

Question Papers

ExamCode: GK_GRP II_081114

1. An ambulance siren has a high pitch when it approaches us and a low pitch when it is moving away. This is due to-
- 1) Doppler effect
2) Echo
3) Beats
4) Resonance
2. Hubble's law states that the velocity of recession V of a galaxy is:
- 1) Directly proportional to its distance from the earth ie. $V \propto R$
2) Inversely proportional to its distance from the earth ie. $V \propto 1/R$
3) Directly proportional to its square of the distance from the earth ie. $V \propto R^2$
4) Inversely proportional to its square of the distance from the earth ie $V \propto 1/R^2$
3. Which of these forces help in the separation of milk and cream?
- 1) Centripetal force
2) Centrifugal force
3) Frictional force
4) Gravitational force
4. A stone of mass 'm' tied to a string of length 'l' is rotated in a circle, with the other end of the string as the centre, with speed 'V'. If the string breaks, the stone will move-
- 1) Towards the centre
2) Away from the centre
3) Along the tangent
4) Will stop
5. When fast moving electrons are suddenly stopped by a metal-
- 1) Gamma rays are produced
2) UV-rays are produced
3) X-rays are produced
4) Microwaves are produced
6. Match List I with List II and select the correct answer using the codes given below the lists.
- | List - I | List - II |
|----------------------|-------------|
| a) X rays | 1) Roentgen |
| b) Electricity | 2) Faraday |
| c) Blood circulation | 3) Harvey |
| d) Atomic number | 4) Mosley |
- | | a | b | c | d |
|----------------------------------------|---|---|---|---|
| A. | 2 | 3 | 4 | 1 |
| B. | 3 | 4 | 1 | 2 |
| <input checked="" type="checkbox"/> C. | 1 | 2 | 3 | 4 |
| D. | 4 | 3 | 2 | 1 |
7. Which of the following statement about Avagadro number is true? 1. It is the number of molecules in one litre of gas at NTP. 2. Number of molecules in one mole of gas. 3. Number of molecules in one gram of gas 4. Number of molecules in 1 kg of gas.
- 1) (ii) only
2) (i) only
3) (III) only
4) (III) and (IV) only

8. Match List I with List II and select the correct answer using the codes given below

	List - I		List - II	
	a) Stefan's law		1) $C_p - C_v = R$	
	b) Meyr's relation		2) $\lambda_m T = b$	
	c) Weins displacement law		3) $\eta = \frac{T_1 - T_2}{T_1}$	
	d) Carnot engine efficiency		4) $E = \sigma T^4$	
	a	b	c	d
A.	1	2	3	4
B.	4	3	2	1
C.	3	2	1	4
<input checked="" type="checkbox"/> D.	4	1	2	3

9. Transformers are used to-

- 1) Convert AC to DC
 2) Convert DC to AC
 3) Step up DC voltage
 4) Step up or Step down AC voltages

10. Which of the following stage is reached by white Dwarfs?

- 1) They cannot continue nuclear burning
 2) Nuclear burning will be very high after this stage
 3) They generate very high amount of nuclear fuel after this stage
 4) Nuclear burning will be intermittant after this stage

11. Potassium in the fertilizers is primarily for-

- 1) Root growth
 2) Flowering
 3) For the leaves
 4) Building resistance

12. The correct structure of bleaching powder is given by-

A.	$\text{Ca}^{2+}(\text{ClO}_2)\text{Cl}^-$
<input checked="" type="checkbox"/> B.	$\text{Ca}^{2+}(\text{ClO}^-)\text{Cl}^-$
C.	$\text{Ca}^{2+}(\text{ClO}^+)\text{Cl}^-$
D.	$\text{Ca}^{2+}(\text{ClO}_3)\text{Cl}^-$

13. When Nitric acid is mixed with concentrated Sulphuric acid..

A.	SO ₂ is formed
<input checked="" type="checkbox"/> B.	NO ₂ ⁺ is formed
C.	NH ₃ is formed
D.	H ₂ S is formed

14. Crystalline form of carbon in the following is:

- 1) Coal 2) Diamond
 3) Animal charcoal 4) Graphite

15. In which of the following acids, chlorine has an oxidation number of +5.?

- 1) HClO₄ 2) HClO
 3) HClO₂ 4) HClO₃

16. Which element in the group II A is the best reducing agent?

- 1) Ca 2) Sr
 3) Mg 4) Ba

17. Which of the following statements is correct in describing an acid?

- 1) Electron pair donor 2) Chemical species which can give up anions
 3) Chemical species that can combine with anions or electrons or give up cations 4) Nucleophilic reagent

18. What type of solution you get when solid Sodium Nitrate(NaNO₃) is dissolved in pure water?

- 1) Acidic 2) Basic
 3) Neutral 4) Amphoteric

19. Choose the metal that is formed in the mineral dolomite.

- 1) Mg 2) Ca
 3) Sr 4) Ba