**DEPARTMENT OF SCHOOL EDUCATION**

**Government JEE Coaching-Screening Test 2019-20**

**Time: 60min**

 **Marks:180**

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**Instructions:**

**1) Answer all the questions**

**2) For Every correct answer Four marks will be given**

**3) For Every wrong answer One mark will be deducted**

CHOOSE THE CORRECT ANSWER 45x4=180

|  |  |
| --- | --- |
| 1. | What will happen to the acceleration of a body at its highest position, if it is thrown vertically upwards? |
|  | a) Zero | b) increases | c) decreases  | d) constant |
| 2. | A bower bowls a ball of mars 0.25kg, which reaches the batsman with a speed of 5 m/s. it is hit by the batsman with the bat so that it flies away with a speed of 25 m/s in the same direction. What is the impulse of force on the ball? |
|  | a) 125 Kg m/s | b) 7.5 Kg m/s | c) 5 Kg m/s | d) 5 Kg m/ |
| 3. | A boy jumps to a height of 0.3 m from the earth’s surface to what height can he jump in moon by spending the same energy if g moon = g earth? |
|  | a) 0.3m | b) 20m | c) 1.8m | d) .05m |
| 4. | 49 divisions of main scale coincide with 50 divisions of vernier scale in a vernier calipers find the least count if 1 main scale divisions is 0.5 mm  |
|  | 1. .01mm
 | 1. 0.1mm
 | 1. 0.5mm
 | 1. 1mm
 |
| 5 | A glass rod is rubbed with silk glass rod becomes positively charged due to  |
|  | 1. Loss of electrons
 | 1. Gain of electrons
 | 1. Loss of protons
 | 1. Gain of protons
 |
| 6. | Resistors R1, R2 **……** Rn are all connectedin parallel. The effective resistance of this combination will be |
|  | a) less than least value | b) greater than highest value | c) sum of resistances  | d) mean value of all resistances |
| 7 | Choose the correct statement from the following  |
|  | 1. Magnetic lines of force outside the magnet start from south pole end at north pole
 | 1. Magnetic lines of force inside the magnet start from north pole end at south pole
 |
|  | c) Magnetic lines of force start from positive charge end at negative charge | d) Magnetic lines of force inside the magnet start from south pole end at north pole |
| 8 | Number of images formed by 2 plane mirrors kept parallel so that its reflecting sides face each other will be |
|  | a) 2 | b) 4 | c) infinite | d) 1 |
| 9  | Which one of the following will always from virtual correct and diminished image? |
|  | a) convex mirror | b) concave mirror | c) convex lens | d) plane mirror |
| 10 | 2 lenses have their optic powers as -2D and 1.5D their combination will have focal length of  |
|  | a) -1m | b) +1m | c) -2m | d) +2m |
| 11 | What is the work done by centripetal force acting on a particular executing circular motion at constant speed |
|  | a) Positive | b) Negative | c) Zero | d) Positive or Negative |
| 12. | Two masses 25Kg and 100Kg are placed at a distance of 1M. force exerted by 25 Kg on 100 Kg =F1 force exerted by 100 Kg on 25 Kg =F2 choose the correct statement |
|  | a) F1> F2 | b) F1< F2 | c) F1= F2 | d) F1= 4F2 |
| 13 | Bursting of cycle tube is an example for  |
|  | a) Isobaric process | b) Isochoric process | c) Isothermal process | d) Adiabatic process |
| 14 | 100 gm of water at 80 is mixed with 100 gm of water at 30 what will be common temperature of mixture |
|  | a) 45 | b) 60 | c) 55 | d) 50 |
| 15 | When a wave travels from one medium to another which characteristic of the wave will not change? |
|  | a) Wave length | b) velocity | c) frequency | d) wave no |

16 The equivalent mass of Potassium Permanganate in alkaline medium is \_\_\_\_\_\_\_\_

 Mn+2O+ 3 Mn+ 4O

1. 31.6 b) 52.7 c) 79 d) None of these
2. For ‘d‘ electron the orbital angular momentum is \_\_\_\_\_\_\_\_\_\_\_
3. b) c) d)

18 What would be the IUPAC name for an element with atomic number 222?

a) bibibiium b) bididium c) didibium d) bibibium

19 Which of the following has the highest hydration energy?

1. Mgcl2 b) Cacl2 c) Bacl2 d) Srcl2

20 Maximum deviation from ideal gas is expected from

1. CH**4** (g) b) NH**3** (g) c) H**2** (g) d) N**2** (g)

21 Heat of combustion is always \_\_\_\_\_

1. Positive b) Negative c) Zero d) Either positive or negative

22 Phenol dimerises in benzene having Van’t Hoff factor 0.54 what is the degree of association?

1. 0.46 b) 92 c) 46 d) 0.92

23 The percentage of ‘s’ character of the hybrid orbitals in methane, ethane, ethene and ethyne

 are respectively

1. 25,25,33.3,50 b) 50,50,33.3,25 c) 50,25,33.5,50 d) 50,25,25,50

24 In an organic compound Phosphorus is estimated as \_\_\_\_\_\_\_\_\_

1. Mg2P2O7 b) Mg3(PO4)2 c) H3PO4 d) P2O5

25 Which of the group has highest +**I** effect \_\_\_\_

1. CH3 - b) CH3- CH2- c) (CH3) 2 – CH- d) (CH3) 3– C-

26 Peroxide effect (Kharasch effect) can be studied in case of

1. Oct – 4 ene b) hex-3- ene c) pent-1- ene d) but-2- ene

27 The carbo cation formed in reaction of alkyl halide in the slow step is

1. hybridised b) hybridised c) *sp* hybridised d) None of these

28 Bio Chemical oxygen demand value is more than 17 ppm indicates a water to be \_\_\_

1. Highly polluted b) poor in dissolved oxygen c) rich in dissolved oxygen d) low COD

29 Producer gas is

1. H2O (g) b) CO+ H2O c) CO+ H2 d) CO+N2

30 Which of the following pairs of d orbitals will have electron density along the axis

a) b) c) - d)

1. If n = 64, then n(A) is \_\_\_\_\_\_
2. 8 b) 4 c) 6 d) 16
3. If A= , B= , then =
4. 2A-B b) A-2B c) 2A-3B c)3A-2B

33 If A= , then det (2A) =

1. 3 b) 6 c) 9 d) 12

34 If denotes nCr and in the expansion of , +++ ……… is

1. b) c) d)
2. Term independent of x in is
3. 1 b) 2 c) 3 d) 4

36

1. 1 b) 2 c) 4 d) 8

37 =

1. 0 b) 1 c) d) -
2. The area of the triangle formed by the line with the co ordinate axes is
3. 6 sq units b) 8 sq units c) 12 sq units d) 16 sq units
4. The length of the diameter of the circle +-8x-6y=0 is
5. 5 b) 10 c) 25 d) 20
6. If A,B,C are the vertices of a triangle, then + is

a) b) c) d)

1. The vector + is a
2. Null vector b) Unit vector c) Constant vector d) None of these
3. The value of Cos (-)
4. 1 b) 0 c) d)
5. The value of is
6. 1 b) c) d)
7. If A and B are independent events then P
8. P(A) b) P(B) c) P(A d) P
9. If A and B are any two events and P(B) – P(A
10. P(A-B) b) P(B) c) P(B-A d) P

**ANSWER KEY**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | **D** | 16 | **B** | 31 | **C** |
| 2 | **C** | 17 | **D** | 32 | **C** |
| 3 | **C** | 18 | **D** | 33 | **D** |
| 4 | **A** | 19 | **A** | 34 | **D** |
| 5 | **A** | 20 | **B** | 35 | **B** |
| 6 | **A** | 21 | **B** | 36 | **B** |
| 7 | **D** | 22 | **D** | 37 | **C** |
| 8 | **C** | 23 | **A** | 38 | **8** |
| 9 | **A** | 24 | **A** | 39 | **9** |
| 10 | **C** | 25 | **D** | 40 | **10** |
| 11 | **C** | 26 | **C** | 41 | **B** |
| 12 | **C** | 27 | **B** | 42 | **A** |
| 13 | **D** | 28 | **A** | 43 | **C** |
| 14 | **C** | 29 | **D** | 44 | **B** |
| 15 | **C** | 30 | **C** | 45 | **C** |