



For students moving from class 9th to class 10th

Exam ID : 1231

Time : 1:30 Hrs

Max. Marks : 240

IMPORTANT INSTRUCTIONS

Note: All Questions are compulsory:

Section-1: It contains 30 questions in total.

Question No. 1 to 10 belongs to Physics.

Question No. 11 to 20 belongs to Chemistry.

Question No. 21 to 30 belongs to Biology.

Section-2: It contains 10 questions in total.

Question No. 31 to 40 belongs to Mathematics.

Section-3: It contains 20 questions in total.

Question No. 41 to 60 are to Mental Ability questions.

Marking Scheme: Each question carries 4 marks. **For each correct response, the candidate will get 4 marks. There is no negative marking for incorrect response or unattempted questions.**

Section- I (SCIENCE)

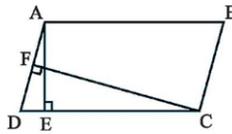
- Area under a velocity-time graph gives
 - Time taken by a moving object
 - Displacement covered by a moving object
 - Acceleration of moving object
 - Retardation of a moving object
- Weight of a girl is 294 N. Find her mass.
 - 30 kg
 - 20 kg
 - 25 kg
 - 40 kg
- A body of mass 2 kg is dropped from a height of 1m. Its kinetic energy as it reaches the ground is
 - 19.6 J
 - 19.6 N
 - 19.6 kg
 - 19.6 m
- The buoyant force acting on a body due to different fluids is:
 - same
 - different
 - zero
 - none of these
- If the angle between force F and displacement s is 60° , then the work done is-
 - Fs
 - F/s
 - $(F \times s)/2$
 - $2Fs$
- If a body is thrown up with an initial velocity u and covers a maximum height of h , then h is equal to :-
 - $\frac{u^2}{2g}$
 - $\frac{u}{2g}$
 - $2u^2/g$
 - none of these
- If a rock is brought from the surface of the moon.
 - its mass will change
 - Its weight will change but not mass
 - both mass and weight will change
 - its mass and weight both will remain same
- A particle of mass 100 g moves at a speed of 1 m/s. Its kinetic energy is
 - 50 J
 - 5 J
 - 0.5 J
 - 0.05 J
- Which of the following statements is incorrect ?
 - Momentum has both direction and magnitude
 - Momentum is a scalar quantity
 - The SI unit of momentum is kilogram-metre per second.
 - The rate of change of momentum of an object is in the direction of force.

10. Relative density of silver is 10.8. The density of water is 10^3 kg/m^3 . What is the density of silver in SI unit?
 (a) 1080 kg/m^3 (b) 10800 kg/m^3 (c) 1000 kg/m^3 (d) none of these
11. The mass of a single atom of carbon is
 (a) 12 g (b) $1/12 \text{ g}$ (c) $1.99 \times 10^{-23} \text{ g}$ (D) $1.99 \times 10^{23} \text{ g}$
12. Which of the following is not a compound
 (a) Common salt (b) Water
 (c) Iron fillings (D) Copper sulphate
13. Camphor can be purified by :
 (a) Distillation (b) Filtration
 (c) Magnetic separation (d) Sublimation
14. On increasing the temperature of the liquid the rate of evaporation is -
 (a) Increase (b) Decreases
 (c) No Change (d) None of these
15. Isotopes of element have –
 (a) different chemical properties (b) different atomic
 (c) The same physical properties (d) Different number of neutrons
16. The overall charge on an ionic compound equal to
 (a) Charge of the cation present (b) zero
 (c) Charge of the anion preset (d) sun of charges of the cation & anion
17. The correct formula of aluminium sulphate is
 (a) AlSO_4 (b) Al_2SO_4 (c) $\text{Al}_3(\text{SO}_4)_2$ (d) $\text{Al}_2(\text{SO}_4)_3$
18. Which of the following given a true solution in water
 (a) Starch (b) Sugar (c) Chalk powder (d) Egg albumin
19. What is volume occupied by gases?
 (a) Definite (b) Almost Nil
 (c) Large (d) Take the volume of container
20. Neutron a is present in all atom except
 (a) Protium (b) Deuterium (c) Tritium (d) Helium

21. Double membrane is absent in –
(a) Mitochondrion (b) Chloroplast
(c) Nucleus (d) Lysosome
22. The smallest taxon is :-
(a) Class (b) Order (c) Species (d) Genus
23. Common cold is a :-
(a) Chronic disease (b) Congenital disease
(c) acute disease (d) genetic
24. DDT is
(a) A non-degradable pollutant (b) A biodegradable pollutant
(c) An antibiotic (d) Not a pollutant
25. Increase in the length of the plant is caused by
(a) cork cambium (b) vascular cambium
(c) apical meristem (d) Permanent tissue
26. The energy currency of a cell is –
(a) ADP (b) AMP (c) ATP (d) CTP
27. Which of the following is unicellular green algae?
(a) Spirogyra (b) Fern
(c) Cycas (d) Chlamydomonas
28. Goitre is caused due to deficiency of :-
(a) Vitamin A (b) Fluorine (c) Iodine (d) Vitamin C
29. Malathion is used as :-
(a) Fungicide (b) Pesticide (c) Weedicide (d) Biocide
30. Cork cambium is an example of –
(a) lateral permanent tissue (b) Primary meristem
(c) apical meristem (d) intercalary meristem

Section- II (MATHEMATICS)

31. A rational number between 3 and 4 is:
- (a) $\frac{3}{2}$ (b) $\frac{4}{3}$ (c) $\frac{7}{2}$ (d) $\frac{7}{4}$
32. The zero of $p(x) = 2x - 7$ is:
- (a) $\frac{7}{2}$ (b) $\frac{2}{7}$ (c) $\frac{-2}{7}$ (d) $\frac{-7}{2}$
33. Point $(5, -4)$ lies in the quadrant:
- (a) I (b) II (c) III (d) IV
34. The solution of the equation $x - 2y = 4$ is:
- (a) $(0, 2)$ (b) $(4, 0)$ (c) $(1, 1)$ (d) $(2, 0)$
35. Thales belongs to the country:
- (a) Bablyonia (b) Egypt (c) Greece (d) Rome.
36. The measure of an angle which is equal to its supplement is
- (a) 100° (b) 75° (c) 90° (d) 60°
37. In a triangle ABC, if $2 \angle A = 3 \angle B = 6 \angle C$, then the measure of $\angle C$ is
- (a) 30° (b) 75° (c) 90° (d) 60°
38. Line segment joining the mid points of the opposite sides of a quadrilateral_ each other.
- (a) trisect (b) bisect (c) coincide (d) none of these.
39. In the below Fig., ABCD is a parallelogram, $AE \perp DC$ and $CF \perp AD$. If $AB = 16$ cm, $AE = 8$ cm and $CF = 10$ cm, find AD.



- (a) 10.8 cm (b) 11.8 cm (c) 12.8 cm (d) 13.8 cm
40. Chords equidistant from the centre of a circle are_ in length.
- (a) half (b) one third (c) one fourth (d) equal

Section- III (MAT)

Directions: (41 to 43) In each of the following questions, choose one number which is similar to the numbers in the given set?

41. Given set: 282, 354, 444
 (a) 453 (b) 417 (c) 336 (d) 255
42. Given set: 992, 733, 845
 (a) 114 (b) 326 (c) 425 (d) 947
43. Given set: 124, 246, 358
 (a) 372 (b) 460 (c) 572 (d) 684

Directions: (44 to 49) In each of the following questions, there are two terms to the left of the sign :: which are related in some way. Obtain the same relationship between the term to the right of the sign :: from one of the four alternatives given under it.

44. ACF : EDG :: IEH : ?
 (a) OFJ (b) OFI (c) GHI (d) LMN
45. FG : LM :: ? : ?
 (a) NO : TU (b) HI : RS (c) GH : KL (d) DE : BA
46. AEZ : EIY :: IOX : ?
 (a) UYZ (b) AEX (c) EIX (d) OUW
47. ? : IJGH :: STQR : NOLM
 (a) OPMN (b) NOLM (c) MNKL (d) LMNO
48. KLQM : CFMK :: NRPT : ?
 (a) FLLR (b) JIJH (c) FLTM (d) RLTM
49. CEHG : XVST :: ? : OMJK
 (a) LMNO (b) LNQP (c) NLPQ (d) OPMN

Directions : (50 to 55) In each of the following questions, four words are given, out of which three are same in one

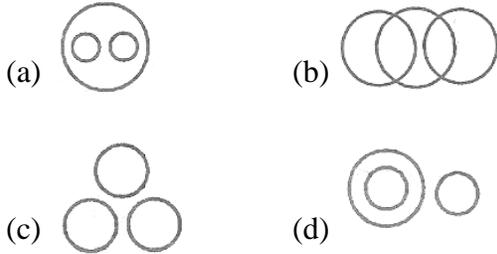
way and the fourth one is different from others. Select the odd one.

50. (a) Sun (b) Moon (c) Venus (d) Mars
51. (a) Green (b) Violet (c) Brown (d) Yellow
52. (a) Silk (b) Fur (c) Milk (d) Rubber

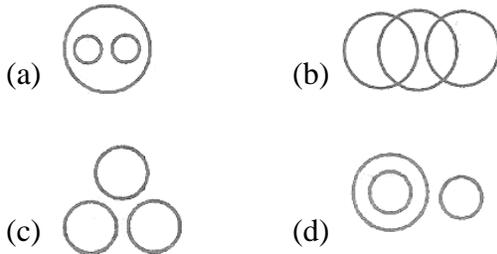
53. Moon, Earth, Universe



54. India, Pakistan, Asia



55. Batsman, Cricket, Stick



Direction : (56 to 60). Find the missing term :

56. HEJ, JGL, LIN, NKP, ?

- (a) PMR (b) QPL (c) GLJ (d) NIL

57. YAL, TCP, OET, JGX, ?

- (a) LAY (b) EIB (c) CPT (d) XJG

58. AD, EI, JO, PV, ?

- (a) EO (b) JI (c) WD (d) PQ

59. Find the term which would replace the questions mark ?

XYQ, ZAR, BCS, DET, ?

- (a) UGF (b) ZBC (c) BCT (d) FGU

60. 1 BR, 2 EO, 6 HL, 15 KI, ?

- (a) 25 FN (b) 31 NF (c) 52 FN (d) 36 NF