again turns left and walks for 6 km. At this point he turns to his left and walks for 8 km and finally moves 3 km towards South. How many kilometres is he from the starting point?
 a) 4 b) 5 c) 6 d) 8
- Q.34 Fill in the blank:
 The brain, spinal cord, nerves are _____ tissue.
 a) fibric b) smooth c) nervous d) none of this
- Q.35 What is the atomic mass(u) of chlorine?
 a) 34 b) 34.5 c) 35 d) 35.5
- Q.36 A particle shows a value of 46 ms^{-1} . What can it be?
 a) Force of the particle b) The velocity of the particle c) Acceleration of the particle d) The momentum of the particle
- Q.37 According to Dalton which element is indicated by this symbol?

 a) Carbon b) Hydrogen c) Sulphur d) Copper
- Q.38 Atoms of the same element with different mass number, which have the same atomic number, are called _____.
 a) isobar b) isochoric c) isotopes d) none of the above
- Q.39 Who is known as the father of 'nuclear physics'?
 a) E. Rutherford b) J.J. Thomson c) Neils Bohr d) None of this
- Q.40 When force act in opposite direction the work done is?
 a) positive b) negative c) zero d) None of the above
- Q.41 Rocket works on the principle of conservation of:
 a) mass b) energy c) momentum d) velocity
- Q.42 Which of the following pairs will not exhibit diffusion?
 a) Hydrogen, oxygen b) Oxygen, water c) Salt, sand d) Sugar, water
- Q.43 What is the maximum number of electrons that can be accommodated in the 4th energy level?
 a) 32 b) 18 c) 2 d) 8
- Q.44 When the mass and velocity of the body are doubled, what happens to its kinetic energy?
 a) It gets doubled b) It gets quadrupled c) It becomes eight times d) It becomes one fourth
- Q.45 How do the directions of velocity and acceleration act when brakes are applied to a moving cycle?
 a) Opposite to each other b) In the same direction c) Perpendicular to each other d) Parallel to each other