



Science

Preparatory 1



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موقع مذكرات جاهزة للطباعة

1- The gases that cause respiratory system malfunction are .....

- a. carbon oxides
- b. sulphur oxides
- c. nitrogen oxides
- d. (b), (c)

2- Oxides which affect the nervous system and the eye.

- a. Sulphur oxides
- b. Nitrogen oxides
- c. carbon oxides
- d. no correct answer

3- What is the name of the chemical reaction in which elements and compounds join together to create a single product?

- a. Decomposition reaction
- b. Direct combination reaction
- c. Substitution reaction
- d. Neutralization reaction

4- The chemical reaction equation below shows nitrogen monoxide reacting with oxygen:



Which of the following types of direct combustion reactions does this equation represent?

- a. A mixture with an element
- b. An element with a compound
- c. An element with another element
- d. A compound with another compound

5- The car brake performance is an application of .....

- a. attraction forces
- b. friction forces
- c. centrifugal forces
- d. nuclear force

6- ..... is/are example/s of forces inside living systems.

- a. Pulse inside blood vessels
- b. Inertia
- c. Brakes
- d. All the pervious

7- Static objects resist the change of its ..... from rest to motion.

- a. mass
- b. density
- c. state
- d. All the pervious

8- Earth's gravity acceleration changes from a place to another on the Earth's surface because of the .....

- a. object's mass
- b. Earth's mass
- c. the distance from the earth's center
- d. varied temperature

9- The electromagnet is used in making the ..... set.

- a. calculator
- b. microscope
- c. electric bell
- d. night vision

10- Iron filings are attracted to an iron bar when the electric current flows, due to the effect of .....

- a. gravity force
- b. electricity force
- c. electromagnetic force
- d. nuclear force

11- The attraction force between an object and the Earth is equal to the .....

- a. electromagnet
- b. weight
- c. weak nuclear
- d. strong nuclear

12- An object's weight on the Earth's surface is related to ..... force.

- a. electromagnet
- b. weak nuclear
- c. Earth's attraction
- d. strong nuclear

13- All of the following are examples of the universal forces in nature except for .....

- a. thunder
- b. lightning
- c. wind motion
- d. changing direction of the ball

14- All of the following are electromagnetic waves except for the .....

- a. thermal rays (infra-red)
- b. visible light
- c. sound waves
- d. ultraviolet rays

- 15- When two cars move in the same direction with a velocity of 100 Km/h, the driver of the first car imagines the second car to be .....
- a. not moving  
b. moving backwards  
c. moving forward  
d. No correct answer
- 16- A force is an effect that .....
- a. Changes the phase of an object's motion only.  
b. Never changes the phase of the object's motion.  
c. Changes both the object's motion and its direction.  
d. Changes the phase of the object's direction.
- 17- ..... is an example of a pneumatic musical instrument.
- a. Violin  
b. Guitar  
c. Lute  
d. Reed pipe
- 18- What chemical is produced when magnesium reacts with oxygen?
- a. Oxygen magnesium  
b. Magnesium oxide  
c. Magnesium oxygen  
d. Oxide magnesium
- 19- Which of the following speeds is closest to the speed of light waves in a vacuum?
- a. Three hundred thousand meters per second  
b. Three thousand meters per second  
c. Three hundred million meters per second  
d. Three million meters per second
- 20- Which of the following chemical equations shows the reaction between ammonia and hydrogen chloride to form ammonium chloride?
- a.  $\text{NH}_3 + \text{HCl} \longrightarrow \text{NH}_4\text{Cl}$   
b.  $\text{NH}_4\text{Cl} + \text{H}_2\text{O} \longrightarrow \text{HCl} + \text{NH}_4\text{OH}$   
c.  $\text{HCl} + \text{NaCl} \longrightarrow \text{NaOH} + \text{H}_2\text{O}$   
d.  $\text{N}_2 + 3\text{H}_2 \longrightarrow 2 \text{NH}_3$

21- Which of the following is a unit of force?

- a. The newton
- b. The kilogram
- c. The watt
- d. The joule

22- If an object is not moving, it.....start to move unless a force acts on it.

- a. will
- b. will not
- c. (a) & (b)
- d. No correct answer

23- If an object is moving, it will not change..... or..... unless a force acts on it.

- a. speed, direction
- b. position, direction
- c. position, inertia
- d. no correct answer

24- An object with a mass of 20 kg falls toward Earth. What is the acceleration of the object if the only force acting on it is gravity?

- a.  $7.8 \text{ m/s}^2$
- b.  $8 \text{ m/s}^2$
- c.  $9.8 \text{ m/s}^2$
- d. No correct answer

25- A person stands on the north pole of Earth and a second person stands on the equator. The directions that the gravitational forces on the two people act in are.....

- a. the same as each other
- b. opposite to each other
- c. at 90 degrees to each other
- d. no correct answer

26- The weight of an object is the gravitational.....that acts on it.

- a. force
- b. mass
- c. energy
- d. no correct answer

27- The electric motor works on changing..... energy to.....energy.

- a. Mechanical; electric
- b. Electric; heat
- c. Electric; mechanical
- d. No correct answer

28- The electric generator works on changing.....energy to .....energy.

- a. Mechanical; electric
- b. Electric; heat
- c. Electric; mechanical
- d. No correct answer

29- Objects weight.....

- a. The amount of Earth's attraction to the object.
- b. The point at the center of an object where the force of gravity affects the object.
- c. (a) & (b)
- d. No correct answer

30- Find the mass of an object if its weight = 60 N, knowing that the earth's gravity acceleration is  $9.8\text{m/s}^2$

- a. 12.6 Kg
- b. 6.12 Kg
- c. 6.12 N
- d. No correct answer

31- When the electric current passes through a wire near a magnetic needle it deflects.

- a. Due to the gravity.
- b. Due to the magnetic effect of the electric current
- c. Due to the attraction force
- d. No correct answer

32- Carbon monoxide has a dangerous impact on human being and it may cause.....

- a. Building corrosion
- b. Bombing
- c. Headache and fainting
- d. No correct answer

33- Which of the following statements about nuclear forces is correct?

- a. The strong nuclear force is a different type of force from the weak nuclear force, but both are types of fundamental forces.
- b. The strong nuclear force is a different type of force from the weak nuclear force, and only the strong nuclear force is a type of fundamental force.



- c. The strong nuclear force is the same type of force as the weak nuclear force, just stronger.
- d. No correct answer.

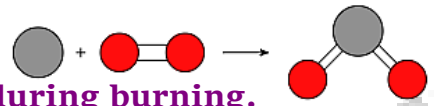
34- Which of the following are types of fundamental forces?

- a. Opposing forces
- b. Constant forces
- c. Up thrust forces
- d. Magnetic forces

35- Which of the following are types of force responsible for radioactive decay of atomic nuclei?

- a. Weak nuclear forces
- b. Strong nuclear force
- c. Electrical forces
- d. Magnetic forces

36- The particles in the diagram show the reaction between carbon and oxygen to form carbon dioxide. Heat is required for this reaction to take place. What does the heat do?



- a. It turns the carbon into soot during burning.
- b. It sticks the carbon atom to the oxygen atoms.
- c. It forms the bonds between the carbon and oxygen atoms.
- d. It breaks the double covalent bond in the oxygen molecule.

37- Which of the following are types of fundamental forces?

- a. Constant forces
- b. Friction forces
- c. Gravitational forces
- d. Upthrust forces

38- Which of the following is a unit of weight?

- a. The kilogram
- b. The newton
- c. (a) and (b)
- d. No correct answer

39- Which of the following is a unit of mass?

- a. The kilogram
- b. The newton
- c. (a) and (b)
- d. No correct answer

40- What does the triangle above the arrow in a chemical equation mean?



- a. Three substances present
- b. Heat required
- c. Diluted substances
- d. Concentrated substances

41- Which of the following statements best describes the way in which mass is conserved during chemical reactions?

- a. The total mass of reactants is equal to the total mass of products plus the mass of oxygen.
- b. The total mass of reactants is greater than the total mass of products.
- c. The total mass of reactants is always the same as the solid products produced.
- d. The total mass of reactants is equal to the total mass of products.

42- A teacher places a cup of coffee onto an electronic balance at the front of the science laboratory. The teacher then adds three large teaspoons of sugar to the coffee. The volume of the coffee does not appear to increase. What happens to the mass displayed on the front of the balance?

- a. The mass on the balance decreases.
- b. The mass on the balance stays the same.
- c. The mass on the balance increases.
- d. No correct answer.

43- In a chemical reaction, 64 g of zinc is reacted with excess oxygen to form 80 g of zinc oxide. How much oxygen is used in this reaction?

- a. 144 g
- b. 80 g
- c. 16 g
- d. 64 g

44- The greater the mass of an object, the..... the weight of the object.

- a. less
- b. greater
- c. smallest
- d. no correct answer



45- The diagram shows two objects at different positions around Earth. The force of gravity acts on the black object in the direction of the black arrow. Which color arrow correctly shows the direction in which the force of gravity acts on the green object?



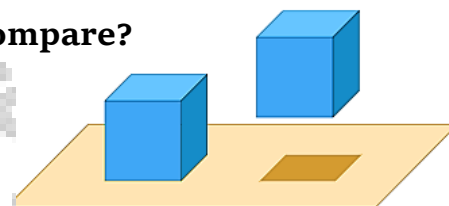
- a. Red
- b. Blue
- c. (a) and (b)
- d. No correct answer

46- A process in which breaking of bonds between reactants' molecules and forming of new bonds between products' molecules occurs.

- a. Chemical reaction
- b. Chemical equation
- c. Law of constant ratio.
- d. No correct answer.

47- Two boxes have the same mass. One box falls toward the ground from a point near the ground. The other box is at rest on the ground. In which of the following ways do the weights of the boxes compare?

- a. Both boxes have the same weight.
- b. The falling box has less weight.
- c. The falling box has greater weight.
- d. No correct answer.

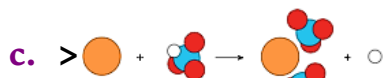


48- Which of the following equations showing the formation of carbon dioxide is correctly balanced?.

- a.  $2C + O_2 \longrightarrow CO_2$
- b.  $C + O_2 \longrightarrow CO_2$
- c.  $C + O_2 \longrightarrow CO$
- d.  $C + O \longrightarrow CO_2$

49- Which of the following particle diagrams shows the law of conservation of mass being preserved?

- a.
- b.



d. No correct answer

50- The chemical reaction causes . . . . .

- a. breaking the bonds between the products and forming new bonds between the reactants.
- b. the formation of bonds between the products ,then breaking the bonds between the reactants.
- c. breaking the bonds between the molecules of reactants and forming new bonds between the molecules of the products.
- d. breaking the bonds between the products and the reactants.

51- The sum of reactants masses in any chemical reaction is . . . . . the sum of products masses.

- a. doubled
- b. more than
- c. equal to
- d. less than

52- If the molecule of carbon dioxide consists of one atom of carbon and two atoms of oxygen, knowing that the mass of carbon is 12 and that of oxygen is 16, so the mass of two molecules of carbon dioxide equals . . . . . gm.

- a. 22
- b. 44
- c. 88
- d. 33

53- Direct combination reaction takes place between . . . . .

- a. two nonmetals.
- b. a metal and a nonmetal.
- c. a compound with another.
- d. all of the previous answers.

54- Ammonia combines with conc. HCl producing . . . . . of ammonium chloride.

- a. white ppt
  - b. brown clouds
  - c. white clouds
  - d. brown ppt
- 55- Chemical reactions are used in .....
- a. medicines industry.
  - b. fertilizers industry.
  - c. food industry.
  - d. all of the previous answers.
- 56- Increasing the ratio of ..... gas in the atmosphere leads to increasing the air temperature.
- a. carbon monoxide
  - b. carbon dioxide
  - c. nitric oxide
  - d. sulphur dioxide
- 57- The gases that cause building corrosion are .....
- a. nitrogen oxides.
  - b. carbon oxides.
  - c. sulphur oxides.
  - d. both (b) and (c).
- 58- The gases that affect the nervous system and the eye are .....
- a. nitrogen oxides.
  - b. carbon oxides.
  - c. sulphur oxides.
  - d. (a) and (b).
- 59- All of these gases are acidic gases except .....
- a. sulphur dioxide.
  - b. sulphur trioxide.
  - c. nitrogen oxides.

d. ammonia.

60- ..... oxides are resulted during the time of lightning.

- a. Carbon
- b. Sulpher
- c. Nitrogen
- d. (a) and (b)

61- The substances resulted from burning of coal and cellulose fibres cause .

.....

- a. head-ache.
- b. fainting.
- c. lung cancer.
- d. (a) , (b) and (c) are correct.

62- ..... is the distance at which an object moves away from its original position at any moment in a certain direction.

- a. Velocity
- b. Speed
- c. Displacement
- d. Acceleration

63- Which of the following represents a static object ?

- a. Displacement occurred by the object every second is not equal.
- b. Displacement occurred by the object every second is equal.
- c. Displacement value of the object is fixed.
- d. No correct answer.

64- The change in an object's position or direction as the time passes relative to a frame of reference is called ..... motion.

- a. periodic
- b. vibrating
- c. relative
- d. circular

65- If you are in a moving train, you imagine that cars moving in the same direction on the road at smaller speed . . . . .

- a. stop.
- b. move forward.
- c. move backward.
- d. move with a high speed.

66- The motion of the following objects are transitional motion except the motion of . . . . .

- a. train.
- b. simple pendulum.
- c. car.
- d. bicycle.

67- In the periodic motion, the . . . . .

- a. pathway is straight.
- b. motion is regularly repeated.
- c. time is regularly repeated.
- d. speed is regularly changed.

68- All of the following are periodic motions except the . . . . . motion.

- a. fan
- b. pendulum
- c. train
- d. sunflower

69- All of the following are motions regularly repeated in equal periods of time except . . . . .

- a. wave motion.
- b. circular motion.
- c. vibrating motion.
- d. transitional motion.

70- All of the following are properties of sound waves except . . . . .

- a. it is mechanical waves.
- b. it is produced due to vibration of medium particles.
- c. it needs a medium to travel.
- d. it travels through free space.

71- . . . . . waves is an example of mechanical waves.

- a. Water
- b. Light
- c. Radio
- d. Ultraviolet

72- . . . . . are used in examining and curing sets for human body.

- a. Ultrasonic waves
- b. Gamma rays
- c. Infrared rays
- d. X-rays

73- Sound waves are used in all the following except . . . . .

- a. examining and curing sets.
- b. making remote sets.
- c. musical instruments.
- d. amplifiers.

74- . . . . . are used in night vision apparatus.

- a. Infrared rays
- b. Ultraviolet rays
- c. Gamma rays
- d. X-rays

75- X-rays are used in . . . . .

- a. treatment and discovering some swellings.
- b. photographing bones to detect bone fractures.



- c. sterilizing the sets of surgical operation rooms.
- d. remote sensing instruments to photograph the Earth's surface.

76- ..... are used in medical purposes as the treatment and discovering some swellings.

- a. X-rays
- b. Ultraviolet rays
- c. Infrared rays
- d. Gamma rays

77- ..... is among the applications of ultraviolet rays.

- a. Photographing bones
- b. Night vision apparatus
- c. Sterilizing of the sets of surgical operation rooms
- d. Discovering of some swellings

78- Visible light is used in all of the following applications except in .....

- a. night vision apparatus.
- b. television cameras.
- c. photographic cameras.
- d. data shows.

79- All of the following are accompanied forces to motion except .....

- a. friction force.
- b. gravitational force.
- c. force of inertia.
- d. forces inside living systems.

80- When a moving bus stops suddenly, the passengers and the driver .....

.....

- a. rush backward.
- b. rush forward.
- c. turn upside down.
- d. tend to lean.

81- When the horse is tripped, the horse rider is suddenly rushed forward, this is related to the force of .....

- a. inertia.
- b. centrifugal.
- c. attraction.
- d. horse pushing.

82- Passengers are rushed back when a car starts moving suddenly, this is related to .....

- a. centrifugal force.
- b. force of attraction.
- c. force of inertia.
- d. friction force.

83-..... is a technological application on inertia forces.

- a. Car tyres
- b. Contraction and relaxation of muscles
- c. Safety belts
- d. No correct answer

84- The car brake performance is an application of .....

- a. attraction forces.
- b. friction forces.
- c. electromagnetic forces.
- d. forces of inertia.

85- The following forces are applications of friction except .....

- a. walking on foot on a road.
- b. starting motion of cars.
- c. the work of electric generator (dynamo).
- d. stopping the car using the brakes.

86- Friction causes a great loss of mechanical energy because this energy is changed into ..... energy.

- a. light
- b. electric
- c. heat
- d. magnetic

87- The idea of machine lubrication depends on the decrease in . . . . .

- a. their weights.
- b. forces of inertia.
- c. friction forces.
- d. forces of gravity.

88- . . . . . is among the forces inside living systems.

- a. The contraction and relaxation of muscles
- b. Force of inertia
- c. Electrostatic force
- d. Friction force

89- Liquids transport through pores and the walls of cells from . . . . .

- a. outside to inside.
- b. inside to outside.
- c. low concentration to high concentration.
- d. high concentration to low concentration.

90- A force is an effect that . . . . .

- a. always changes the phase of an object's motion only.
- b. never changes the phase of an object's motion.
- c. always changes both object's phase and direction.
- d. may change the phase of an object motion only.

91- Universal forces in nature are . . . . .

- a. attraction forces.
- b. electromagnetic forces.
- c. nuclear forces.
- d. all of the previous forces.

92- The attraction force between an object and the Earth is equal to the . . . .

- a. object's mass.
- b. object's weight.
- c. Earth's gravity acceleration.
- d. Centrifugal force.

93- An object's weight on the Earth's surface is related to . . . . .forces.

- a. electromagnetic
- b. attraction
- c. weak nuclear
- d. strong nuclear

94- Earth's gravity acceleration is changed from a place to another on Earth's surface because of . . . . .

- a. objects' masses.
- b. Earth's mass.
- c. the distance from the Earth's centre.
- d. various temperatures.

95- The multiplying of object's mass by Earth's gravity acceleration equals .....

- a. object's volume
- b. object's mass
- c. object's weight
- d. no correct answer.

96- The bar used in the electromagnet is made up of . . . . .

- a. isolated copper.
- b. steel iron.
- c. wrought iron.
- d. aluminium.

97- The idea of how the electromagnet works is to change . . . .

- a. mechanical energy into electric energy.

- b. electric energy into magnetic energy.
- c. electric energy into mechanical energy.
- d. magnetic energy into mechanical energy.

98- Electromagnet is used in making the . . . . . set.

- a. calculator
- b. electric bell
- c. microscope
- d. night vision

99- Electromagnetic forces affect the performance of the following except for . . .

- a. dynamo (electric generator).
- b. electric motor.
- c. car internal combustion engine.
- d. electromagnet.

100- The . . . . . changes the mechanical energy into an electric energy.

- a. electromagnet
- b. dynamo
- c. electric motor
- d. no correct answer

101- The electric motor changes the . . . .

- a. mechanical energy into an electric energy.
- b. electric energy into a magnetic energy.
- c. electric energy into a mechanical energy.
- d. magnetic energy into a mechanical energy.

102- Electric motor is used in the manufacture of . . . . .

- a. radio.
- b. electric bell.
- c. blinder (mixer).

d. watch.

103- Weak nuclear forces are used in . . . . .

- a. producing electricity.
- b. scientific researches.
- c. military purposes.
- d. all the previous uses.

104- Strong nuclear forces are used in . . . . .

- a. medicine.
- b. industry.
- c. scientific researches.
- d. military purposes.

105-







## Answers

1	B
2	B
3	B
4	B
5	B
6	A
7	C
8	C
9	C
10	C
11	B
12	C
13	D
14	C
15	A
16	C
17	D
18	B
19	C
20	A
21	A
22	B
23	A
24	C
25	C
26	A
27	C
28	A
29	A
30	B
31	B
32	C
33	A
34	D
35	A
36	D

37	C
38	B
39	A
40	B
41	D
42	C
43	C
44	B
45	B
46	A
47	A
48	B
49	B
50	C
51	C
52	C
53	D
54	C
55	D
56	B
57	C
58	A
59	D
60	C
61	C
62	C
63	C
64	C
65	C
66	B
67	B
68	C
69	D
70	D
71	A
72	A
73	B
74	a
75	B
76	D
77	C

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78	A
79	B
80	B
81	A
82	C
83	C
84	B
85	C
86	C
88	C
89	A
90	C
91	D
92	B
93	B
94	C
95	C
96	C
97	B
98	B
99	C
100	B
101	c
102	C
103	B
104	D

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