

CHINMAYA VIDYALAYA, TARAPUR

P-201, MIDC Indl. Area, Saravali, Boisar

ISO 9001-2008 Certified

SCIENCE TALENT SEARCH EXAMINATION



CLASS - IX
SAMPLE PAPER

Please fill the following details immediately

Name: _____

Hall Ticket No.: _____

❖ 100 Questions ❖

❖ Time Allowed : 120 Minutes ❖

- ❖ Do not open this question paper until the signal is given.**
- ❖ Please check the CLASS printed on the cover page and the inside is same when you open the booklet.**

General Instructions:

- 1) All questions are compulsory and carry equal marks.
- 2) There is no negative marking.
- 3) There is only one correct answer hence write one choice only.
- 4) Please avoid cutting/overwriting etc.
- 5) Return the answer sheet to the invigilator at the end of the examination.
- 6) The question paper can be retained by the student.

Physics [30]

- 1) The distance between the crest and the next trough in a periodic wave is
a) λ b) $\lambda / 2$ c) $\lambda / 4$ d) 2λ
- 2) A longitudinal wave travels from east to west in air. In which direction do the particles of air move?
a) east to west b) west to east
c) north to south d) south to north
- 3) The velocity of sound in vacuum is
a) 332ms^{-1} b) 330ms^{-1} c) 288ms^{-1} d) 0ms^{-1}
- 4) Resonance is a special case of
a) forced vibrations b) natural vibrations
c) damped vibrations d) none of these
- 5) Waves used in sonography are
a) infrared waves b) microwaves
c) sound waves d) ultrasonic waves
- 6) Flash and thunder are produced simultaneously. But the thunder is heard a few seconds after the flash is seen. This is because
a) speed of sound is greater than speed of light
b) speed of sound is equal to the speed of light
c) speed of light is very much greater than the speed of sound.
d) None of these
- 7) A simple pendulum is transferred from the earth to the moon. Will it go faster or slower?
a) slow down b) becomes faster
c) remains same d) none of these
- 8) When ice melts, its temperature
a) remains constant b) decreases
c) increases d) changes

- 9) The maximum temperature recorded in Delhi on hot summer day is 48°C . Find its value in Fahrenheit?
a) 153°F b) 102°F c) 100°F d) 113°F
- 10) Mercury is used as a thermometric substance because
a) it has uniform expansiveness
b) it has high boiling point
c) it has a fairly low freezing point
d) all of the above
- 11) Expansion of a rod depends on
a) the original length of the rod
b) the rise of temperature
c) the material of the temperature
d) all of the above
- 12) A metal disc has a hole in it at its centre. If the disc is heated, the hole will
a) increase in size b) decrease in size
c) neither increase nor decrease d) none
- 13) For accurate scientific work, temperatures are often measured by
a) alcohol thermometers
b) mercury thermometers
c) platinum resistance thermometers
d) thermoelectric thermometers
- 14) What are the three modes of transmission of heat?
a) conduction, convection and radiation
b) conduction, sublimation and radiation
c) sublimation, convection and radiation
d) conduction, convection and sublimation
- 15) In winter, a metal chair feels cooler to touch than a wooden chair. Why?
a) metal is a good conductor
b) metal is a bad conductor
c) wood is a good conductor
d) none of the above

- 16) In hot climatic conditions, buildings are painted white because
- a] white paint is cheaper
 - b] it does not fade of
 - c] it does not crack with the change of temperature
 - d] white coating is bad conductor of heat and reflects heat rays falling on it, thus keeping the house cool.
- 17) When we are sweating, we feel comfortable under a fan because
- a] the air circulated by the fan is cool
 - b] the air takes away the heat from the body
 - c] the air circulated by the fan quickens the evaporation of sweat
 - d] all of the above
- 18) The door of a fridge, which is working is left open
- a] the temperature of the room will fall
 - b] the temperature of the room will rise
 - c] the room temperature will have been maintained within the fridge
 - d] none of these
- 19) A 1 kilowatt motor pumps out water from a well 10 meters deep. Calculate the quantity of water pumped out per second.
- a] 10.204g
 - b] 15.302g
 - c] 11.201g
 - d] 16.204g
- 20) Which of the following equations show the correct relationship between mass, momentum and kinetic energy.
- a] $P = \sqrt{2mEk}$
 - b] $P = \sqrt{5mEk}$
 - c] $P = \sqrt{4mEk}$
 - d] $P = \sqrt{6mEk}$
- 21) When a stone tied to a string is whirled in a circle the work done on it by the string is
- a] positive
 - b] negative
 - c] zero
 - d] undefined

- 22) An apple falls towards the earth because the earth attracts it. The apple also attracts the earth by the same force. Why do we not see the earth raising towards the apple.
- a] acceleration of the earth is very large when compared to that of apple.
 - b] acceleration of the earth is equal to that of apple.
 - c] acceleration of the earth is neither high nor too low.
 - d] acceleration of the earth is very small compared to that of apple.
- 23) Where is the value of 'g' greater, at the poles or at the equator?
- a] equator
 - b] at the centre
 - c] poles
 - d] none of these
- 24) When a body is thrown up, the force of gravity is
- a] in the upward direction
 - b] in the downward direction
 - c] zero
 - d] in the horizontal direction
- 25) The mass of a body as measured by two students is given as 1.2 Kg and 1.23 Kg. Which of these two is more accurate
- a] 1.2 Kg
 - b] 1.23 Kg
 - c] none
 - d] both a and b
- 26) While walking on ice, one should take small steps to avoid slipping. This is because smaller steps ensure
- a] larger friction
 - b] smaller friction
 - c] larger normal force
 - d] smaller normal force
- 27) Vehicles are provided with shock absorbers, which obey Newton's
- a] first law of motion
 - b] second law of motion
 - c] third law of motion
 - d] all the above
- 28) A body floats in a liquid if the buoyant force is
- a] Zero
 - b] greater than its weight
 - c] less than its weight
 - d] equal to its weight
- 29) Pascal is a unit of
- a] pressure
 - b] force
 - c] linear momentum
 - d] energy

- 40) An excellent solvent for both ionic and covalent compounds is
a) water b) liquid NH_3 c) CH_3COOH d) CCl_4
- 41) Carbon tetrachloride is insoluble in water because
a) Water is polar b) Carbon tetrachloride is non-polar
c) both are polar d) both are non-polar
- 42) Linear molecule among the following is
a) CO_2 b) NO_2 c) SO_2 d) SiO_2
- 43) Tetrahedral nature of bonding by carbon atom was first shown by
a) Kelvin b) Vant Hoff and Le Bel c) Lewis d) Pasteur
- 44) Which of the following molecule is not an exception to the octet rule?
a) BF_3 b) CO_2 c) IF_7 d) PF_5
- 45) Covalent bond is found in
a) NaCl b) KCl c) H_2O d) brass
- 46) The triads were given by
a) Dalton b) Dobereiner c) Mendeleev d) None
- 47) Which of the following has zero electron affinity?
a) Oxygen b) Fluorine c) Nitrogen d) Neon
- 48) Coinage metals are
a) Fe, Co, Ni b) Na, K, Mg c) Mg, Ca, Sr d) Cu, Ag, Au
- 49) The rare gas which shows the greatest chemical reactivity is
a) Helium b) Krypton c) Xenon d) Neon
- 50) Which of the following is a typical element?
a) Lithium b) Beryllium c) Boron d) Magnesium
- 51) Which of the following is an amphoteric oxide?
a) BeO b) ZnO c) PbO d) all of these
- 52) Which of the following is the weakest base?
a) NaOH b) KOH c) Ca(OH)_2 d) Zn(OH)_2

53) Elements having seven electrons in the valence shell are called

- a] Halogens b] Chalcogens
c] alkali metals d] alkaline earths

54) The most abundant metal in the earth crust is

- a] Fe b] Cu c] Al d] Au

55) The first transitional element in the periodic table is

- a] Sc b] Ni c] Fe d] Au

56) Which set has the strongest tendency to form anions?

- a] Ga, In and Te b] Na, Mg, and Al
c] N, O and F d] V, Cr and Mn

57) One of the defects of the Mendeleev's periodic table is

- a] position of hydrogen b] position of potassium
c] position of lanthanides d] position of cobalt

58) The highest oxidation state in the transition metal is

- a] + 7 b] + 8 c] +6 d] +5

59) Which of the following is true?

- a] Halogens are metals.
b] ZnO is more basic than CO
c] A non metal is more electropositive than a metal.
d] A metal is more electronegative than a non-metal

60) Which element exhibits more than one oxidation state?

- a] Na b] Mg c] Fe d] H

BIOLOGY

61) The term cell was coined by

- a] R.G. Harrison b] Feulgen
c] Weismann d] Robert Hooke

62) The biggest cell is

- a] Hen egg b] Ostrich egg
c] Nerve cell d] Kidney cell

63) Meiotic division occurs in

- a] vegetative cells b] reproductive cells
c] meristematic cells d] xylem cells

- 64) Tracheids are the components of
a] xylem b] phloem c] collenchyma d] sclerenchyma
- 65) Companion cell is associated with
a] sclerenchyma b] tracheid c] tracheae d] sieve tube
- 66) Anticoagulant of blood is
a] histamine b] thrombine c] chondrin d] heparin
- 67) The cells that cannot be cultured as they have their centrioles are
a] neurons b] osteocytes c] chondrocytes d] mast cells
- 68) Father of Biology is
a] Linnaeus b] Aristotle
c] Von Leeuwenhock d] Schleiden
- 69) Theory of natural selection was proposed by
a] William Harvey b] Charles Darwin
c] Robert Hooke d] Von Morgan
- 70) Five kingdom classification was proposed by
a] Hyman b] Linnaeus c] Whittaker d] Aristotle
- 71) Which of the following does not contain chlorophyll?
a] fungi b] algae c] bryophyta d] pteridophyta
- 72) Highly evolved plant in the plant kingdom are
a] bryophytes b] pteridophytes
c] angiosperms d] gymnosperms
- 73) Tallest and longest living plant species in the entire plant kingdom belongs to
a] pteridophyta b] bryophyte
c] angiospermae d] gymnospermae
- 74) Name of freshwater sponge
a] Spongilla b] Euspongia c] Euplectella d] Chalina
- 75) The excretory structure in planaria is
a] kidney b] lungs c] gills d] flame cell
- 76) Study of mollusca is
a] Conchology b] Malacology
c] Mammology d] Ichtheology

- 77) The chief component of pearl is
a) sodium bicarbonate b) calcium carbonate
c) chitin d) chonchiolin
- 78) Chewing of tobacco may cause
a) ulcer b) diabetes c) diarrhea d) oral cancer
- 79) Dim vision at night results due to deficiency of
a) Vitamin C b) Vitamin E c) Vitamin D d) Vitamin A
- 80) Food material responsible for repair of damages is
a) carbohydrates b) proteins c) fats d) vitamins
- 81) Obesity may result due to
a) high intake of roughage b) high intake of fatty acid
c) high intake of water d) mosquito bite
- 82) Sweating is a physical process that helps in
a) regulation of body temperature
b) digestion of food
c) transpiration of nutrients
d) excretion of uric acid
- 83) The vitamin that plays an important role in blood clotting is
a) Vitamin A b) Vitamin B complex
c) Vitamin C d) Vitamin K
- 84) Study of reptile is called
a) Saurology b) Hepatology
c) Herpetology d) Ophiology
- 85) Lack of iron causes
a) anaemia b) goitre c) both a & b d) none
- 86) Which of the following is a water soluble vitamin?
a) Vitamin A b) Vitamin D
c) Vitamin E d) Vitamin C
- 87) Rabies is caused by
a) virus b) bacteria c) fungi d) none
- 88) In tinned food, there may be
a) staphylococci b) clostridium
c) salmonella d) none
- 89) Intake of alcohol reduces
a) vision b) hearing c) speech d) alertness

- 90) Bombay green banana is a result of
a) mass selection b) clonal selection
c) pure line selection d) natural selection

GENERAL KNOWLEDGE

- 91] Arjuna Awards are associated with
a) Journalism b) Films c) Sports d) Literature
- 92] The acid used in vinegar is
a) Citric acid b) Tartaric acid
c) Lactic acid d) Acetic acid
- 93] Who is the author of the book 'as you like it.'
a) Jaidev b) Kalidas
c) Willam Shakespeare d) Lewis Carroll
- 94] Paris is the headquarter of which of the following U.N. Organisations?
a) ILO b) FAO c) UNESCO d) WHO
- 95] In the world of music, Zakir Hussain has distinguished himself in
a) Sarangi b) Sarod c) Tabla d) Flute
- 96] What is popularly called 'the queen of spices'?
a) clove b) mace c) cardamom d) cinnamon
- 97] The deficiency of which vitamin causes sterility?
a) E b) D c) C d) B
- 98] What is the currency of Yugoslavia?
a) Peseta b) Dinar c) Dollar d) Yen
- 99] Limba Ram represented India in which sport?
a) Archery b) Polo c) Golf d) Hocke
- 100] If a coolie is a person who carries goods, what kind of creature is a 'collie'?
a) A breed of hen b) A breed of dog
c) A breed of buffalo d) A breed of pig

