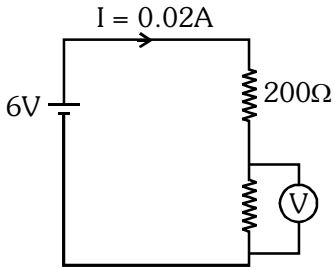
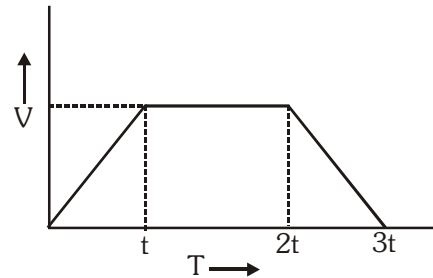


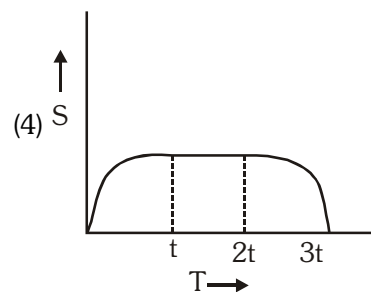
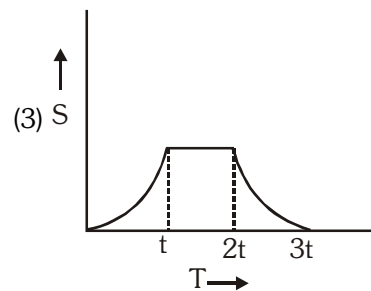
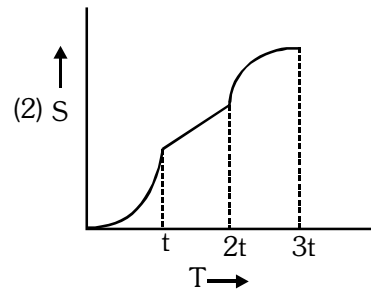
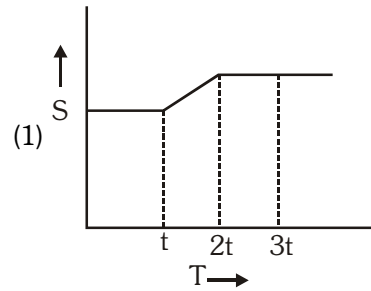
This test contains 100 questions of one mark each.

- 101.** A bulb of (220 V, 60 W) is operated on 110 V supply then power developed in it is  
 (1) 15 W (2) 30 W (3) 65 W (4) 60 W
- 102.** A dichromatic light of wavelength 5600 Å and 6300 Å pass through a prism of crown glass. Then  
 (1) deviation for both wavelengths is same.  
 (2) both will emerge without deviation.  
 (3) deviation for wavelength 5600 Å is greater than deviation for wavelength 6300 Å.  
 (4) deviation for wavelength 6300 Å is greater than deviation for wavelength 5600 Å.
- 103.** A convex lens is in contact with concave lens. The magnitude of the ratio of their focal length is  $\frac{2}{3}$ . Their equivalent focal length is 30 cm. What are their individual focal lengths (in cm).  
 (1) -75, +50 (2) +10, -15  
 (3) +75, -50 (4) -15, -10
- 104.** The reading of ideal (V) connected across R in the circuit shown below is:  
  
 (1) 1 V (2) 2 V (3) 3 V (4) 4 V
- 105.** An object starting from rest move on a straight road for time t and comes to rest finally. The distance is covered in two parts. In the first part, it is accelerated at constant acceleration  $\alpha$  and then after, decelerate at rate  $\beta$ . The maximum velocity of object is  
 (1)  $\alpha t$  (2)  $\beta t$   
 (3)  $\left(\frac{\alpha + \beta}{2}\right)t$  (4)  $\left(\frac{\alpha\beta}{\alpha + \beta}\right)t$
- 106.** A person is standing in an elevator. In which situation he finds his weight less?  
 (1) When the elevator moves upward with constant acceleration.  
 (2) When the elevator moves downward with constant acceleration.  
 (3) When elevator moves upward with uniform velocity.  
 (4) When elevator moves downward with uniform velocity.

**107.** Velocity-time graph of an object is



Displacement – Time graph is



- 108.** A source emits sound of frequency 600 Hz inside water. The frequency heard in air will be:  
 ( $v = 1500$  m/s in water and  $v = 300$  m/s in air).  
 (1) 300 Hz (2) 120 Hz  
 (3) 600 Hz (4) 6000 Hz

- 109.** When a charged particle in motion enters in a uniform magnetic field perpendicularly then its  
 (1) Speed changes  
 (2) Velocity changes  
 (3) K.E. changes  
 (4) Acceleration does not change
- 110.** The frequency of seconds pendulum is  
 (1) 0.5 Hz (2) 1.0 Hz  
 (3) 2.0 Hz (4) 1.5 Hz
- 111.** The structure of solids is investigated by using  
 (1) Cosmic rays (2) X-rays  
 (3) Gamma rays (4) Infrared rays
- 112.** Two bodies with kinetic energy in the ratio of 4 : 1 are moving with equal linear momentum. The ratio of their masses is  
 (1) 1 : 2 (2) 1 : 1 (3) 4 : 1 (4) 1 : 4
- 113.** A ray of light is incident on the surface of separation of a medium with the velocity of light in air at an angle  $45^\circ$  and is refracted in the medium at an angle  $30^\circ$ . What will be the velocity of light in the medium  
 (1)  $1.96 \times 10^8$  m/s (2)  $2.12 \times 10^8$  m/s  
 (3)  $3.18 \times 10^8$  m/s (4)  $3.33 \times 10^8$  m/s
- 114.** Analyse the given statements and choose the correct option.  
**Statement-I :** When current is represented by a straight line, the magnetic field will be circular.  
**Statement-II :** According to Fleming's left hand rule, the direction of the force is parallel to the magnetic field.  
 (1) Both statement-I and statement-II are correct and statement-II is the correct explanation of statement-I.  
 (2) Both statement-I and statement-II are true but statement-II is not the correct explanation of statement-I.  
 (3) Statement-I is true but statement-II is false.  
 (4) Statement-I is false but statement-II is true.
- 115.** Which one of the following is the smallest in size?  
 (1)  $N^{3-}$  (2)  $O^{2-}$  (3)  $F^-$  (4)  $Na^+$
- 116.** Which chemical substance is added to LPG to help in detection of its leakage?  
 (1) Isobutane (2) Ethanethiol  
 (3) Propane (4) Hydrogen sulphide
- 117.** Which of the following salt does not contains the water of crystallization?  
 (1) Blue Vitriol (2) Baking soda  
 (3) Washing soda (4) Gypsum
- 118.** The ion of an element has 3 positive charge, 27 mass-number and 14 neutrons. What is the number of electrons in this ion?  
 (1) 13 (2) 14 (3) 10 (4) 16
- 119.** Which one of the following is the natural fruit ripening hormone?  
 (1) Ethane (2) Ethene  
 (3) Ethyne (4) Carbide
- 120.** Which of the following contains acidic hydrogen?  
 (1) Ethene (2) Ethane  
 (3) Ethyne (4) But-2-yne
- 121.** Silver jewellery becomes black on prolonged exposure to air, It is due to the formation of  
 (1)  $Ag_3N$  (2)  $Ag_2O$   
 (3)  $Ag_2S$  and  $Ag_3N$  (4)  $Ag_2S$
- 122.** What is the mass of oxygen required to react completely with 15 g of  $H_2$  gas to form water?  
 (1) 140 g (2) 115 g (3) 107.5 g (4) 120 g
- 123.** Percentage purity of a sample of gold is 85%. How many atoms of gold are present in its 1 gram sample? (Atomic mass of gold = 197 u)  
 (1)  $2.6 \times 10^{21}$  (2)  $2.6 \times 10^{23}$   
 (3)  $3.0 \times 10^{21}$  (4)  $4.5 \times 10^{20}$
- 124.** The volume of 1 mole of an ideal gas at  $25^\circ C$  temperature and 1 bar pressure is:  
 (1) 22.4 L (2) 22.7 L  
 (3) 24.8 L (4) 24.4 L
- 125.** Which of the following solution can be stored in aluminium container?  
 (1)  $MgSO_4(aq)$  (2)  $ZnSO_4(aq)$   
 (3)  $CuSO_4(aq)$  (4)  $FeSO_4(aq)$
- 126.** What is the correct order of pH of aqueous solution of the following salts?  
 (1)  $NaCl = Na_2CO_3 = NH_4Cl$   
 (2)  $NaCl < Na_2CO_3 < NH_4Cl$   
 (3)  $NH_4Cl < Na_2CO_3 < NaCl$   
 (4)  $NH_4Cl < NaCl < Na_2CO_3$

- 127.** Place of gold in modern periodic table is\_\_\_\_\_.
- (1) s-block (2) p-block  
(3) d-block (4) f-block
- 128.** The cell organelle in which hydrolytic enzymes are stored is
- (1) Plastid (2) Mitochondria  
(3) Centrosome (4) Lysosome
- 129.** Choose the incorrect statement about insulin.
- (1) Deficiency of insulin leads to diabetes.  
(2) It regulates the growth and development of the body.  
(3) It controls sugar level in the blood.  
(4) It is produced from the pancreas.
- 130.** The animal which belongs to class pisces is
- (1) Silver fish (2) Jelly fish  
(3) Star fish (4) Dog fish
- 131.** Most of the plants absorb nitrogen in the form of
- (1) Uric acid  
(2) Amino acids  
(3) Atmospheric nitrogen  
(4) Nitrates and Nitrites
- 132.** In a synapse, the chemical signal is transmitted from
- (1) axonal end of a neuron to dendritic end of another neuron.  
(2) axonal end to the cell body of the same neuron.  
(3) Cell body to axonal end of the same neuron.  
(4) dendritic end of one neuron to axonal end of another neuron.
- 133.** After pollination, the growth of pollen tube on stigma toward ovule is due to
- (1) Phototropism (2) Chemotropism  
(3) Hydrotropism (4) Geotropism
- 134.** Oxygen present in the glucose molecule formed during photosynthesis is obtained from
- (1) Water molecule  
(2) Carbon dioxide molecule  
(3) Chlorophyll  
(4) Oxygen in air
- 135.** Which of the following has extranuclear DNA ?
- (1) Mitochondria  
(2) Lysosomes  
(3) Golgi Complex  
(4) Rough Endoplasmic Reticulum
- 136.** Conversion of one molecule of glucose into two molecules of pyruvic acid takes place in
- (1) Cytoplasm  
(2) Mitochondria  
(3) Endoplasmic reticulum  
(4) Golgi bodies
- 137.** Dead cells of cork contain a chemical in their wall that makes them impervious to gases and water. The chemical is
- (1) Lignin (2) Suberin  
(3) Mucilage (4) Sucrose
- 138.** Peculiar water driven tube system is the unique feature of the following group
- (1) Echinodermata (2) Arthropoda  
(3) Annelida (4) Platyhelminthes
- 139.** In an accident, two long bones of a person are dislocated. The possible reason may be the
- (1) Breakage of Skeletal muscles  
(2) Breakage of Tendon  
(3) Breakage of Smooth muscles  
(4) Breakage of Ligament
- 140.** Which of the options given below would not work in the following sentence?  
In order for the body to absorb and use\_\_\_\_\_ these must be broken down by hydrolysis into \_\_\_\_\_.
- (1) polysaccharides, monosaccharides  
(2) amino acids, proteins  
(3) fats, glycerol and fatty acids  
(4) disaccharides, monosaccharides
- 141.** Who was Confucius?
- (1) A Chinese Philosopher  
(2) King of Tibet  
(3) Religious leader of Japan  
(4) Disciple of Dalai Lama

- 142.** What was Barbarossa Operation ?  
 (1) It was a plan to stop World War-II  
 (2) Name of Germany's invasion of Russia during World War-II  
 (3) Name of treaty between Germany and Russia  
 (4) A secret meeting of central forces
- 143.** Who was the King of England during First Round Table Conference :  
 (1) Edward VII (2) George IV  
 (3) George V (4) James II
- 144.** In the first world war, which country was not indulged in allied powers :  
 (1) Britain (2) Austria (3) France (4) Russia
- 145.** Of which revolution was the motto "Liberty Equality and Fraternity"  
 (1) The Britain Revolution  
 (2) The American Revolution  
 (3) The Russian Revolution  
 (4) The French Revolution
- 146.** Mahatma Gandhi's Dandi March was associated with:  
 (1) Quit India Movement  
 (2) Individual Satyagraha Movement  
 (3) Non-cooperation Movement  
 (4) Civil Disobedience Movement
- 147.** The Lahore Congress Session was famous for  
 (1) Local self government  
 (2) Complete independence  
 (3) Fundamental rights  
 (4) Constitution assembly
- 148.** Who read the inscription on pillar of Emperor Ashoka?  
 (1) James Prinsep (2) William Jones  
 (3) D.D Kosambi (4) Ferguson
- 149.** Great Bath in Harappa Civilization was situated in:  
 (1) Lothal (2) Harappa  
 (3) Mohanjadora (4) Kalibanga
- 150.** Din-e-Elahi, a new religion was introduced by  
 (1) Jahangir (2) Akbar  
 (3) Babar (4) Shershah
- 151.** Which one of the following metal can be obtained from bauxite?  
 (1) Aluminium (2) Copper  
 (3) Iron (4) Silver
- 152.** Which type of drainage pattern is formed, when river and its tributaries resemble the branches of a tree.  
 (1) Dendritic (2) Radial  
 (3) Trellis (4) Rectangular
- 153.** Which one of the following types of vegetation does 'rubber' belong to  
 (1) Tundra (2) Tidal  
 (3) Himalayan (4) Tropical Evergreen
- 154.** Tropic of cancer  $\left(23\frac{1}{2}^{\circ}\text{N}\right)$  does not pass through which state of India?  
 (1) Rajasthan (2) Chattisgarh  
 (3) Odisha (4) Tripura
- 155.** Which one of the following describe a system of agriculture where a single crop is grown on a large area:  
 (1) Shifting agriculture  
 (2) Horticulture  
 (3) Plantation agriculture  
 (4) Intensive agriculture
- 156.** Which one of the following Iron and Steel plant is located in Odisha?  
 (1) Durgapur (2) Bokaro  
 (3) Rourkela (4) Jamshedpur
- 157.** Which of the following facts is not true about Laterite soils of India?  
 (1) They form as a result of the process of leaching  
 (2) Cashewnuts can be grown in this soil  
 (3) They have high content of organic matter in them  
 (4) Potash is found in excess in these soils
- 158.** Which of the following dams is not a part of Damodar Valley Project?  
 (1) Panchet (2) Tilaiyya  
 (3) Mettur (4) Maithon

- 159.** Which mountainous state faced severe flooding in June 2013.  
 (1) Sikkim (2) Jammu and Kashmir  
 (3) Uttrakhand (4) Arunachal Pradesh
- 160.** Which of the following energy is produced from a non-sustainable source?  
 (1) Thermal energy (2) Solar energy  
 (3) Wind energy (4) Geo-thermal
- 161.** According to the constitution of India, who has the power to Legislate on the subject 'Computer Software'?  
 (1) The Union Government  
 (2) The State Governments  
 (3) Both the above  
 (4) None of the above
- 162.** Who was the King of Nepal in 2006 during the 'second movement for democracy'?  
 (1) King Virendra (2) King Gyanendra  
 (3) King Vijendra (4) King Tejendra
- 163.** Which of the following people movement later converted into a political party?  
 (1) Assam Movement  
 (2) Chipko Movement  
 (3) Narmada Bachao Aandolan  
 (4) All of the above
- 164.** What is the ideological orientation of the India National Congress?  
 (1) Rightist (2) Leftist  
 (3) Centrist (4) None of the above
- 165.** The Centre-State power distribution in India is similar to  
 (1) Spain (2) USA  
 (3) Switzerland (4) Australia
- 166.** Seats are reserved for women in:  
 (1) Parliament  
 (2) State Legislature  
 (3) Pachayati Raj Institution  
 (4) Rajya Sabha
- 167.** Medha Patekar is the leader of which movement  
 (1) Women Movement  
 (2) Chipko Movement  
 (3) Narmada Bachao Aandolan  
 (4) Social Movement
- 168.** In which country 'Seven Party Alliance' formed by major parties in:  
 (1) Bhutan (2) Nepal  
 (3) Sri Lanka (4) Bolivia
- 169.** A democratic Government is responsible to:  
 (1) President (2) Prime Minister  
 (3) Chief Justice of India (4) The people
- 170.** Which of the following is a challenge to Democracy?  
 (1) Leader (2) Illiterate Citizens  
 (3) Political Parties (4) Election
- 171.** The formula of calculate BMI is  
 (1)  $\frac{\text{Kg}}{(\text{cm})^2}$  (2)  $\frac{\text{Kg}}{(\text{m})^2}$   
 (3)  $\frac{\text{g}}{(\text{inch})^2}$  (4)  $\frac{\text{Kg}}{(\text{inch})^2}$
- 172.** In India, the NREGA (2005) reserves 1/3 proposed employment for;  
 (1) Women (2) Men  
 (3) Urban Women (4) Poor
- 173.** 'Problem of double coincidence of wants' is removed because money acts as  
 (1) Medium of exchange  
 (2) Store of value  
 (3) Measurement of value  
 (4) Mode of deffered payment
- 174.** WTOs means:  
 (1) World Technical Organisation  
 (2) World Trade Organisation  
 (3) World Television Organisation  
 (4) World Technology Organisation

- 175.** National Consumer day is celebrated on:  
 (1) 24<sup>th</sup> December  
 (2) 29<sup>th</sup> January  
 (3) 05<sup>th</sup> March  
 (4) 15<sup>th</sup> September
- 176.** The Calcutta Supreme Court had passed certain regulations to control press freedom by  
 (1) 1820s (2) 1830s  
 (3) 1840s (4) 1850s
- 177.** Folk tales and stories from the peasants in Germany in 1812 were published by the  
 (1) Graham Company  
 (2) Grimm Brothers  
 (3) Music Germany  
 (4) Queens Publishing Company
- 178.** The power-driven cylindrical press was perfected by  
 (1) J.V. Schley (2) Johann Gutenberg  
 (3) Marco Polo (4) Richard M. Hoe
- 179.** In England, penny chapbooks were carried by petty pedlars known as  
 (1) chapmen (2) dealmen  
 (3) papermen (4) salesmen
- 180.** The shilling series was introduced in  
 (1) France (2) US  
 (3) England (4) Germany
- 181.** If the length of diagonal of a square is  $(a + b)$ , then the area of the square will be  
 (1)  $(a + b)^2$  (2)  $\frac{1}{2}(a + b)^2$   
 (3)  $(a^2 + b^2)$  (4)  $\frac{1}{2}(a^2 + b^2)$
- 182.** The angle between the bisectors of the two acute angles of a right angle triangle is  
 (1)  $90^\circ$  (2)  $112\frac{1}{2}^\circ$  (3)  $135^\circ$  (4)  $120^\circ$
- 183.** The average rainfall for a week excluding Sunday was 0.5 cm. Due to heavy rainfall on Sunday, the average for the week rose to 1.5 cm. The rainfall on Sunday was  
 (1) 6.5 cm (2) 7.5 cm  
 (3) 8.5 cm (4) 8.0 cm

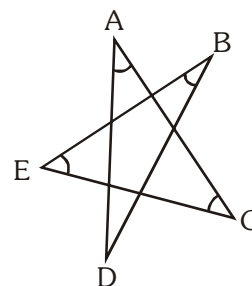
- 184.** The area of the largest triangle that can be inscribed in a semi-circle of radius 'r' is

(1)  $r^2$  (2)  $r^3$  (3)  $2r^2$  (4)  $\frac{1}{2}r^2$

- 185.** A rational number between  $\sqrt{2}$  and  $\sqrt{3}$  is

(1) 1.5 (2)  $\frac{\sqrt{2} + \sqrt{3}}{2}$  (3)  $\sqrt{2} \times \sqrt{3}$  (4) 1.8

- 186.** In the given figure:  $\angle A + \angle B + \angle C + \angle D + \angle E$  is equal to



(1)  $360^\circ$  (2)  $180^\circ$  (3)  $150^\circ$  (4)  $90^\circ$

- 187.** If the radius of a circle is a rational number, its area is given by a number which is

- (1) Irrational (2) Rational  
 (3) Integral (4) A perfect square

- 188.** The hypotenuse of a right angle triangle is 10 cm and the radius of the inscribed circle is 1 cm. The perimeter of the triangle is

(1) 15 cm (2) 22 cm  
 (3) 24 cm (4) 26 cm

- 189.** A hemispherical depression is cut out from one face of a cubical wooden block such that the diameter (D) of the hemisphere is equal to the edge of the cube. The surface area of the remaining solid is

(1)  $\frac{1}{4}(\pi + 24)D^2$  (2)  $\pi D^2$   
 (3)  $(\pi - 40)D$  (4)  $(\pi + 24)(2D)$

- 190.** The value of  $2.\overline{4178}$  is

(1)  $\frac{24151}{9990}$  (2)  $\frac{24151}{990}$   
 (3)  $\frac{24154}{9990}$  (4)  $\frac{24155}{9990}$

- 191.** If  $n$  is a natural number, then which number always ends at 6 from the following?  
(1)  $4^n$       (2)  $2^n$       (3)  $6^n$       (4)  $8^n$
- 192.** A number is increased by 10% and then it is decreased by 10%. The net increase or decrease percent is  
(1) 3%      (2) 4%      (3) 2%      (4) 1%
- 193.** A card is drawn from a well-shuffled deck of 52 cards at random. The probability that the card is neither a heart nor a king is  
(1)  $\frac{9}{13}$       (2)  $\frac{17}{52}$       (3)  $\frac{35}{52}$       (4)  $\frac{4}{13}$
- 194.** The angles of elevation of the top of a tower from two points at distances 'a' and 'b' metres from the base and in the same straight line with it, are complementary. The height of the tower is  
(1) ab metres      (2)  $\sqrt{ab}$  metres  
(3)  $\frac{a}{b}$  metres      (4) (a + b) metres
- 195.** The value of  $\cot 12^\circ \cot 38^\circ \cot 52^\circ \cot 60^\circ \cot 78^\circ$  is  
(1) 1      (2) 0      (3)  $\frac{1}{\sqrt{2}}$       (4)  $\frac{1}{\sqrt{3}}$
- 196.** AB is a line segment and M is its mid point. Semi-circles are drawn with AM, MB and AB as diameters on the same side of AB. A circle is drawn to touch all the three semi-circles. Its radius is  
(1)  $\frac{AB}{3}$       (2)  $\frac{2}{3}AB$       (3)  $\frac{AB}{6}$       (4)  $\frac{3}{4}AB$
- 197.** AB and CD are two equal chords of a circle with centre at O. If  $OP \perp AB$  and  $OQ \perp CD$ , where P and Q are points on the chords AB and CD respectively and if  $\angle POQ = 100^\circ$ , the measure of  $\angle APQ$  is  
(1)  $45^\circ$       (2)  $50^\circ$       (3)  $60^\circ$       (4)  $80^\circ$
- 198.** In  $\triangle ABC$ , D is the mid point of BC and ED is the bisector of  $\angle ADB$ . If  $EF \parallel BC$  meeting AC in F. The measure of  $\angle EDF$  is  
(1)  $80^\circ$       (2)  $90^\circ$       (3)  $110^\circ$       (4)  $120^\circ$
- 199.** If the sum of first n terms of an A.P. is  $2n^2 - n + 1$ , then the tenth term of this A.P. is  
(1) 36      (2) 37      (3) 38      (4) 39
- 200.** A says to B, "I was four times as old as you were when I was as old as you are. "If the sum of their present ages is 33, then the present ages of A and B respectively are  
(1) 18 years, 15 years      (2) 21 years, 12 years  
(3) 24 years, 9 years      (4) 27 years, 6 years

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SPACE FOR ROUGH WORK